

Public Disclosure Authorized

Public Disclosure Authorized

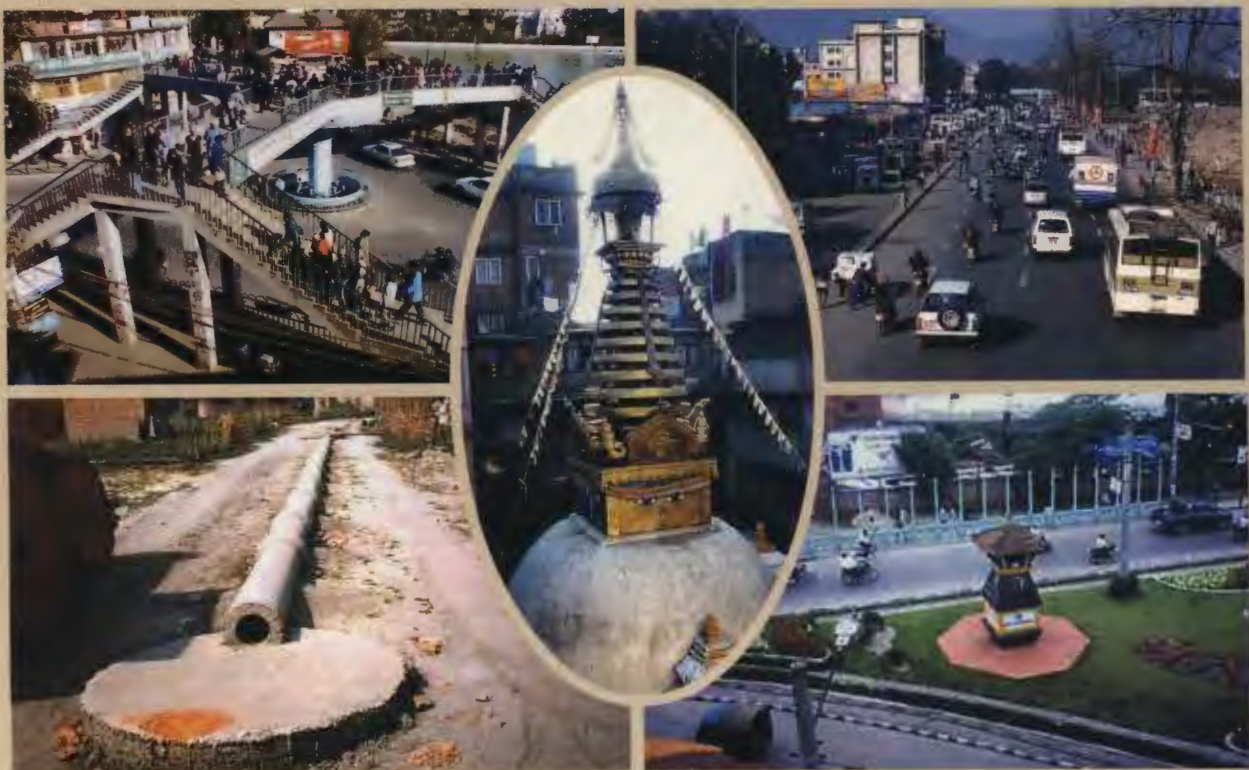
Public Disclosure Authorized

Public Disclosure Authorized



City Diagnostic Report

FOR CITY DEVELOPMENT STRATEGY
Kathmandu Metropolitan City



Kathmandu Metropolitan City



The World Bank

JANUARY 2001

City Diagnostic Report

FOR CITY DEVELOPMENT STRATEGY

Kathmandu Metropolitan City

Kathmandu Metropolitan City / World Bank

JANUARY 2001



काठमाडौं महानगरपालिका कार्यालय
Kathmandu Metropolitan City Office



पत्र संख्या:-

चलानी नं.:-

2nd February, 2001



Kathmandu is a modernizing city with a glorious history and heritage to be proud of. During the past three years of my tenure, the Metropolis Government has welcomed the challenge of striking a balance between modernization while preserving and nurturing our city's historical characters. In those years, the most I have come to appreciate about Kathmandu is its vitality, its willingness and perseverance to go on against all odds, whatever they may be.

It is against this backdrop that I have tried to bring before you our City Diagnostic Report and City Development Strategy. My interactions with the CDS team and their capable counterparts from KMC, during their continuous seven-month effort in the preparation of these documents, has given me full confidence in vouching for the usefulness of both the documents. I also take the opportunity to guarantee my administration's unfailing support in following the strategic guidelines that CDS has recommended.

I am confident that the City Diagnostic Report will provide necessary insight information on Kathmandu and the City Development Strategy will have paved the way for essential rebuilding and revitalizing activities that our city needs. The documents would have done their job if they find ways to give more impetus to the vitality of our city, because, that is what will keep our city moving and ever vibrant.


Keshav Sthapit
Mayor

फोन नं. २३१४८१ (प्रमुख), २३१४२९ (उप-प्रमुख), २३१३१२ (कार्यकारी अधिकृत), २६८५०६/७/८/१०, फ्याक्स नं. २६८५०९

इमेल : kmc mayor@mos.com.np, पोष्ट बक्स नं. ८४१६, टेकु, काठमाडौं

मेरो पौरख, मेरो गौरव, मेरो काठमाडौं



काठमाडौं महानगरपालिका कार्यालय
Kathmandu Metropolitan City Office



पत्र संख्या:-
बलानी नं.:-

OFFICE
2052

2nd February, 2001



The city of Kathmandu is undergoing great changes as we try to meet the demands of rapidly growing population and at the same time establish ourselves as an efficient and effective local government. In this time of transition, the greatest challenges for us is to manage this change. The City Development Strategy is an exercise to guide this change towards a direction we all want to go.

In this process, the Diagnostic study has compiled all the scattered but relevant information on the current state of Kathmandu into one report. I hope that this report will help us develop clear understanding regarding where we are and the direction in which we are headed. It also points out major issues that are of concern to us as Kathmandu moves into the new millennium.

The City Development Strategy itself will point out the direction we want to go based on the findings of this Diagnostic Report and our common vision for the future of Kathmandu. I call on all citizens of Kathmandu and relevant authorities to study this report in detail and assist the Kathmandu Metropolitan City in creating a Strategy which will guide us in creating a Kathmandu we are all proud of. Thank you.

Bidur Mainali
Deputy Mayor

ACKNOWLEDGEMENT

ACKNOWLEDGEMENTS

Project Co-ordinator (KMC)

Mr. Padma Sunder Joshi

Team Leader (Consultants/World Bank)

Mr. Surya Man Shakya

Deputy Team Leader (Consultants/World Bank)

Mr. Vijay Burathoki

Counterpart Team (KMC)

Mr. Hari Prasad Rimal

Past CEO

Mr. Surya P. Silwal

Acting CEO

Mr. Naresh Regmi

Assistant CEO

Ms. Haridevi Ranjitkar

HOD, Social Welfare

Mr. Devendra Dangol

HOD, Urban Development

Mr. Gambhir Lal Shrestha

HOD, Finance

Mr. Shantaram Pokharel

HOD, Environment

Dr. Baburam Gautam

HOD, Health

Mr. Jyoti Bhushan Pradhan

HOD, Public Works

Mr. Bishnu Singh Basnet

HOD, Security

Mr. Indra Man Singh Suwal

HOD, Heritage

Mr. Ram Sharan Humagain

HOD, Revenue

Mr. Shankar Raj Kandel

HOD, Information and Communication

Mr. Dev Kumar Rai

HOD, Administration

Mr. Ganesh Dhoj G.C.

HOD, Law and Litigation

Project Consultants (World Bank)

Mr. Surya Man Shakya

Environment

Mr. Vijay Burathoki

Urban Planning

Dr. Bhuvan Bajracharya

Urban Economics

Dr. Sudarshan Raj Tiwari

Heritage Conservation

Dr. Dev Raj Adhikari

Institutional Development

Mr. Naresh Shrestha

Municipal Finance

Mr. Sanjeev Bajracharya

Municipal Infrastructure Services

Mr. Shambhu Rai

Community Development

Ms. Jun Hada

Housing and Squatter Settlements

Mr. Harihar Man Amatya

Urban Transport

World Bank Support

Kenichi Ohashi

World Bank Country Director for Nepal

Cities Alliance/ CDS Study

Mark Hildebrand

Manager, Cities Alliance

Hiroichi Kawashima

Sr. Urban Specialist, CDS

Frannie Leautire

Former Sector Director SASIN

Kevin Milroy and Cities Alliance Secretariat

ACKNOWLEDGEMENT

Hiroaki Suzuki
Principal Operations Officer and CDS South Asia Coordinator

Balakrishna Menon. P
Urban Specialist and Task Leader of Kathmandu CDS

Asif Faiz
Operations Advisor

Tashi Tenzing
Sr. Sanitary Engineer

Ofelia Valladolid
Administrative and Technical Support.

Rajesh Singh
Administrative and Technical Support.

EXPERT REVIEWERS

Urban Economics

Mr. Amrit Man Shrestha (CPC/KMC)
Mr. Ram Chettri (UDLE)

Urban Planning

Dr. Pitamber Sharma (ICIMOD)
Mr. Surya Bhakta Sangache (KVTDC)
Mr. Padam B. Chettri (UDLE)
Mr. Kishore Thapa (KVMP)

Heritage Conservation

Mr. Karna Shakya (NHS)
Mr. Anil Chatrakar (CPC)

Environment

Dr. Roshan Shrestha (ENPHO)
Mr. Bhushan Tuladhar (CPC/KMC)

Community Development

Dr. Santa B. Gurung (T.U.)
Dr. S.B. Thakur (Independent)

Housing & Squatter Settlements

Dr. Sumitra Manandhar (LUMANTI)
Ms. Lajana Manandhar (LUMANTI)
Mr. Kishore Thapa (KVMP)
Mr. Laxman Rajbhandari (UDLE)

Municipal Finance

Mr. Sundar Man Shrestha (C.A.)
Mr. Amrit Man Shrestha (CPC/KMC)
Mr. Ram Chettri (UDLE)
Mr. Harka Chettri (TDF)

Municipal Infrastructure

Mr. Tashi Tenzing (WB)
Mr. Rabindra Lal Shrestha (T.U.)

Institution

Mr. Khem Raj Nepal (CIAA)
Mr. Purna Man Shakya (Lawyer)
Mr. Mangal K. Shrestha (MHPP)
Mr. Amrit Man Shrestha (CPC/KMC)

Transportation

Mr. Shiv B. Pradhananga (Independent)
Mr. Anand Khanal (DOR)
Mr. Triveni M.S. Pradhan (KMC)

CREATIVE SUGGESTIONS (Stakeholders Meetings)

Amod Pokharel (LEADERS)
Arjun Dhakal (NEFEJ)
Akshay Sharma (Spotlight)
Anup Mangal Joshi (KMC)
Achyut Pd. Koirala (MLD)

Bidur Bikram Shah (W.Ch. 34)
Badri Prasad Kharel (W.Ch. 10)
Badri Bahadur Thapa (W.Ch. 14)
Barsha Ram Bhandari (W.Ch. 29)
Bhanu Sharma (W.Ch. 33)
Bharat Sharma (DUDBC)
Basanta Rai (KVTDC)
Bal Sundar Malla (CEMAT)
Bishnu Sital (NSP)
Bhim Dhoj Shrestha (PAC/TU)
Binod Hari Joshi (FNCCI)
Bhoj Raj (Pro. Public)
Bhim Nepal (DOA)
Bal K. Pandey (NBBSS)
B.R. Manandhar (MOPE)
Bijaya Krishna Shrestha (W.Ch. 20)
Bikas Bhakta Shrestha (W.Ch. 25)
Babu Raja Maharjan (W.Ch. 27)

Chandra Prasad Bhattarai (MLD)
Chandrananda Shrestha (W.Ch. 18)
Chiniyaman Bajracharya (W.Ch. 30)

Dipak Rai (NBBSS)
Deva Sharma Poudel (NEA)
Dilli Maya Upreti (KMC)
Devi Nath Subedi (SWMRMC)
Devendra N. Gongal (STIDP)
Dinesh Bajracharya (NEWAH)
Dr. Durga Lal Shrestha (CEDA)
D.N. Subedi (MLD)

ACKNOWLEDGEMENT

- Dipak K.C. (W.Ch. 3)
Dhruva Narayan Manandhar (W.Ch. 13)
- Franz W. Ziegler (KVMP)
- Gopal Joshi (KMC)
Gyani B. Niraula (A.N.)
Girija P. Gorkhali (UEIP)
Gyanendra Shrestha (Metro F.M.)
Giri R. Gautam (W.K.)
Gopal Pandit (W.Ch. 7)
Ganesh Bahadur Khadgi (W.Ch. 31)
- Harka Bdr. Lama (NBBSS)
Himal S. "Lekali" (SOCODEP)
Hari K. Shrestha (Metro F.M.)
Hukum B. Lama (NBBSS)
Hari Krishna Dangol (W.Ch. 22)
- Indra Bahadur Gurung (NBBSS)
Ishori Wagle (P.D.)
Ishwor Man Dangol (W.Ch. 15)
- Juddha Bajracharya (W.Ch. 24)
Jibgar Joshi (MPPW)
Jay Prakash (Media)
Jay Singh (Research)
Jeevan Kansakar (FNCCI)
- Kishor Manandhar (KVMP)
Kamal Murimal (KMC)
Kushum Shakya (FPAN)
Kayeshwor Man Shakya (SEECON)
Kazi Ratna Shakya (Thapahiti Handicrafts)
Kiran Bhandari (Kantipur)
Kedar Khadka (Pro. Public)
Kiran P. Amatya
Kishor P. Pokharel (DOR)
- Lhakpa Lama (NBBSS)
Lila Mahat (Researcher)
Lajali Bajracharya (TUGI)
- Mahendra Subba (KVTDC)
Mohan Singh Lama (H.T.)
Mangal Man Shakya (NEFEJ)
Madhav Pradhan (CWIN)
Mukti Nath Ghimire (G.S.)
Dr. Madan K. Dahal
Mahendra B. Joshi (W.Ch. 17)
- Narottam Vaidya (W.Ch. 8)
Niranjan K. Shrestha (W.Ch. 12)
Naresh Man Shakya (NHS)
Nur N. Neupane (KMC)
Nepal Jit Lama (former W.Ch. 6)
Navaraj Parajuli (W.Ch. 35)
- Pavitra Bajracharya (W.Ch. 23)
Purna Prasad Gautam (KMC)
Purna Prasad Kadariya (DUDBC)
Pushpa Ratna Shakya (MOPE)
Panna Ratna (JMG)
Pratap P. Pradhan (UEIP)
- Ratna Prasad Joshi (W.Ch. 4)
Rinchen Yonjan (KMC)
Rajendra Giri (ADB/TA)
Raman Shrestha (DTM)
Dr. Rup Khadka (VAT- Project)
Rameshwar Lamichane (MOE & S)
Dr. Renu Rajbhandari (WOREC)
Renuka Rai (NEWAH)
Ramesh B. Shrestha (NASC)
Rupendra Maharjan (KTM 2020)
Rabin Lal Shrestha (SEECON)
Ramesh Lamsal (TRN)
Ramesh Chalise (R.S.)
Rabindra M. Maskey (Photographer)
Rajendra Manandhar (TKP)
Rajan Shakya (HAN)
Rajesh Manandhar (KMC)
Rabin Man Shrestha
Roshan Shakya (KMC)
R. Babbar
Raju Shrestha (KMC)
Ramesh Man Dangol (W.Ch. 2)
(late) Rajesh Shrestha (W.Ch. 11)
Ram Bir Manandhar (W.Ch.16)
- Sanu Kumar Shrestha (Ch. DDC, KTM)
Dr. Surendra B.B. Shrestha (Mayor, Banepa)
Sukha Ram Maharjan (W.Ch.5)
Suvan K. Shrestha (W.Ch. 28)
Shrijan Pradhan (KMC)
Shree Gopal Maharjan (LSMC)
Suresh P. Acharya (KVTDC)
Sunil Poudel (DOR)
Sugat R. Kansaker (NTC)
Saroj Thapalia (G.S.)
Surendra B. Malakar (FNCCI)
Surendra Pathak (MAN)
Sama Vajra (LUMANTI)
Sunita Lama (MES)
Suman K. Shrestha (D.C)
Surya Shrestha (NASC)
Shiva Br. Nepali Pradhan (RCP- South)
S.M. Pradhan (NHDFC)
Sanju Shrestha (NH & MF)
Shishir Sapkota (NSD)
Saras Man Pradhan (NHDFC)
Suman Karna (Researcher)
Suneil Adhikari (KVMP)
Sunil D. Joshi (NWSC)
Saubhagya Pradhananga (NHS)

ACKNOWLEDGEMENT

Sashi Lal Shrestha (W.Ch. 19)
Shyam Chitrakar (W.Ch. 26)
Shree R. Adhikari (RSS)
Sukra B. Thapa (NBBSS)
Shyam Krishna K.C. (W.Ch. 9)

Tej Kumar Karki (UEIP)

Udhav Acharya
Uttam Silwal (RSS)
Unam Pradhan
Umesh Malla (Sr. Urban Planner)

Vidya Sundar Shakya (W.Ch. 21)
Vinod C. Baral (ADB/TA)
V. Rajgopalan (AC/D)
Yogendra K. Shrestha (W.Ch. 1)
Y. Badal (KMC)

Editing

Dr. Sunam G. Tenzin
Ms. Rajani Rizal

Cartography

Asha Kazi Thaku

Cover Design

WordScape

Design & Layout

Hari Prasad Marasini

Computer Type setting

Arjun Neupane

Rajan Bahadur Shivakoti

Photographs

Naresh P. Shrestha

Logistics

Khaju Shakya

Sudeep Pandey



The contents of this publication reflects the combined views of KMC, the consultants and the stakeholders who contributed by participating in series of discussions and meetings. Any or all part of this publication may be used, reproduced, stored in an information retrieval system or transmitted in any manner whatsoever, provided, acknowledgement of the source is made. KMC would appreciate receiving a copy of any publication which uses this publication as a source.

Acknowledgement are also due to many contributors, well-wishers and stakeholders, whose names could not be accommodated despite their direct or indirect support in preparing this document.

This Document has been produced under the overall supervision and guidance of **Mr. Keshav Sthapit**, Hon. Mayor and **Mr. Bidur Mainali**, Hon. Dep. Mayor of KMC.

ABOUT THIS DOCUMENT...

(A note from the KMC counterpart and WB Consultant Team)

The 'City Diagnostic Report' CDR for Kathmandu Metropolitan City (KMC) was prepared over July 2000-January 2001. The CDR has been prepared exclusively by a team of national consultants with valuable inputs from KMC counterpart team as well as timely suggestions from the World Bank experts. The ten chapters in CDR provide a comprehensive overview of the sectors they cover. They were prepared with a view to provide background information on KMC's existing situation to the readers and development agencies so that they may deploy their resources to problem areas through crystallization of project assistance in future. This report is the basis on which the **City Development Strategy** has been formulated for KMC.

The ten sectoral chapters, presented here, cover sectors related to Urban Planning, Urban Economics, Institutional Development, Urban Transport, Housing and Squatter Settlements, Municipal Services (Infrastructure), Heritage Conservation, Community Development, Environment and Municipal Finance. In order to ensure quality information in the diagnosis, the papers prepared were extensively studied and reviewed by a team of experts on each subject. Following the review, a series of focused group meetings were held to discuss the reviewers'

comments and to examine the critical cross-sectoral issues.

The chapters presented are the final outcome of intensive exercise by the consultants and the KMC counterpart team, together with a series of field meetings at the community level, specially in the case of squatter settlements. A number of findings of the sectoral papers are also based on review of existing literature, for which due acknowledgements have been given by the authors.

This diagnostic report provides factual and expert assessment of the sectors for KMC and also in the valley context. This compilation of information in the form of one single publication on KMC is the first attempt of this kind and should make a valuable resource for development agencies and professionals involved in KMC and Kathmandu Valley development activities.

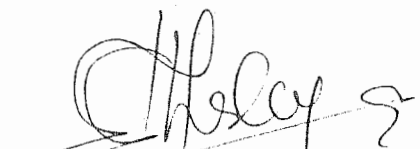
It is important to note here that this document has been prepared within seven months and hence, the authors have stayed within the parameters of existing literature and discussions with selected professionals and stakeholders. It is expected that the document will be periodically updated by KMC so that additional issues are covered as new developments unfold in future.



P. S. Joshi
Co-ordinator (KMC)



Vijay Burathoki
Deputy Team Leader



Surya Man Shakya
Team Leader

TABLE OF CONTENTS

1. Urban Planning (Vijay Burathoki)	1- 46
2. Urban Economics (Dr. Bhuban Bajracharya)	47- 62
3. Institutional Development (Dr. Dev Raj Adhikari)	63- 110
4. Urban Transport (Harihar Man Amatya)	111- 144
5. Housing and Squatter Settlements (Jun Hada)	145- 180
6. Municipal Services (Infrastructure) (Sanjeev Bajracharya)	181- 218
7. Heritage Conservation (Dr. Sudarshan Raj Tiwari)	219- 254
8. Community Development (Shambhu Rai)	255- 282
9. Environment (Surya Man Shakya)	283- 330
10. Municipal Finance (Naresh P. Shrestha)	331- 471

URBAN PLANNING

Vijay Burathoki
URBAN PLANNER

LIST OF ABBREVIATIONS

ADB	Asian Development Bank
CEDA	Center for Economic Development and Administration
CDO	Chief District Officer
CDS	City Development Strategy
CEC	Commission of European Communities
CPC	City Planning Commission
DBMS	Data Based Management System
DDC	District Development Committee
DHBPP	Department of Housing, Building and Physical Planning
DHUD	Department of Housing and Urban Development
DOR	Department of Roads
FAR	Floor Area Ratio
GIS	Geographic Information System
GLD	Guided Land Development
HMG	His Majesty's Government
ICIMOD	International Center for Integrated Mountain Development
ISKMC	Institutional Strengthening of Kathmandu Metropolitan City
IUCN	World Conservation Union
KMC	Kathmandu Metropolitan City
KVDA	Kathmandu Valley Development Authority
KVMP	Kathmandu Valley Mapping Program
KVTDC	Kathmandu Valley Town Development Committee
KVUDPP	Kathmandu Valley Urban Development Plans and Programs
LSG	Local Self Governance
MSUD	Management Support for Urban Development
NSET	National Society for Earthquake Technology
NWSC	Nepal Water Supply Corporation
PWD	Public Works Department
SAARC	South Asian Association for Regional Cooperation
TDC	Town Development Committee
TPIC	Town Planning Implementation Committee
UDD	Urban Development Department
UN	United Nations
UNDP	United Nations Development Program
VDC	Village Development Committee

TABLE OF CONTENTS

List of Abbreviations	2
Table of Contents	3
List of Tables	4
List of Maps	4
1. URBAN PLANNING	5
1.1 Introduction	5
1.1.1 Background	5
1.1.2 A Brief History of Kathmandu City	5
1.1.3 Early Urban Development Efforts	6
1.1.4 City Development Strategy for Kathmandu Metropolitan City	6
1.1.5 Physical and Regional Setting of Kathmandu Metropolitan City	7
1.1.6 Political Divisions of the Valley and Kathmandu City	11
1.2 City Development Strategy for Kathmandu Metropolitan City	12
1.2.1 Objectives of City Development Strategy for Kathmandu Metropolitan City	12
1.2.2 Methodology of CDS for Kathmandu Metropolitan City	12
1.2.3 Urban Planning in the Context of CDS	12
1.2.4 City Diagnostic Report in the Context of CDS	13
1.3. Urbanization and Urban Planning In Kathmandu	13
1.3.1 Population	13
1.3.2 Growth of Kathmandu City	18
1.3.3 The City Development Plans	26
1.3.4 Land Use Planning	29
1.4. Planning Legislations In the Development Of KMC	32
1.4.1 Town Development Committee Act 2019	32
1.4.2 Town Development Plan Implementation Act 2029	32
1.4.3 Land Acquisition Act 2034	33
1.4.4 Acts for Local Government Units	33
1.4.5 Town Development Act 2045	33
1.4.6 Kathmandu Valley Development Authority (KVDA) Act 2045	33
1.4.7 Municipality Act 2048	34
1.4.8 DDC and VDC Act 2048	34
1.4.9 Local Self-Governance Act 2055	34
1.4.10 Prospects and Limitations of the Legislations for Urban Development of KMC	34
1.5. Organizations Involved In City Development	35
1.5.1 Ministry of Physical Planning and Works	35
1.5.2 Ministry of Local Development	35
1.5.3 Kathmandu Valley Town Development Committee and Town Planning Implementation Committees	36
1.5.4 District Administration Office	36
1.5.5 Kathmandu Metropolitan City	36
1.5.6 City Planning Commission of KMC	36
1.5.7 Urban Development Department of KMC	37
1.5.8 Public Works Department of KMC	37
1.5.9 Ward Level Organizations of KMC	37
1.5.10 Different Central and Local Level Government Agencies Involved in KMC	38
1.5.11 Prospects and Limitations of KMC's Institutional Capacity to Undertake Planning Functions	38

1.6 Vision and Future Prospects for Urban Planning In KMC	39
1.6.1 Government Policy on Urban Development	39
1.6.2 Vision Proposed for Greater Kathmandu	39
1.6.3 Stakeholders' Vision for Kathmandu Metropolitan City	40
1.6.4 Constraints and Opportunities for Planned Urban Development of the City	40
1.7 Conclusions of The First Stakeholders' Workshop	41
1.8 Summary of Issues on Urban Development	41
1.8.1 Planning and Infrastructure	42
1.8.2 Institutional Problems	42
1.8.3 People's Participation in Planning	43
1.8.4 Environment	43
1.9 Conclusions and Recommendations	43
Bibliography	46

LIST OF TABLES

Table 1:	Population of Kathmandu Valley Municipalities
Table 2:	Actual and Projected Population of Kathmandu Valley
Table 3:	Migration into the Cities of Kathmandu
Table 4:	Area, Households, Population and Population Density by Wards of KMC
Table 5:	Urbanized VDCs of Kathmandu Valley
Table 6:	Kathmandu Valley Land Utilization
Table 7:	Kathmandu Metropolitan City Land Use 1995
Table 8:	Urban Planning - Issues and Implications

LIST OF MAPS

Figure 1:	Settlements in Kathmandu Valley
Figure 2:	Location Map
Figure 3:	Ward-wise Population Density 1991
Figure 4:	Urban Expansion Trends in Kathmandu Valley
Figure 5:	VDCs with Projected Population Exceeding 10,000

From its humble beginnings as a small cluster of settlements during the Kirata period, Kathmandu City has grown into the Primate City of Nepal. It is the capital city and the center of administrative, economic, academic and cultural functions. In the past it has received the largest share of development aid in Nepal and the centralization of major functions and services has made it the prime location for economic activities. It has established international linkages and grown into an important regional center of South Asia. It currently houses a population of about 700,000, which is expected to exceed one million by the next decade. Its chaotic and unplanned physical growth, however, belies its influential role as a national and regional city. Whereas, the city had experienced the culmination of architectural and urban forms and spaces during the Malla period, today it is a sprawling metropolis of haphazard and unplanned developments with serious deficiencies in essential infrastructure services. Environmental consequences of the current urbanization process are evidenced by the dangerous levels of river, ground water, air and noise pollution. The city cannot continue to grow in this manner if it is to remain manageable and competitive in the new millennium. Without proper urban management and planned urban growth there is a real danger that the city will be unable to cope with its burgeoning population and urban sprawl.

1.1 INTRODUCTION

1.1.1 Background

Continuous efforts have been made in the past few decades to manage the urban expansion process of the city. City development plans were prepared and implemented at different stages. However, because of various shortcomings in the plans and related regulations as well as their weak implementation, the city grew haphazardly as per the demands and preferences of individual landowners and brokers, rather than according to any professionally proposed plan. Today urbanization has spilled over beyond the city limits, which makes it even more difficult to regulate the growth of the city. If left unattended, the urbanization process threatens to engulf the entire valley, with serious consequences for the valley's natural and built environment and severe pressure on the already inadequate infrastructure services.

1.1.2 A Brief History of Kathmandu City

The early Nepali chronicles, the Vamsavali's, claim that Kathmandu Valley was ruled in the early times by the pastoral dynasties of the Gopals and Mahisapalas who

were later subjugated by the Kiratas. The Kiratas were in turn defeated by the Licchavis who ruled Kathmandu valley and its surrounding areas beginning from the 1st century AD (Tiwari, 1995) till about 900 AD. They were followed by the Thakuris who reigned till about 1200 AD when the Malla state was organized. The Malla rule lasted until 1768 AD after which King Prithvi Narayan Shah conquered the three kingdoms of the valley along with many of the petty states to build what forms much of present day Nepal.

Kathmandu emerged on the high lands east of the Vishnumati river during the Kirata period as a conglomeration of several small settlements arranged along the main trade route (Tiwari, 1995). Daxina-koligram was later added by the Licchavis to the south west of the existing town at the confluence of the Vishnumati and Bagmati rivers. The older northern settlements were earlier referred to as Yambi while the southern settlement was known as Yangala. During the rule of King Gunakamadev in the 11th century AD the city of Kathmandu was apparently restructured to fit the Shakti cult doctrine. By the early 12th century Yangala was commonly referred to as Kasthamandapa, a name derived from a large public rest house near the city center, which is still existent today. The Mallas also referred to the city as Kantipura, but the name more often seemed

reserved for the northern settlement of Yambi. After the fall of the city in 1768 AD to Prithvi Narayan Shah, both names were commonly used for the city but these gradually gave way to the present day name of Kathmandu. For a more detailed history of the city, refer chapter on cultural heritage.

Kathmandu's role as an important trading and cultural center had been well established since the Kirata and Licchavi times. It had rich agricultural land and was strategically situated to take advantage of the north-south trade route between India and Tibet. In the south it was connected to Uttarapatha, the great northern trade route linking the eastern and near eastern Gangetic areas since at least the 6th century AD. Since the Nepali route was much shorter than the traditional land and sea route between India and China, it was the preferred corridor for trade between the two countries. Till the late 18th century, trade provided the major source of wealth for the valley (Slusser, 1982).

Kathmandu's wealth was the target of frequent raids from the southern Mithila regime between 1097 AD and 1311 AD. Also, with the destruction of the Indian Buddhist centres by the Muslims at the close of the 12th century, many of the Buddhist scholars gravitated to Kathmandu making it a center for Buddhist learning. Urbanization accelerated and took on a consolidated and mature urban form during the late Malla rule between 1476 and 1768 AD (CEDA, 1979) when the valley flourished as a trade entrepot as well as a cultural and religious center.

After the unification of the country by Prithvi Narayan Shah in 1769, Kathmandu became the political and cultural center of the country and grew more rapidly than the other towns. Following the political changes of 1951, much of the government political and administrative functions, tourism, industrial activities and investments have been concentrated in Kathmandu. This has fueled rapid urban expansion of Kathmandu City, which continues unabated till today.

1.1.3 Early Urban Development Efforts

After the political developments of 1951, as Kathmandu gained international exposure, there was a realization that the city and its infrastructure needed to be improved and modernized. The Coronation Committee, which was formed prior to 1955, performed some of the earliest city improvements works. Although it was seriously hampered by lack of funds, it did manage to renovate

Hanuman Dhoka palace, widen the King's Way road and blacktop the airport-Kathmandu and Thankot-Tripureswore roads (CEDA, 1979).

The city beautification program for Kathmandu was launched in preparation of Queen Elizabeth's state visit to Nepal in 1962 (Chhetri, CEDA). The Kathmandu Valley Construction Committee also known as the Upatyaka Nirman Samiti was constituted to undertake various urban renewal and city beautification works. In the absence of any broad comprehensive plan for the city, the approach tended to be ad hoc and piecemeal. Some of the projects completed were City Hall, Bhrikuti Mandap, Ratna Park, Royal Nepal pavilion at Tundikhel, widening of Tripureswore-Kalimati road etc. Considering the practical difficulties and legal complications of land acquisition, the work of the Committee was quite commendable (CEDA, 1979). Conflicts soon occurred with the Roads and Building Department because of overlapping interests and activities and the Committee was dissolved in 1967.

Realizing the need for planned development of towns and settlements, assistance in urban planning was sought from the UN in 1960. UN technical assistance arrived in 1962 and a small town-planning unit was established under the Public Works and Building Department. A preliminary master plan for Kathmandu and a comprehensive building code were prepared but these were not formally adopted by the government due to the lack of institutional and administrative structure to implement them. Later in 1969, The Physical Development Plan for the Kathmandu Valley was prepared which was the first comprehensive planning exercise to be undertaken for Kathmandu. Thereafter plans were prepared on a regular basis, although most never attained the legal status necessary for actual implementation.

1.1.4 City Development Strategy for Kathmandu Metropolitan City

Although many physical development plans had been prepared for Kathmandu Metropolitan City (KMC) in the past, they had proven to be largely ineffective in promoting planned development of the city. The municipal body had also tended to be relegated to the periphery of the planning activities as the primary responsibility of preparing and implementing city development plans for Greater Kathmandu had been assumed by the Kathmandu Valley Town Development

Committee, an organization under the Department of Housing, Building and Physical Planning. This was justified by the fact that KMC, then known as Kathmandu Nagar Panchayat, did not possess the necessary technical capability to prepare or monitor the implementation of such plans and the Government could also no longer delay the performance of such a crucial function due to the rapid growth of the city. Over the past few decades there had been a growing realization that planning was an integral part of municipal functions and various Acts such as the Municipality Act and the Local Self-Governance Act were promulgated to empower municipalities to exercise this responsibility. Meanwhile, KMC has evolved significantly over the years and has expressed its intention to assume the role of an independent local government, with urban planning as one of its integral functions.

In conformity with its objective of functioning as a Local Government, KMC has sought the assistance of the World Bank for the preparation of a city development strategy (CDS) for Kathmandu. Based on its past experience in providing similar assistance to many cities of the world, the Bank agreed to provide technical assistance to KMC for the preparation of the CDS. As part of the program a team of consultants with expertise in various aspects of the urban sector were engaged for the period between July 2000 and January 2001 to assist KMC in this task. This diagnostic study which covers one of several components of the urban sectors of Kathmandu City is intended to provide the basis for the identification of specific strategies related to urban planning for the city. In combination with the strategies proposed for all the different sectors of the city, the City Development Strategy is expected to provide an overall framework within which KMC will synchronize and rationalize its future programs in a coherent and strategic manner.

1.1.5 Physical and Regional Setting of Kathmandu Metropolitan City

Kathmandu Valley, which provides the physical setting for Kathmandu Metropolitan City (KMC), is situated between the latitudes 27° 32' 13" and 27° 49' 10" north and longitudes 85° 11' 31" and 85° 31' 38" east. It covers an area of about 667 sq. km. (KVTDC, 2000) and its mean elevation is about 1350m. above sea level. Variations in the area of the Valley have been noted in different studies but the area derived by KVTDC is quite consistent with the area of 660 sq. km. calculated by

ICIMOD in 1993 and 640 sq. km. derived by IUCN in 1995. The valley is bowl shaped with rivers draining towards the center of the basin. The rivers merge into the Bagmati river which drains out through the Chobar Gorge located at the southwest corner of the valley.

Kathmandu City is connected by the Tribhuvan highway to Hetauda, a growing industrial town to the south located along the Mahendra highway, which traverses the country in the east-west direction along the tarai plains and is the main transport corridor of the country. The Prithvi highway diverges westwards from the Tribhuvan highway at Naubise and connects Kathmandu to Pokhara, an important tourist center, and Bharatpur, an expanding business and industrial center located midway along the East-West highway, (see fig. 2). Currently, these two highways are the main routes for trade and supply of goods and people and serve as an important lifeline for the capital region.

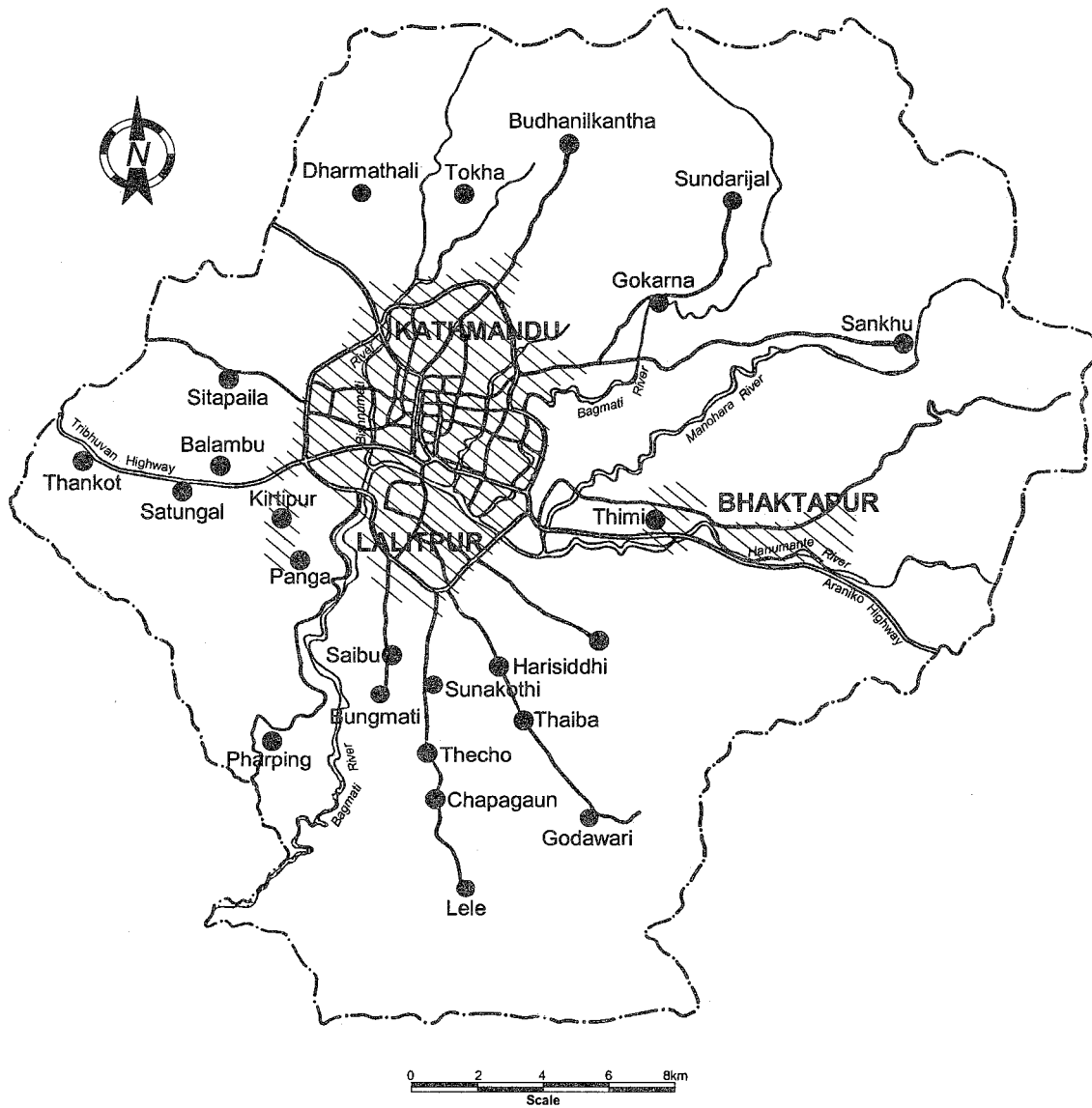
The Arniko highway connects Kathmandu City to Barabise and the China border, lying northeast of Kathmandu. A small amount of Nepal-China trade flows through the route, however, the road is important as a vital link to the emerging markets and district towns of the region. Just beyond the valley rim to the east, the highway passes through Banepa, a small but growing trading town, and Dhulikhel, which is gradually developing into a tourist and university town. These towns are expected to draw significant amounts of trading, transportation and industrial activities once the Sindhuli-Banepa highway is completed in a few years time. The corridor between Kathmandu and Banepa is also expected to face increased urbanization, as the highway will provide a much shorter alternative connection between Kathmandu and the eastern parts of the country.

Apart from these highways, Kathmandu is connected by road to Bidur municipality (Trishuli) situated to the northwest. One of the earliest hydroelectric stations is located there and the town also provides entry to a region of religious and tourism importance.

Kathmandu possesses the only international airport of the country and maintains air link with most of the SAARC countries, some Asian and a few European nations. It is also connected by air with many other towns and district centres of the country. During the past decades Kathmandu has gradually emerged as a regional center with several organizations setting up their regional offices in the Valley. With improvements in urban

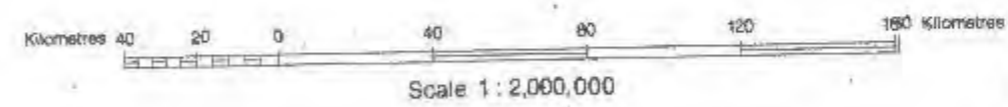
Fig. 1

SETTLEMENTS IN KATHMANDU VALLEY



Kathmandu City Development Strategy
Source: C. B. Shrestha and M. S. Manandhar, 1994

NEPAL



BOUNDARIES
International, Regional, Zonal, District

HEADQUARTERS
Capital, Regional, Zonal, District

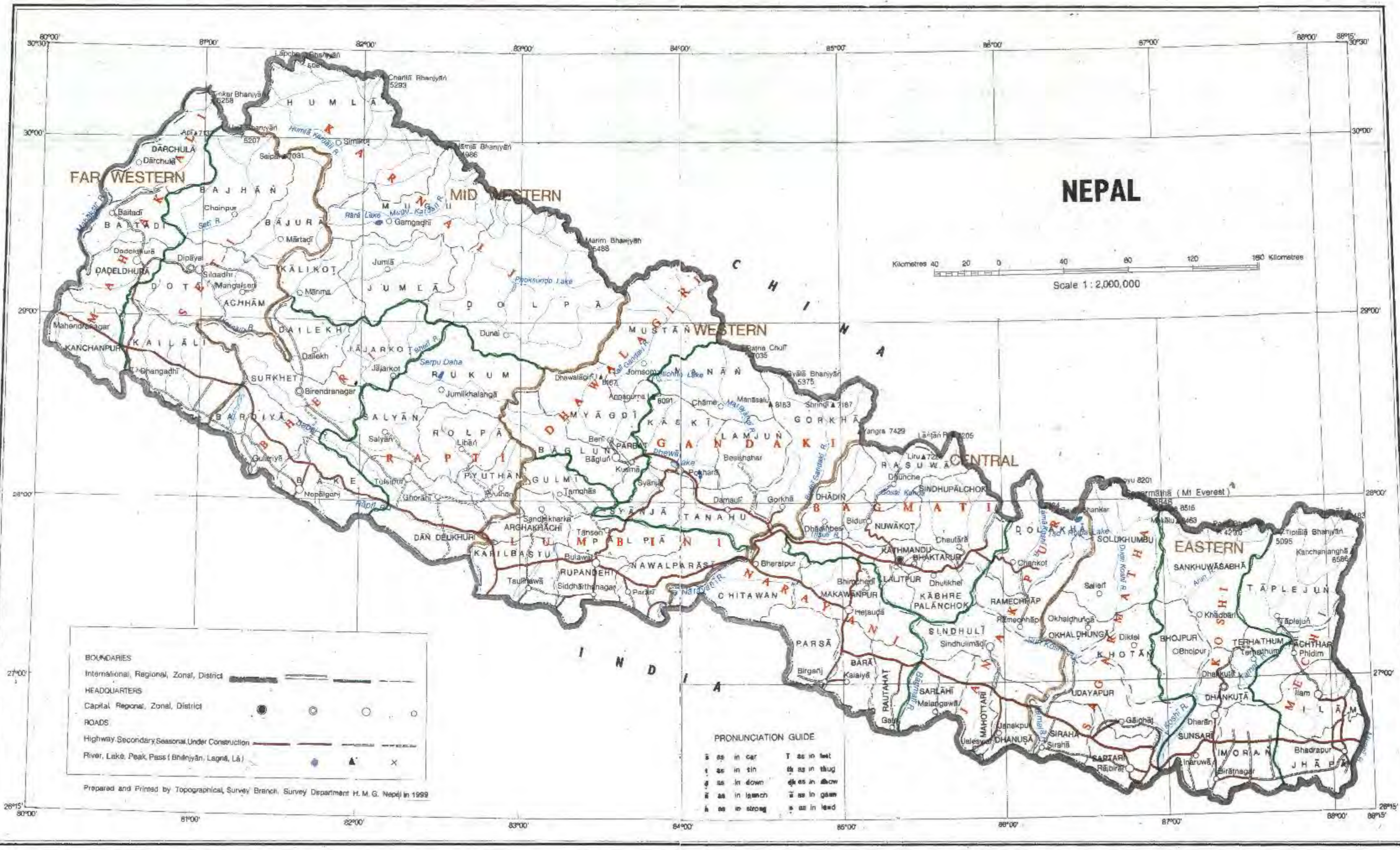
ROADS
Highway, Secondary, Seasonal, Under Construction

River, Lake, Peak, Pass (Bhanjyan, Lagna, La)

PRONUNCIATION GUIDE

ś as in car	T as in tea
t as in tin	th as in thigh
g as in down	gh as in now
ś as in launch	ś as in gain
ś as in strong	s as in lead

Prepared and Printed by Topographical Survey Branch, Survey Department H. M. G. Nepal in 1999



management and infrastructure services, there is ample scope to further reinforce Kathmandu's role as a regional center.

Whereas, during the previous decades industries and migrants tended to concentrate in the Kathmandu Valley, and particularly in Kathmandu City, gradual development of a more articulated transportation network and rapid urbanization in many of the secondary cities of the country are expected to ease the pressure on Kathmandu Valley to some extent in the future. To provide impetus to this unplanned but spontaneous process, policies have been formulated in the past to de-concentrate administrative and industrial functions from the Valley to the lower order cities with little success. More recently the National Urban Sector Strategy Project, being implemented by the Department of Housing and Urban Development with technical support from the Asian Development Bank, is in the process of preparing more specific policies on the matter of decentralization of economic functions away from the capital region.

Within the Kathmandu Valley, apart from the municipalities of Kathmandu, Lalitpur, Bhaktapur, Kirtipur and Madhyapur Thimi - the latter two were declared municipalities in 1997 - there are many other old settlements such as Sankhu, Tokha, Thankot, Pharping, Khokana, Bungamati, Harisiddhi, Chapagaon, and Lubhu, (see fig.1). These settlements had earlier served as important agricultural marketing and servicing centres, however, during the past few decades, they have been experiencing a gradual decline in their traditional function as a result of the rapid urbanization and industrialization of the cities of Kathmandu and Lalitpur. The decline in their economic function has resulted in the breakdown of their social and cultural values as well as the gradual deterioration of infrastructure services and building stock, turning many of them into slums. Lack of employment has also led to migration of the more educated and the affluent class to the metropolitan areas.

Despite the decline of the traditional agricultural settlements, because of transportation linkages and their relative proximity to the Greater Kathmandu area, the outlying settlements have the potential for being revitalized and developed into viable and vibrant towns. Past studies have suggested that improvements in infrastructure and decentralization of selected economic activities could stem the migration to the cities and reverse the economic decline. Some of the towns are

already experiencing a gradual recovery of their economy. Thankot located at the highway entry point has been attracting industries while Nagarkot is a well-established tourist destination. According to the 1995 IUCN study, carpet, garment and brick industries had started expanding into the newly formed municipalities of Kirtipur and Madhyapur Thimi as well as into other settlements such as Jorpati, Budhanilkantha, Lubhu, Thaiba, Thecho and Harisiddhi. Recognizing these trends, while reviewing the "Kathmandu Valley Urban Development Plans and Programs 1991", the Department of Housing and Urban Development in 1996 had, in fact, advocated the development of Nagarkot, Sankhu, Chapagaon, Tokha and Thankot into satellite towns and the integration of Lubhu and Thimi as suburban areas of Greater Kathmandu and Bhaktapur respectively.

1.1.6 Political Divisions of the Valley and Kathmandu City

Kathmandu Valley is politically divided into the three districts of Kathmandu, Lalitpur and Bhaktapur. As per the 1994 IUCN study there were a total of 127 Village Development Committees (VDCs) in the three districts. However, only 110 VDCs lay within Kathmandu Valley of which 65 VDCs were in Kathmandu District, 24 VDCs in Lalitpur District and 21 VDCs in Bhaktapur District. One VDC from Kathmandu District and 16 VDCs of Lalitpur District were determined to lie outside the physical boundaries of the Kathmandu Valley. In 1997, eight VDCs of Kathmandu District and five VDCs of Bhaktapur Districts were assimilated to form the municipalities of Kirtipur and Madhyapur Thimi respectively. Readjustments were also made to a few VDCs. Consequently, as per the 2000 KVTDC study, there are currently five municipalities and only 99 VDCs in the Valley of which 57 belong to Kathmandu District, 26 to Lalitpur District and 16 to Bhaktapur District.

Kathmandu Metropolitan City, which is located in Kathmandu District and covers an area of about 50.8 sq. km., is divided into 35 wards of which the old city core encompasses 12 wards. Much of the municipality falls within the area bounded by the Bagmati river and the northern segment of the ring road except for protruding areas along the major arterial roads at Balaju, Bansbari, Bouddha and Kalanki. Apart from these areas, Pasupati, the airport and the strip east of the airport extending up to the Manohara river also lie outside the ring road.

1.2 CITY DEVELOPMENT STRATEGY FOR KATHMANDU METROPOLITAN CITY

1.2.1 Objectives of City Development Strategy for Kathmandu Metropolitan City

The primary objective of formulating a city development strategy (CDS) for KMC is to enhance the city's livability, competitiveness, bankability, governance and management capacity. These are the factors which determine how successful and competitive the city will remain in the future within an increasingly globalized economy. The objectives of the CDS are expected to be achieved through the implementation of various integrated programs designed to improve the city's infrastructures, natural and built environment, socio-cultural and economic environment as well administrative functions. The CDS provides an overall framework to guide and synchronize KMC's future actions. It helps the city to make judicious use of its limited resources by investing in key priority sectors linked to the city's long-term development strategy.

The key underlying themes of the CDS process are ownership and participation of stakeholders. KMC is expected to take ownership of the CDS and ensure that all concerned stakeholders of the city participate in the formulation of development strategies. The stakeholders are expected to identify the common vision for the city as well as the actions required to help the city to proceed towards the vision. As far as possible, the strategies proposed in the CDS are expected to be doable and priority will be given to those programs and actions which will have a more immediate effect and are more likely to be implemented.

1.2.2 Methodology of CDS for Kathmandu Metropolitan City

The CDS for KMC is intended to address three basic questions: what is the situation of the city today, what is the situation it aspires to achieve in the future and what actions are required to reach the desired future condition? The first question deals with past, present and future development trends of the city and a diagnosis of its strengths and weaknesses and the opportunities and limitations related to these trends. The second question refers to the common vision for the city while the third question deals with the strategy to bridge the gap between the current condition and the envisioned future condition.

The methodology for the preparation of the CDS for KMC more or less attempts to follow the above sequence of analyzing the city's development trends, identifying a common vision and formulating the development strategy for the city. Because of the limited time and resources, the analysis of the city's urban sector will be based on the review of existing literatures, previous studies and interviews with concerned stakeholders and experts. The city diagnosis is expected to identify the key issues as well as the opportunities and limitations for future actions.

The stakeholders' perception of the key issues and their prioritization is to be obtained from the first stakeholders' workshop. The identification of key issues is expected to lead to the formulation of a common vision for the city. The draft CDS is then expected to be prepared based on the analysis of the city's current situation and the proposed vision for the city. The draft CDS is to be discussed and approved by the stakeholders during the second workshop, following which the final CDS is to be prepared and submitted for approval by the Municipal Board as well as the Government.

1.2.3 Urban Planning in the Context of CDS

Urban planning normally tends to be understood as being comprehensive and inclusive of all the different sectors related to the physical, economic and socio-cultural development of the city. However, in the context of the CDS for KMC, urban planning has been conceived of as one of ten urban sectors to be addressed by the CDS. Therefore, in the current study, urban planning has been dealt in the much narrower context of the physical development trends of the city. Similarly, the effectiveness or limitations of past as well as present plans, regulations and agency involvement has been analyzed within the same context. The city's economy, infrastructure, transportation, institutions etc. have been dealt with in detail as separate but interlinked sectors. This has helped to accord equal recognition to all the different urban sectors of the city, which otherwise would probably have been dealt with in a more cursory manner. Thus this study of urban planning of KMC is limited to the study of the city's urbanization trends, the city development plans prepared for the city at various periods, different Acts promulgated to enable implementation of the plans as well as the type and level of involvement of government and KMC agencies in the planning process.

1.2.4 City Diagnostic Report in the Context of CDS

As explained earlier the first task of the CDS is to understand the current status of the city. This entails preparing a detailed audit of the city whereby past and present trends are analyzed to determine the key issues of the city, the actions required to resolve them and the ability of the city to proceed with these actions. The city audit helps to corroborate and analyze the issues identified by the stakeholders. In most cases many issues tend to be overlooked by the stakeholders which the city diagnosis helps to incorporate in the CDS.

The city diagnostic report provides the base from which to proceed towards the formulation of strategies for the city. This section of the report attempts to diagnose only the urban planning component of KMC and together with the diagnostic studies of the other sectors constitutes the main diagnostic report of KMC.

1.3. URBANIZATION AND URBAN PLANNING IN KATHMANDU

1.3.1 Population

1.3.1.1 Trends in National Population Growth

According to the national census, the total population of Nepal was about 18.5 million in 1991 with an annual growth rate of 2.1 percent during the preceding interdecade period. The total population of the country is currently estimated to be about 22.9 million (Kathmandu Post, 11 July 2000). The total urban population in 1991 was 9.5 percent of the national population. The annual growth rate of the urban population was estimated to be 7 percent and the total urban population in 1997 was estimated to constitute about 14 percent of the country's population (Joshi 1997).

The national average household size in 1991 was 5.6 persons, which was slightly higher than the average urban household size in 1995-96 of 5.2 persons. The sex distribution of the national population in 1991 was 49.87% male and 50.13 % female. For the urban areas the male population was marginally higher with 50.8% male and 49.2% female in 1995-96. The urban literacy rate in 1995-96 at 71.8% (83.3% male and 59.8% female)

was much higher than the 1991 national literacy rate of 32.2% (44.2% male and 20.3% female).

During the enumeration of urban population, the 1952-54 census had denoted all settlements with population greater than 5000 as urban areas. The 1962 Nagar Panchayat Act defined urban areas as those settlements which were provided with the basic urban services and had a population in excess of 10,000. This definition was again revised in the 1991 Municipality Act whereby urban areas were categorized as metropolis (population greater than 300,000), sub-metropolis (100,000-300,000 population) and municipality (20,000-100,000 population). Currently there are one metropolis (Kathmandu), 4 sub-metropolises (Lalitpur, Biratnagar, Pokhara and Birgunj) and 53 municipalities in the country.

There is a growing realization that the present criteria for designating municipalities are not very practical. Some municipalities are mere conglomerations of several villages with a small market center and do not strictly adhere to the concept of an urban area with predominantly urban functions. On the other hand, towns that have urban character and perform urban functions have been excluded because of insufficient population. The Nepal Urban Sector Strategy Project has recommended the criteria to be revised and urban areas to be defined along several parameters such as population, population density, accumulation of non-farm activities, existence of urban services, predominance of urban functions and potential for future growth.

1.3.1.2 Population Growth in the Kathmandu Valley and Kathmandu City

Kathmandu is the primate city of the country comprising 24.1 percent of the national urban population and 70.4 percent of the valley's total urban population in 1991. Its primacy was even more accentuated during the time of political closure constituting 82.4 percent of the total urban population in 1952-54 which reduced to 64.9 percent in 1961 (CEDA, 1979). Although Kathmandu City's share of the valley urban population is not expected to show any significant change in the near future, its share of the national urban population is expected to gradually decline to about 20 percent and 18.2 percent in 2001 and 2011 respectively (KVTDC, 2000; Joshi, 1997), undoubtedly brought about because of rapid

CITY DIAGNOSTIC REPORT

urbanization occurring concurrently in the rest of the country.

As per the projection of the Kathmandu Valley Town Development Committee (KVTDC) study, the total population of Kathmandu Valley is expected to grow from 1.07 million in 1991 to 1.57 million and 2.02 million in 2001 and 2011 respectively. During the same

annually at 5.61% during 1991-2001 and 3.32% between 2001-11 with a projected population of 729,690 in 2001 and 1,011,105 in 2011. This population projection is quite consistent with ICIMOD's population estimate of 702,586 and Joshi's estimate of 726,419 for Kathmandu City in 2001. However, Joshi's estimate of Kathmandu City population of 1,240,629 in 2011 at a constant annual growth rate of 5.6% appears a bit optimistic. Considering

the fact that much of Kathmandu City is already urbanized and population growth is extending beyond municipal borders into the adjoining VDCs and radially along the major arterial roads, such a high growth rate probably cannot be sustained within the current municipal boundary itself over the longer period. The rapid urbanization of the country as well as the construction of the Banepa Sindhuli road is expected to diminish,

to some extent, Kathmandu's role as a major center of attraction for migrants in the future.

According to the KMC's City Data Book, the city population was estimated at 575,652 in 1998. This estimate appears to be slightly on the lower side as the annual growth rate works out to be only 4.56%. Similarly, Halcrow Fox's projected 2000 population of 452,095 at an annual growth rate of 3.5% has been proven erroneous, as that population had almost been reached in 1991. Not only does this underscore the difficulties of making accurate population projections, it renders much of the projections of an otherwise excellent study to be gross underestimates. Nevertheless, many of the findings and recommendations of the study still remain valid. The population projections made in earlier studies by the Management Support for Town

Table 1: Population of Kathmandu Valley Municipalities

	1981	1991	2001	2011
Kathmandu	235,160	421,258	729,690	1,011,105
Lalitpur	79,875	115,865	163,923	229,852
Bhaktapur	48,472	61,405	74,707	105,561
Kirtipur	37,877	46,477		
Madhyapur Thimi	39,988	49,767		
Total	363,507	598,528	1,046,185	1,442,762
% share of Kathmandu	64.7%	70.4%	69.7%	70.1%

Source: Population census 1981, 1991; Development Plan 2020 for the Kathmandu Valley (KVTDC, 2000)

period the valley's urban population is estimated to grow from 61.34 percent of the total Valley population in 1991 (55.4% if Kirtipur and Madhyapur Thimi are excluded) to 66.56 percent in 2001 and 71.41 percent in 2011. Meanwhile, the population of the VDCs of the valley in the coming decades is expected to grow at a much lower rate than that of the urban areas, especially in the outlying VDCs, as a result of migration to the urban areas. However, VDCs contiguous to the existing urban centres and along the major arterial roads are expected to experience significant growth in population as indicated by the past and present trends.

Kathmandu Metropolitan City's (KMC) population grew from 235,160 in 1981 to 421,258 in 1991, registering an annual growth rate of 6 percent. According to the KVTDC study the city's population is expected to grow

Table 2: Actual and Projected Population of Kathmandu Valley.

Municipality/VDC	Population					Annual Growth Rate					
	1971	1981	1991	2001	2011	2021	71-81	81-91	91-01	01-11	11-21
Kathmandu MC	150,402	235,160	421,258	729,690	1,011,105	1,382,298	4.57	6.00	5.65	3.32	3.18
Lalitpur SMC	59,049	79,875	115,865	163,923	229,852	319,655	3.07	3.79	3.53	3.44	3.35
Bhaktapur M	40,112	48,472	61,405	74,707	105,561	147,983	1.91	2.39	1.98	3.52	3.44
Kirtipur M	20,814	24,406	31,339	37,877	46,477	57,030	1.60	2.53	1.91	2.07	2.07
Madhyapur Thimi M	20,640	26,076	31,970	39,988	49,767	61,938	2.37	2.06	2.26	2.21	2.21
Valley VDCs	253,942	327,011	417,072	525,498	577,642	628,344	2.56	2.46	2.34	0.95	0.84
Total Valley	544,959	741,000	1,078,909	1,571,683	2,020,404	2,597,248	3.12	3.83	3.83	2.54	2.54
% All Municipalities	53.40	55.87	61.34	66.56	71.41	75.81					
VDCs with >10000 pop			1	4	15	34					

Source: National census 1971, 1981, 1991; Draft Kathmandu Valley Development Plan 2020, KVTDC, July, 2000.

Note: Significant reduction in the projected growth rate of the Valley VDCs partly due to the urban bias of the Component and UN method used for population projection.

Panchayats (1988) and Snowy Mountain Engineering Corp (1990) have also tended to remain on the lower side.

The average household size of the urban population of Kathmandu Valley in 1995-96 was 5.1 persons which was marginally less than the national average. In the same year, sex distribution of the valley's urban population was 51.5% male and 48.5% female while the literacy rate stood at 77.9%. The higher percentage of males in the Valley's urban population is probably due to the greater number of males who come to the valley in search of employment and education.

1.3.1.3 Migration in Kathmandu Metropolitan City

In the past migration had been a major source of population increase in the Kathmandu Valley. Large-scale migration had been observed after the 1960s because of Government policies which tended to centralize services and economic opportunities within the Valley. Regulating Growth (IUCN, 1995) had stated that in 1981, migrants comprised 11.1 percent of the valley's urban population. In 1991 migration had accelerated with migrants constituting 19.4 percent of the urban population. Kathmandu Development Plan 2020 had also estimated that migration accounted for about 37.5% of the population growth of the Valley during 1981-91 whereas it accounted for about 52% of the population increase of Kathmandu Metropolitan City during the same period. KMC was the main destination of the migrants. In comparison migration was moderate in Lalitpur and very nominal in Bhaktapur. Bhaktapur had in fact experienced net outmigration during the period.

In 1993 ICIMOD roughly estimated the floating population of the valley to be 50,000. Labour employed in manufacturing is generally not enumerated in the local population by the national census. The 1995 IUCN study estimated that if the floating population and the migrant labour were added to the migrant population enumerated

in the census, migration could account for almost 31.1 percent of the urban population.

1.3.1.4 Population Density in Kathmandu Metropolitan City

The Draft Structure Plan for Greater Kathmandu had estimated the overall gross population density in 1987 to be about 60-65 persons per hectare. Overall net densities were estimated to be 104 ppha for Kathmandu and 116 ppha for Lalitpur. In the same year, the Infrastructure Assessment Report for Kathmandu and Lalitpur Nagar Panchayats prepared by the same study team found 6 out of 33 wards of Kathmandu City had densities exceeding 500 ppha with ward 23 having the highest density of 1273 ppha while 5 out of 22 wards of Lalitpur had densities in excess of 500 ppha with the highest density of 1119 ppha registered in ward 14.

Based on 1989 aerial photographs, the Kathmandu Valley Urban Development Plans and Programs had divided Greater Kathmandu into 5 zones with net residential densities ranging from 850 ppha in the core areas to 140 ppha in zone 1, 80 ppha in zone 2, 40 ppha in zone 3 and 5 ppha in zone 4. The study assumed that the city could attain through densification a net residential density of 200 ppha or a gross residential density of 170 ppha for the city. The study noted that rapid growth would occur during the earlier stages of development but this would taper off after a density of about 70 ppha had been reached. This was because road fronting lots would be quickly developed leaving large undeveloped areas at the back with difficult access.

From the 1991 census it was found that the overall gross density of KMC was about 84 ppha, (see table 4). Densities in the 12 wards of the city core ranged from 419 ppha in ward 22 to 1067 ppha in ward 27. Eight wards from the city core area had densities in excess of 500 ppha, (see fig. 3). Comparing this to the data presented in the 1987 Structure Plan, it appears that emigration had occurred in the most congested wards but less congested city core wards had experienced density increases. Densities dropped off abruptly in the remaining wards. Three wards had densities ranging from 150-200 ppha of which two were older city extensions to the north and south of the core area and the remaining one was also the relatively old settlement areas of Bag Bazaar, Putali Sadak and Dilli Bazaar to the east of the city core.

Table 3: Migration into the Cities of Kathmandu

City	1981	%	1991	%
Kathmandu	29,127	78.4	83,511	83.7
Lalitpur	6,397	17.2	14,787	14.8
Bhaktapur	1,610	4.4	1,439	1.5
Total	37,134	100	99,737	100

Source: Population Census (unpublished) as presented in Regulating Growth, 1995.

WARD-WISE
POPULATION DENSITY
1991

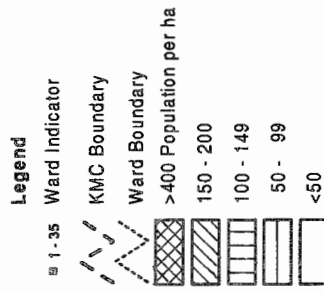
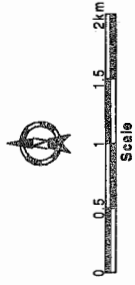
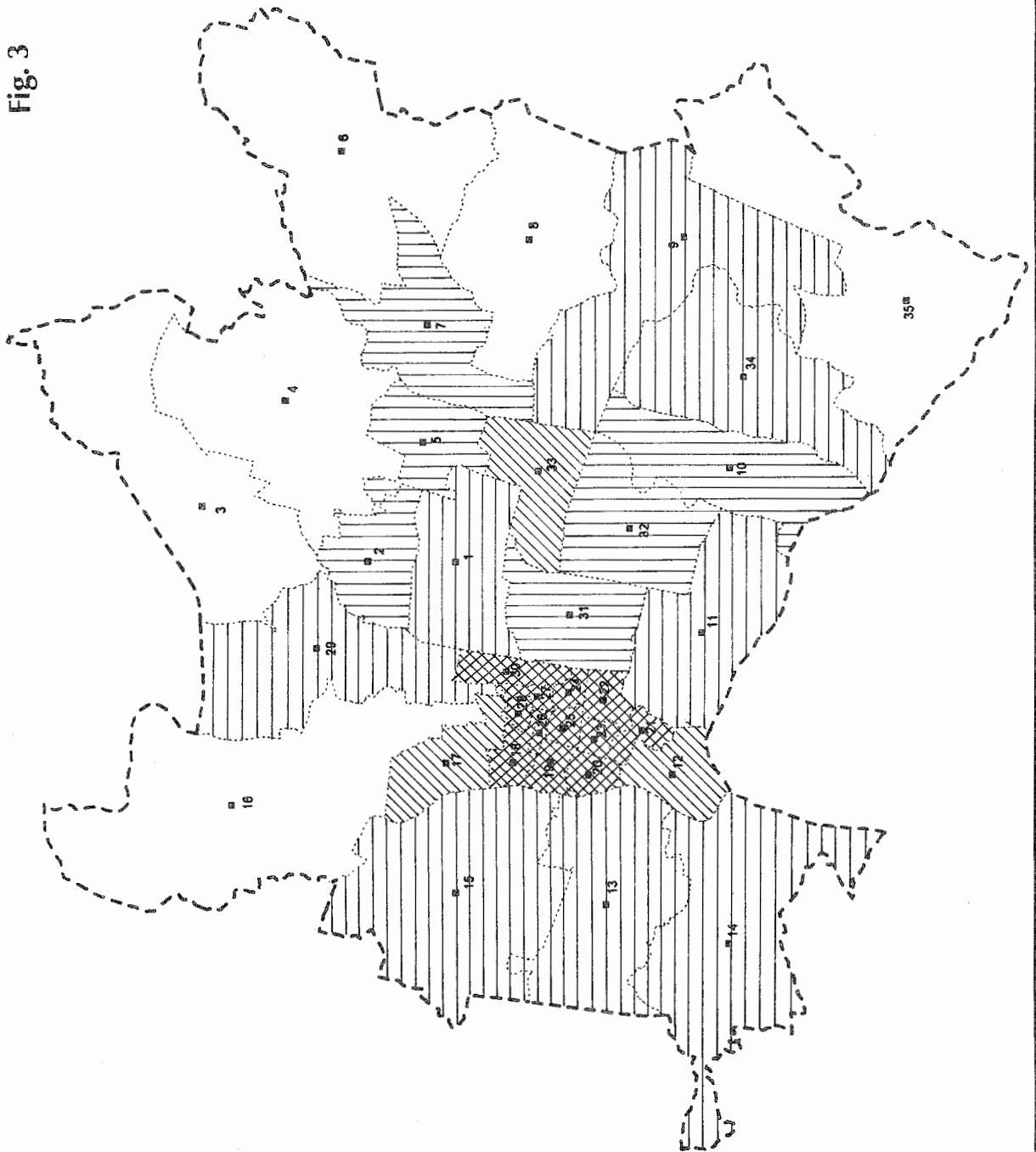


Fig. 3



KATHMANDU CITY
DEVELOPMENT STRATEGY

Source: Kathmandu Metropolitan City
Information & Communication Department
Geographic Information System Section

Table 4: Area, Households, Population and Population Density by Wards of Kathmandu Metropolitan City in 1991

Ward No.	Area in ha.	No. of Households	Population	Population Density ppha
1	138.4	1555	8731	63.09
2	81.3	1804	9163	112.71
3	329.7	2756	14347	43.52
4	324.1	3086	15337	47.32
5	79	1691	8646	109.44
6	366.8	3292	17509	47.73
7	153.5	3810	19797	128.97
8	253.8	1607	7756	30.56
9	301.9	3209	16516	54.71
10	156.8	3375	16000	102.04
11	183.9	1814	10055	54.68
12	51	1774	9940	194.90
13	213.3	2774	14746	69.13
14	302.9	3655	18425	60.83
15	316.5	3838	19627	62.01
16	437.4	4121	21286	48.66
17	65.7	2263	11605	176.64
cc 18	18.9	1428	8081	427.57
cc 19	15.5	1284	7588	489.55
cc 20	15.7	1702	8920	568.15
cc 21	15.4	2343	12383	804.09
cc 22	18.8	1288	7884	419.36
cc 23	10.2	1580	8711	854.02
cc 24	8.9	1044	6288	706.52
cc 25	10.3	954	5744	557.67
cc 26	4	766	4248	1,062.00
cc 27	7.6	1417	8112	1,067.37
cc 28	6.8	845	5077	746.62
29	218.6	3885	19179	87.74
cc 30	25.4	1974	11079	436.18
31	103.7	2260	12455	120.11
32	128	3339	14613	114.16
33	85.7	3636	17025	198.66
34	232.1	3375	16000	68.94
35	395	2532	12000	30.38
Total	5076.6	82076	424873	83.69

Source: KMC: Household and Population, CBS census 2048.
cc - city core

Note: The total ward population deviates slightly from census data because population figures for wards 34 and 35, which were formed after the census, were general estimates.

Six wards, the areas to first experience urban expansion, had densities of 100-149 ppha while 8 wards, which were areas subsequently urbanized, had densities of 50-99 ppha. Five wards at the fringes of the city had densities less than 50 ppha with wards 8 and 35 having the lowest density of about 30 ppha. Both these wards had large areas occupied by the airport and Pasupati area, which restricted urban expansion.

It can generally be surmised that apart from the historic city core and the early settlement areas, the density patterns of many of the city wards of Kathmandu in 1991

corresponded to low-rise low-density development. There has been a gradual process of densification in many of the wards, generally in decreasing order from the city center to the periphery, but the true extent and the intensity of this process can only be properly determined after the actual enumeration of the ward populations in subsequent studies or census. A population update is not expected before the forthcoming 2001 national census.

Currently the city's infrastructure has fallen far short of population growth, limiting to some extent the natural process of densification. However, if these could be sufficiently upgraded and extended together with a concomitant improvement in the transportation system, densities within the city wards could still be increased substantially to accommodate a significant proportion of the future population growth.

Halcrow Fox et al in its Kathmandu Valley Urban Development Plans and Programs (KVUDPP) had projected that in 2000 much of Greater Kathmandu within the ring road, except for institutional areas, open land and river flood plains, would have a gross urban density of 100-139 ppha or higher. Only the outer fringes of the metropolitan areas, mainly the western and northern fringes, were expected to have lower densities. Core areas were expected to maintain average densities of 700 ppha while the relatively earlier settled areas outside the core areas of Kathmandu and Lalitpur were expected to have densities of 140-170 ppha. The areas outside the ring road to the south of Lalitpur and along the Kathmandu-Bhaktapur transportation corridor were expected to attain gross densities of 30-79 ppha. Similarly, areas of Kathmandu outside the ring road and along the arterial roads were expected to have densities of 100-139 ppha. These areas were Bouddha, Bansbari, Balaju and Kalanki. As expected, densities in the airport and Pasupati areas were projected to remain low. In reality, the actual urban densities in Greater Kathmandu are expected to be much higher since the population projections were significantly underestimated by Halcrow Fox et al. As per the population projection of the KVTDC study, Kathmandu City is expected to attain a gross average density of about 144 ppha in 2001. If Halcrow Fox's assumptions that the city can attain gross average densities of 170 ppha are accepted, the city will not be able to accommodate more than 150,000 additional population after 2001.

KVTDC in its proposed draft Development Plan 2020 for Kathmandu Valley had noted that a large proportion of the expected population growth could be

accommodated within the existing urbanized areas if high-density developments were to be established at selected locations with good transportation linkages and infrastructure services. The study had proposed such developments at the intersections of the main radial roads and the ring road. KVTDC had specified that it was desirable to maintain a gross urban density of not less than 300 persons per hectare which could be achieved through housing policies that encouraged the development of multi-owned apartments over the current practice of detached owner built and occupied houses. It can be concluded that if such a policy could be successfully implemented, a significant amount of additional population could be absorbed within the existing urban areas through densification alone.

1.3.1.5 Prospects and Limitations of Population Growth in KMC

Although the population growth rate of KMC had been quite alarming in the past, registering 6% growth rate between 1981-91, this is expected to reduce significantly in the future mainly because of the emergence of other urban centres that will help to draw migrants away from Kathmandu as well as the limited land available within the existing KMC areas to accommodate additional population. By itself, population growth does not pose much of a problem. In fact, population is a valuable resource that is necessary for the economic growth of the city. As larger manufacturing industries are decentralized to other urban centres and Kathmandu specializes in service industries and information technology, it would be necessary to attract entrepreneurs and people with higher skills who could contribute to the creation of jobs and wealth in the city. Policies to restrict population growth could often be counterproductive and bring about economic slowdown. To retain the tax base of the city it will also become imperative to house the growing population within its municipal boundaries. Thus the challenge to the city is not to restrict population growth, but to manage the growth in a planned manner.

A study of the density patterns suggested that densities were quite low outside the city core. The city is expected to have a gross density of about 144 ppha in 2001. The KVTDC study has suggested to maintain a density of not less than 300 ppha which means that if effective policies to encourage densification could be implemented, much of the future population could be absorbed within the existing urban area. Densification

could be achieved by opening up landlocked parcels of land, which still exist at various locations within the city, through land pooling or guided land development programs. Policies could simultaneously be formulated to encourage high-density development in the form of high-rise apartments and commercial buildings at selected locations. As suggested by the KVTDC study suitable locations for such developments could be the areas close to the intersection of the ring road and the main arterial roads. These policies in conjunction with the development of a central business district, which was proposed by the KVUDPP study and is under consideration by KMC, could help relieve congestion in the city core as well as prevent the erosion of its tax base. It must be noted, however, that these programs cannot be effectively implemented in the absence of a comprehensive land use plan and the attending regulations as well as programs to concurrently improve infrastructure and transportation services.

In view of the fact that much of KMC has already been built up and urban growth has spilled over into the surrounding VDCs, the city must consider annexation of the contiguous urbanized and urbanizing VDCs as a distinct possibility in the near future. In fact, the inclusion of most of the VDCs of Kathmandu District, except those to the south and west of Kirtipur Municipality, to create a larger Kathmandu Metropolitan District would be even more practical as the city would have additional land to plan for essential services which are currently unavailable and to accommodate its future population growth in planned settlements. Thus, if KMC takes proper measures to increase the overall density, promotes high-density developments at selected locations and expands its municipal borders, it should be able to easily manage the expected population increase of the future.

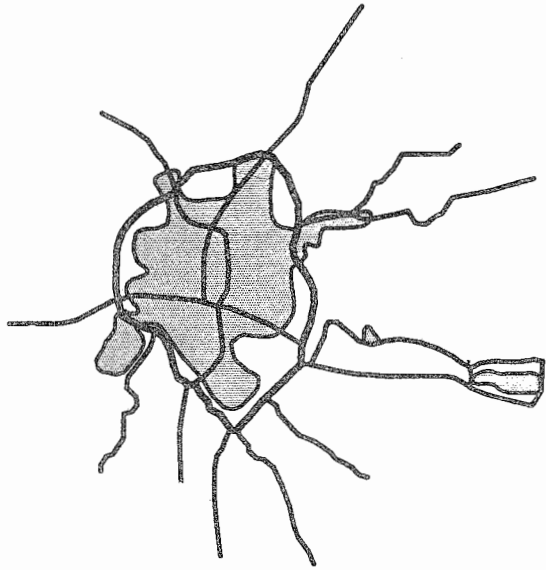
1.3.2 Growth of Kathmandu City

1.3.2.1 Early Urban Expansion Trends

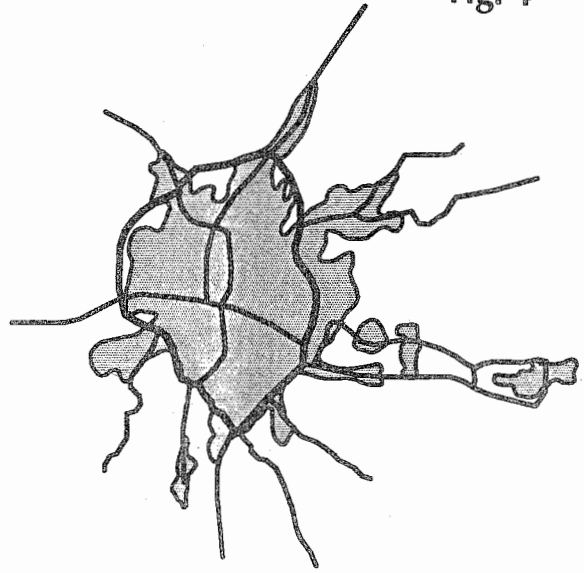
The earlier settlements of Kathmandu Valley were normally located on the drier, less fertile elevated flat lands, locally referred to as "tars", in order to preserve the fertile agricultural land along the valley's numerous river flood plains. Until the Malla period Kathmandu City remained as a compact settlement surrounded by agricultural land. After the Gorkha conquest the physical development of the Valley was greatly influenced by the construction of new palaces outside the city core. This practice was most prominent during the Rana period

URBAN EXPANSION TREND IN KATHMANDU VALLEY

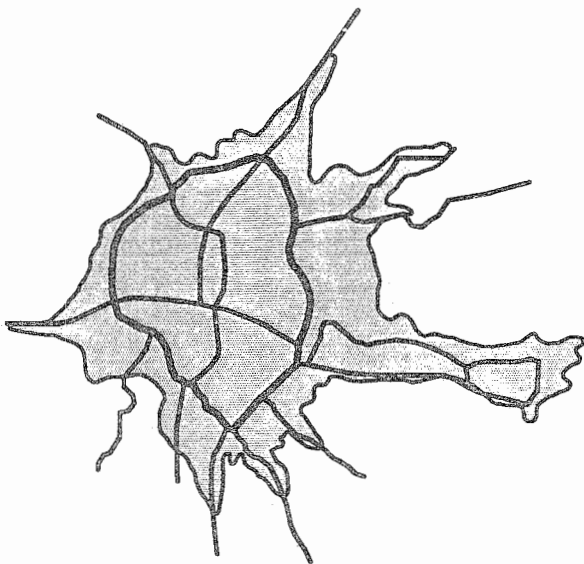
Fig. 4



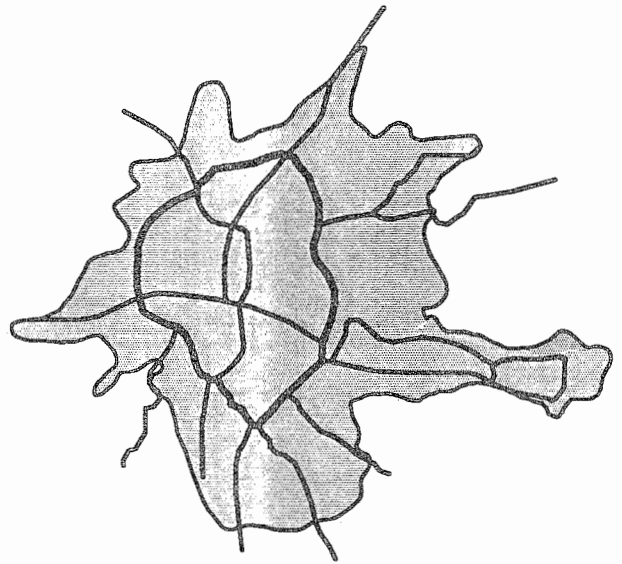
1984



1991



2000*



2015

KATHMANDU CITY DEVELOPMENT STRATEGY

Source: Kathmandu Valley Urban Road
Development, JICA, 1993

* Kathmandu Valley Development Plan 2020, 2000



Unplanned Urbanization

when palaces were built to the north, northeast and east of the Kathmandu City. A road network system was developed linking these palaces to the city core and to each other. Over time small settlements grew around the palace complexes and the land made accessible by the interconnecting roads became the areas to be first developed following the political changes in the country after 1951 (Department of Housing and Physical Planning, 1969).

Urban growth of Kathmandu outside the historic city core area occurred in the 50s and 60s mainly to the east and northeast, along Bag Bazaar, Dilli Bazaar and Putali Sadak in the east and towards Lazimpat and Maharajgunj in the northeast. These were generally low-density linear developments along existing road networks but without adequate infrastructure services. At the time of the preparation of The Physical Development Plan for the Kathmandu Valley in 1969, Kathmandu city was confined to the highlands between the Vishnumati River and the Dhobi Khola in the east-west direction and between Bagmati River and Maharajgunj in the north-south axis. Low intensity urbanization had occurred in the periphery, leaving large interstitial areas of undeveloped land within the city areas.

Urbanization gained further momentum during 1970-80 when low density urban expansion spread to outlying well drained tar lands with easy road access such as Bansbari, Teku-Kalimati, Baneshwore-Battispatali, etc. These new developments were occurring beyond the Vishnumati River on the west and Dhobi Khola on the east. The ring road, which was constructed in the mid-70s, gave further impetus to urban expansion as more areas were made accessible. Developments accelerated at the intersection areas of the ring road and the arterial

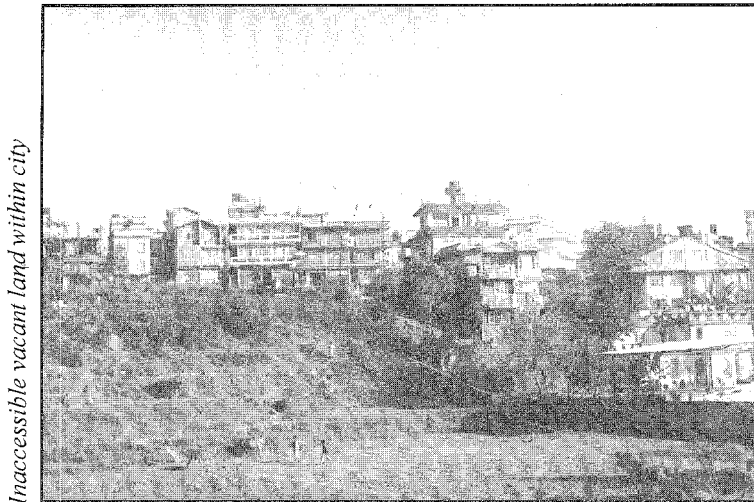
roads especially at Balaju, Maharajgunj and Jaulakhel. Different stages of urban growth in the valley are shown in Fig. 4.

Although the first urban development plan had been introduced in 1976, it had little effect in promoting planned development of the city. Unclear zone boundaries, vague allowable land uses and weak implementation led to laissez faire planning. Resource constraints prevented the Government from playing a proactive role in the development process. Instead, land development was carried out mostly by brokers and individual landowners. Urban expansion tended to be haphazard and unplanned and concentrated mainly along

existing roads as ribbon developments, leaving large pockets of inaccessible and unserviced areas in between. In many instances urbanization was occurring even in the absence of infrastructure, which was often provided only after the development process had been well established. Regulation of land development was further hampered by the fact that building permits and land registration/sub-division were conducted by different agencies which made little efforts to coordinate their activities.

1.3.2.2 Urban Growth in the 80s and 90s

By the 80s and the 90s, urban growth of Greater Kathmandu was taking place generally in the north-south direction. This was mainly due to the fact that much of the easily accessible land had already been urbanized and the land bordering on the west was undulating and difficult to develop while the airport and the Pashupatinath area impeded expansion to the east. Although pockets of inaccessible land still remained undeveloped within the municipal areas, unregulated ribbon developments along the principal arterial roads had extended beyond the city limits into the adjoining village development committees (VDC). The city had no jurisdiction over developments occurring beyond its borders in the VDCs. The Statutory Plan dating back to 1976 also did not cover areas beyond the municipal boundaries as a result of which the Kathmandu Valley Town Development Committee, the agency solely responsible for planning and regulating urban development of the Greater Kathmandu area, did not have the legal basis to control urbanization in the VDCs. In fact, many activities, which probably would not have been permitted in the city, tended to locate just outside



Inaccessible vacant land within city

the municipal boundaries in order to circumvent the requirements of building permits. This was the time when many industries were set up along the Kalanki-Thankot and Kathmandu-Bhaktapur transportation corridor.

A major thrust in urban expansion had also been occurring in the east along the Kathmandu-Bhaktapur transport corridor. Bhaktapur had long remained a neglected and relatively stagnant city in the past. Since the 80s, the intervening space between Kathmandu and Bhaktapur was being filled up with low-density urban development. This process has continued unabated throughout the 90s.

1.3.2.3 Urban Expansion into Flood Plains

In the 80s, apart from expansion into the outlying "tar" lands, development was also concurrently occurring in the low-lying flood plain areas close to the cities. Alarmed at this development, several studies attempted to formulate policies to halt this process. The Kathmandu Valley Urban Land Policy (1986) and the Management Support for Urban Development (1991) recommended policies to be introduced to confine urban development to the tar lands and preserve the low lying productive agricultural lands. In 1988, the Ministry of Housing and Physical Planning had prepared a "Land Development and Conservation Scheme" which advocated preservation of prime agricultural land and conservation of flood plains and low lands within Kathmandu Valley. A moratorium for a short period was declared on land sub-division and building construction. However, without a legal basis to prohibit construction in the low lands and agricultural areas as well as due to intense public resistance, these policies could not be legally

enforced. Today, urban growth has permeated into much of the flood plain areas of Bagmati, Vishnumati and Dhobikhola. Interestingly, the Kathmandu Valley Urban Development Plans and Programs (1991) had foreseen the inevitability of this trend and had accepted and given continuity to this process in their proposal as an alternative to uncontrolled urban sprawl along the city periphery where infrastructure servicing would be difficult and expensive. Because of the high land value and demand for urban space and the rationale for maximizing efficiency of urban land, it is difficult to visualize, in hindsight, how without outright land acquisition,

urbanization could have been prevented in the agricultural and low lands within the city areas.

Environmental considerations have forced all the subsequent plans to propose some form of protection of the river systems. While the earlier plans proposed to prohibit developments in the flood plains, the Development Plan 2020 has acknowledged urban developments in the flood plains as a fait accompli and proposed a setback of 20 metres from the river edge. One of the difficulties experienced in protecting the river domains from encroachment and maintaining uniform setback along the river edge has been the lack of clear demarcation of the river boundaries, especially on the cadastral survey maps. Disputes have often arisen because of the changes in the river courses and without proper records of such variations, delineation of accurate river domain has been difficult to establish. This has greatly handicapped more recent efforts by the Municipality to maintain a greenbelt setback along the riverbanks.

1.3.2.4 Land Development Process in Greater Kathmandu

Because of the Government's limited role in plan implementation, land development in the urban expansion areas has been conducted primarily by private owners, land brokers or land development companies. Whereas individual landowners and brokers have tended to develop residential parcels on a plot by plot basis, the companies have developed clusters of plots on relatively larger chunks of land. The companies' process has been a slight improvement over the piecemeal approach of the individual owners and brokers, however, areas developed by the companies have been generally too

small to make a profound impact, between 0.25-0.5 ha. (IUCN, 1995). The developed land has also tended to be deficient in road width, infrastructure services and open public spaces. There were more than 250 land development companies (Thapa 1995) but few were found to be active (IUCN 1995). Land development also often tended to be carried out for speculative purposes and served mainly the middle and higher income groups (Thapa 1995). With the recession in the land market in the past few years, most of the land developers have suffered losses or been driven out of business. Very recently private business groups have shown interest in developing large housing schemes. A joint venture of a local business house and an Indian housing company is currently constructing an apartment complex at Bagdol in Lalitpur. This type of planned area development does result in more efficient urban land use and similar projects, especially those aimed at lower income market, need to be promoted in the future.

In the absence of proper plans and regulatory measures, past land development process has tended to be very inefficient. As a corrective measure the Town Development Act 2045 (1988) was enacted after which the Government had a legal basis to intervene in the land development process. Three strategies were proposed for developing land for housing and other uses: site and services, guided land development and land pooling. Site and services necessitated the acquisition of private land and was the less preferred model because of high public resistance to land acquisition due to the long process involved and the Government's unrealistically low compensation rates. Site and services programs were carried out at Kuleshwore for civil servants and at Gulfutar and Saibu for the general public. Guided land development (GLD) was carried out throughout most of Greater Kathmandu by DHUD, excepting the city core areas. With limited intervention, GLD did help to open up areas which had no access to roads. The drawback of GLD was that there was no provision for concurrently incorporating land use and infrastructure development and relied on the cooperation of landowners to provide access. Many GLD programs could not be implemented because of the non-cooperation of the landowners, especially those with road fronting lots. The third program introduced was land pooling, which was a definite improvement over GLD for sites which were relatively undeveloped. Land pooling has been implemented with relative success at Gongabu, Dallu, Lubhu, Kamal Vinayak. However, in the absence of an overall land use plan, these land

development programs have tended to be ad hoc and not properly coordinated with other city functions.

The informal land development process had rarely given proper consideration to infrastructure, structural safety of buildings or access for emergency vehicles. In view of the fact that Kathmandu lies within the active seismic zone, this aspect should not have gone unattended. However, the laissez faire planning of the past had led to a situation whereby the existing deficiencies could not be rectified without extensive demolition or redevelopment. The National Society for Earthquake Technology (NSET, 1999) had estimated that in the event of a large earthquake in the Valley, almost 60 percent of the buildings and 95 percent of water pipes could be severely damaged. About half of the valley bridges and more than 10 percent of paved roads could also be rendered unusable. Areas without access to emergency vehicles could face major difficulties in times of calamity such as fire or earthquake. NSET had advocated proper implementation of building codes and land use plans which incorporated seismic issues such as provision of open spaces in urban areas and prohibition on development of areas susceptible to liquefaction or earthquake induced landslides. The fact that much of the urbanized areas of Kathmandu falls under areas most prone to liquefaction and the city is severely deficient in open urban spaces makes implementation of such policies all the more imperative.

1.3.2.5 Urbanization beyond Municipal Borders

Since the 80s and 90s, urban growth has extended beyond the Kathmandu Municipality borders along the main radial roads. In the coming decades much of the areas of the surrounding VDCs is expected to be urbanized.

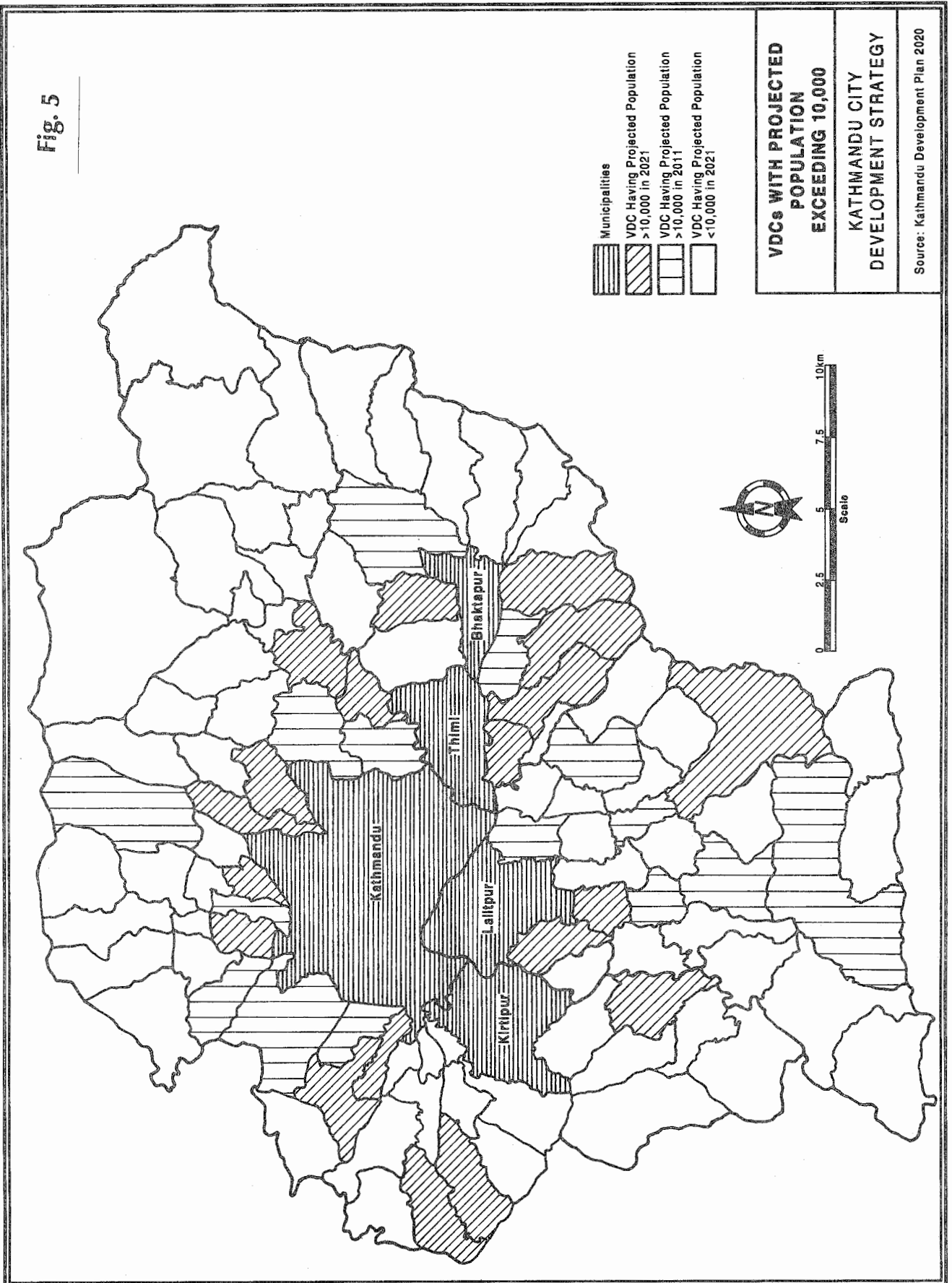
The 1995 study by IUCN had found about 37 percent of the VDCs of Kathmandu and Lalitpur as well as 24 percent of the VDCs of Bhaktapur to have urban to semi-urban character. If the trends were allowed to continue,

Table 5: Urbanized VDCs of Kathmandu Valley

	Total VDCs	Urban to Semi-Urban VDCs			
		1994	%	2010	%
Kathmandu	65	16	36.9	32	49.2
Lalitpur	24	9	37.5	16	66.6
Bhaktapur	21	8	23.8	16	76.1
Total	110	33	30.0	64	60.0

Source: Regulating Growth: Kathmandu Valley, IUCN, 1995.

Fig. 5



VDCs WITH PROJECTED POPULATION EXCEEDING 10,000

KATHMANDU CITY DEVELOPMENT STRATEGY

Source: Kathmandu Development Plan 2020



Unplanned Urbanization in surrounding VDCs

it predicted that about 60 percent of the Valley VDCs would be urbanized by 2010.

A few adjustments were made in the municipalities and VDCs of the valley prior to the 1997 elections. A few wards of KMC were readjusted to create two additional wards, bringing the total to 35 wards. Two new municipalities of Kirtipur and Madhyapur Thimi were formed by combining eight adjoining VDCs of Kathmandu District and five VDCs of Bhaktapur District respectively. As a consequence the total number of VDCs within the Kathmandu Valley was reduced from 110 to 99.

The KVTDC study had projected that in 2001 four VDCs including Jorpati of Kathmandu District would have a population in excess of 10,000. In 2011, 15 VDCs including 7 VDCs of Kathmandu District were expected to have more than 10,000 population and by 2021 this number was expected to increase to 34 of which 17 were expected to be from Kathmandu District, (see fig. 5). Although population by itself is not a true indicator of urbanization, high population levels in the VDCs tend to correspond closely to the urbanization patterns. This relationship is corroborated by a general examination of the current trends.

The problems related to development spillover from the cities to the VDCs and the lack of coordination and overlapping jurisdictions and responsibilities had been well recognized in previous studies. The National Urban Forum 1995/96 had suggested the creation of an agency, which would prepare plans for the entire valley and would have the authority to plan, coordinate and monitor development works within the Valley. The Forum recommended the formation of three Municipality Districts to replace the existing local governments. There had also been a suggestion for the creation of a single metropolitan district for the valley.

The trend of urban expansion into the surrounding VDCs gives rise to several problems. The urbanization process tends to be unplanned and without accompanying infrastructural developments and the city does not have the jurisdiction to regulate such growth. Whereas, the residents enjoy the many facilities and services provided by the city, it becomes difficult to include them in the development process and bring them into the tax system of the city. Given the current situation, it is highly improbable that the individual local bodies, mainly the other municipalities which have been enjoying certain levels of autonomy, would be willing to be merged into a single large entity, despite

the many planning advantages it may have. However, many smaller VDCs could be more willing to be annexed by a larger municipality in the hopes that such a merger would bring about improved services and investments.

1.3.2.6 Current Urbanization Pattern

An imprint of Greater Kathmandu's current growth pattern resembles the shape of an octopus. Urbanization has extended upto Thankot in the west, Budhanilkantha in the north, Jorpati and Sundarilal in the north-east, Bhaktapur in the east, Lubhu and Godavari in the south-east and Chapagaon in the south. Without a comprehensive policy to plan and regulate urbanization, this process is expected to continue, especially in the east once the Valley is linked to the eastern part of the country by the Banepa-Sindhuli highway.

The Kathmandu Urban Land Policy (1986) had predicted that if prevailing trends of urban growth were allowed to continue without appropriate action to check the growth, about 60 percent of the entire valley (about 34,000 ha.) would be urbanized by 2020. A consequence of the unchecked urban expansion has been the loss of fertile agriculture land, environmental degradation of the valley, depletion of water resources, poor and deficient infrastructure, improper disposal of industrial and domestic waste and pollution of air, water and land.

1.3.2.7 Infrastructure Services

The Nepal Water Supply Corporation (NWSC) is responsible for water supply in KMC. NWSC's supply in the wet season is 120 mld and 80 mld during the dry

season (Lumanti et al, 2000). Much of the Greater Kathmandu's 270 km. of pipeline is estimated to be over 50 years old resulting in losses of about 40% of total supply (ICIMOD, 1993). Per capita consumption in 1992 ranged from 145 lpcd among high-income group to 45 lpcd among low-income group. Some city core areas consumed as low as 14 lpcd, primarily due to unavailability of water (EMAG, 1992). Water demand was expected to reach 213 mld in 2001 (Lumanti et al, 2000). The widening gap in the supply and demand of water has resulted in increasing shortages. Private tanker services and individual deep wells have helped alleviate some of the shortage but the problem is not expected to be resolved until the Melamchi Project comes on line, probably sometime in 2006.

The 1992 study by EMAG had estimated 17% of households in Kathmandu and 34% of households in Lalitpur to be served by sewerage system. More than 2/3 the capacity of the existing sewerage system is estimated to have been lost due to siltation. Sewage from the network is discharged directly into the rivers. The stabilization ponds at Sundarighat and Kodku, designed to treat the sewage from Kathmandu and Patan, were never brought into operation.

Drainage problems are increasing in the city mainly because of developments in low-lying areas, destruction or blockage of natural drainage channels and increased run-off from more paved areas. About 25% of households in Greater Kathmandu reported flooding problems.

The expansion and improvement of infrastructure services has always remained far behind the physical expansion of the city, resulting in inadequate or even total absence of services. Infrastructure development is a major tool to guide urban expansion. However, due to lack of integration of services based on a rational land use plan, backed by institutional capacity for implementation, as well as poor coordination among the concerned agencies, infrastructure has tended to follow rather than guide developments. The concept of privatization of services as well as relating service charge to quality of service has also not been applied, resulting in inability to recover development costs. For a more detailed account refer section on municipal services.

1.3.2.8 Transportation

In 1998, there was a total of 612 km. of urban roads in the Valley, inclusive of 431 km. in Kathmandu, 175 km.

in Lalitpur and 6 km. in Bhaktapur (DOR, 1998). The roads in the city core are narrow and not designed for vehicular traffic. Excluding a few roads, much of the urban roads are narrow and traffic congested. The mix of slow and fast moving traffic, bottlenecks at certain locations, increase in vehicles, encroachment on the roads etc. are contributing to increased traffic congestion. No effort has been made to link land use and transportation planning. For further details, refer section on transportation.

1.3.2.9 Growth of Slums and Urban Squatters

Another unfortunate and unforeseen development of the continued unplanned urban expansion has been the marginalisation of the urban poor. Currently, the percentage of Kathmandu's residents whose incomes were below the poverty line was estimated at 12-15% of the population (Lumanti et al, 2000). The urban poor lived either in slums, squatter settlements or rental accommodations. The slums, which were legal establishments, were found to be generally inhabited by low caste people whereas the squatter settlements were more heterogeneous (Lumanti, 2000). Other low-income groups such as day laborers, hawkers and unskilled or semi-skilled factory workers tended to live in rented rooms.

Urbanization had resulted in escalating land prices, building costs and rentals, putting land and housing beyond the reach of the urban poor. As many of the old houses in the city core area which had been providing sub-standard but cheap rental housing were falling into disrepair or were being renovated and converted to commercial use, many of the displaced people were forced to squat on public land and buildings. About 67% of the estimated 18000 squatter population had built settlements on previously vacant marginal public land, especially along the river banks, while 25% of them were believed to be occupying public buildings, mostly public shelters around temples or riverbanks (Lumanti et al, 2000). The squatter settlements which numbered 17 communities in 1985 had grown to 65 settlement areas in 2000, most of which were located in Kathmandu Metropolitan City. There have been very little efforts in the past to provide low-income housing to accommodate such people. The Kathmandu-Lalitpur Structure Plan had estimated there were about 1480 ha. of guthi or trust land in the valley, much of it within or close to the towns, some of which it had suggested using for low income housing and urban open space. Whereas, the current

estimate of the squatters does not appear large in comparison to other neighboring cities of the SAARC region, this is a growing phenomenon which needs to be addressed timely before it reaches alarming proportions. For further details refer chapter on housing and squatter settlements.

1.3.3 The City Development Plans

1.3.3.1 The Physical Development Plan for the Kathmandu Valley

The Physical Development Plan for the Kathmandu Valley was prepared by the Department of Housing, Building and Physical Planning in 1969 with technical assistance from the UN. It was the first study to introduce the concept of regional development and undertake a comprehensive study of the Valley. The Valley was considered as a single planning unit and a land use plan was proposed for Kathmandu-Lalitpur for the next 20-30 years. One of the alternative regional approaches was the development of Bhaktapur as a secondary urban node and revitalization through dispersal of services and facilities of the outlying settlements of the Valley.

At the time of the study the city was confined to the highlands between the Vishnumati River and the Dhobi Khola. As the plan proposed to preserve valuable agricultural land of the Valley, priority was given towards absorbing much of the population growth through densification within the existing peripheral urban areas and accommodating future growth in the urban expansion areas identified on the highlands to the west of the Vishnumati River. No new residential developments were proposed east of the Dhobi Khola or beyond Bansbari to the north. Zoning and infrastructure development were recommended to be used to direct and encourage growth towards the designated areas. The historic city core was designated as special preservation zone. Despite the opportune moment to operationalize the Plan and regulate urban growth in a planned manner while the city was still in its early stage of development, the Government did not formally adopt the Plan.

1.3.3.2 The Kathmandu Valley Town Development Plan

Drawing heavily from the 1969 Plan and after revising it to incorporate the proposed ring road around Kathmandu-Lalitpur city, the Kathmandu Valley Physical

Development Plan was prepared in 1973. This plan consisted of a coloured map but without backing data and documents. The 1973 plan was further elaborated in the form of detailed land use plans and accompanying regulatory measures to prepare the Kathmandu Valley Town Development Plan 1976 which was the first legally adopted planning document for Kathmandu and Lalitpur. The 1976 Plan comprised of a series of policy documents approved at different times by the Cabinet. Although the series of documents appeared as an incoherent method of representing integrated urban plans and policies for the city, they were attempts to fill in the shortcomings in the plans during later periods. As the city was still at an early stage of development, the 1976 Plan encompassed mainly the Greater Kathmandu area lying within the ring road. The Plan's regulatory functions were, however, limited to building bulk control. It had demarcated urban areas into various zones but these had not been translated into cadastral survey maps, which were the legal documents for land transaction and sub-division. This led to confusion regarding zone boundaries. Without specific zoning ordinances to precisely specify the nature, type and intensity of activities, land uses often tended to be conflicting and incompatible. Urban development often occurred without the attending infrastructure services since plans or standards for infrastructure services did not exist. Despite its many shortcomings, the 1976 Plan still remains the statutory plan for Kathmandu and Lalitpur.

1.3.3.3 Kathmandu Valley Physical Development Concept, 1984

After 1981, urbanization spread further to the tar lands at the city peripheries along the arterial roads such as Bansbari, Bouddha, Koteshwore and Kalanki-Thankot in Kathmandu, Saibhu-Bhainsepati and Sunakothi in Lalitpur and along the Kathmandu-Bhaktapur transport corridor. Probably, recognizing the need to accommodate the growing urban population in compact planned settlements instead of allowing unplanned urban sprawl beyond the city limits and to overcome some of the shortcomings of the earlier Plan, the Kathmandu Valley Physical Development Concept, 1984, attempted to revise the 1976 Plan and introduce zoning regulations. Its main goal was to develop Kathmandu into an important center of administration, trade and tourism. It proposed urban expansion to be confined to the physically feasible areas within Greater Kathmandu and aimed to develop new planned settlements at Thankot-

Mahadev, Chaulakhel, Saibhu-Bhainsepati, Champi, Idolmatatitar (on the way to Lubhu), Dibyeshwori (Lokanthali and areas west of Thimi) etc. The zoning proposal still remained vague and difficult to implement. The Plan was not officially endorsed and therefore could not be implemented.

1.3.3.4 Kathmandu-Lalitpur Structure Plan

During the period of hectic growth during the 70s and 80s, two plans were prepared for the Greater Kathmandu Area, the Kathmandu-Lalitpur Structure Plan (1987) and the Kathmandu Valley Urban Development Plans and Programs (1991). Technical assistance for the former was provided by UNDP and the World Bank while the latter was supported by the Asian Development Bank. The 1987 Plan recommended consolidation of urban areas and protection of fertile agricultural lands and river flood plains. It called for the preparation of a revised land use plan, detailed area plans, zoning regulations and infrastructure guidelines and standards. The Plan was not officially approved and could not be implemented.

1.3.3.5 Kathmandu Valley Urban Development Plans and Programs

The Kathmandu Valley Urban Development Plans and Programs had the goal of developing Kathmandu Valley as a government center and as a center of culture, tourism and historic preservation. The 1991 Plan recognized the limited ability of the Government to intervene in the development process and thought it prudent to direct and regulate prevailing growth trends, instead of opting for other strategic options such as satellite towns or growth corridors. It proposed to link as well as control urban growth through planned infrastructure development. It accepted the development of flood plains close to the city and proposed to preserve well-irrigated prime agricultural land outside the city limits, mainly to the south east of the Valley.

The 1991 Plan had identified lack of coordinated plans, programs and resources as one of the main constraints to planned development. It had also determined that the people's ability and willingness to pay for infrastructure services was very low. Without infringing on the people's right to develop their land, it recommended indirect control of land use by controlling the provision of infrastructure. But whenever land had to be acquired or

land developments to be restricted, the study proposed compensation at fair market price to the landowners for their land or for the loss of development rights. It advocated flexible land use zoning which could easily accommodate developments dictated by market forces and economic trends but which would preclude developments harmful to the society or environment. It also recommended densification for more efficient infrastructure servicing. As it had accepted the developments already occurring in the flood plains, it proposed restriction only on areas actually prone to flooding and to release all other areas for development. The Infrastructure Assessment Report of Kathmandu and Lalitpur Nagar Panchayats prepared by the Management Support for Town Panchayats (1988) had estimated actual areas prone to flooding or having severe drainage problems as 232 ha. in Kathmandu and 89 ha. in Lalitpur or about 6 percent of the urban areas. To enable servicing of these low lying areas the Plan proposed the construction of trunk sewers along the river banks with a treatment center located beyond the Chobar Gorge. The study suggested developing the areas within the ring road as residential areas and developing certain areas beyond the ring road for wholesale and industrial uses. New large or polluting industries were to be prohibited from locating within the valley. To release land from unproductive urban use, it recommended relocation of existing institutional uses such as the army, jail, local and branch offices. It also proposed the development of a new central business district encompassing areas of Darbar Marg, Jamal, Kamaladi, Bag Bazaar and Putali Sadak to relieve pressure of business and commercial activities from the city core. Unfortunately, neither the 1987 nor the 1991 plans were officially endorsed. Nonetheless, many of the strategic recommendations of the Kathmandu Valley Urban Development Plans and Programs continue to remain relevant.

1.3.3.6 Revised By-laws for Greater Kathmandu

In view of the ineffectiveness of the statutory plan in regulating urbanization in a planned manner and the constant failure to get the revised city development plans approved by the government, the Kathmandu Valley Town Development Committee decided to bring about greater regulatory control on building activities through the revision of the building by-laws of Greater Kathmandu in 1994. The jurisdictional area was once again limited by the legal plan to the municipal boundaries of Kathmandu and Lalitpur cities. Provisions

were made in the by-laws to restrict development on land without road access or having an area of less than two and a half annas (approximately 855 sq.ft.). In order to encourage densification and vertical growth in areas other than the historic zones, building height controls were replaced by floor area ratio (FAR) controls. Planned area development was encouraged with mandatory provisions for open spaces. A revised land use map and land use regulations were also provided as attachments but these served only as a guideline rather than mandatory provisions. The new by-laws had the potential to encourage densification and concentrated developments at selected locations, however, inability to upgrade and expand infrastructure, relatively low FAR and lack of special incentives for planned area developments failed to overturn the prevailing pattern of low density urban sprawl.

1.3.3.7 Regulating Growth: Kathmandu Valley

In 1995 IUCN undertook a study of the Kathmandu Valley with a view to provide policies for regulating the unplanned urban sprawl and protecting forest reserves, prime agricultural land, open spaces, cultural and historic sites, river banks and environmentally fragile areas. It recommended the preparation of a valley-wide land use plan along with the implementation of an integrated infrastructure development program. To relieve pressure from the core areas of Greater Kathmandu, it suggested de-concentrating development activities to the peripheral areas. It recommended private sector involvement in planned area development and housing and proposed using guthi land for this purpose. It proposed the planning institutions to be strengthened and simple basic by-laws to be prepared and implemented in all the non-municipal areas. Despite its many useful recommendations, the study was not officially endorsed by the Government.

1.3.3.8 Development Plan 2020 for the Kathmandu Valley

The current state of urbanization of the Valley and the limitations imposed by the defined jurisdictional areas of the different local bodies had necessitated a valley-wide planning exercise. The Kathmandu Valley Town Development Committee under the Ministry of Housing and Physical Planning, recently reorganized as the Ministry of Physical Planning and Works, and the

Department of Housing and Urban Development, also simultaneously reorganized as the Department of Urban Development and Building Construction, is in the process of preparing a 20 year strategic plan for the entire valley. The Plan is expected to provide a broad framework to the municipalities and VDCs for the preparation of detailed land use plans and local area plans. The vision of the Plan has been stated as developing Kathmandu Valley into a cultural, tourism and capital region with a vibrant economy, geared to compete with other regional cities. This regional role for the Valley had also been forwarded earlier by Joshi (Joshi 1997). The Plan is still in the draft stage. Some of the policies forwarded are densification and in-fill development instead of uncontrolled sprawl, provision of infrastructure to guide development of desired areas, high density development nodes in major road intersections along the ring road, promotion of mixed land use within the city and location of industrial activities to the peripheral areas. The Plan has also called for broad regional policies aimed at economic deconcentration, urban containment and regional planning approach to manage urban growth of the Valley.

1.3.3.9 Nepal Urban Sector Strategy

The Nepal Urban Sector Strategy, which is in the final stage of preparation, is being prepared by DHUD with technical assistance from ADB. The study has tended to focus more on strategies and policies applicable to the overall urban sector of the country and has specified only a few policies for the Kathmandu Valley. The draft document has specified heritage and tourism as strategic focus areas for the Kathmandu Valley and has proposed preparing a comprehensive land use plan for the Valley with the participation of all stakeholders. Other policies are prohibition on polluting industries and control on urban growth.

1.3.3.10 Institutional Strengthening of Kathmandu Metropolitan City Project

Since September 1999, the Asian Development Bank has been assisting KMC to implement the Institutional Strengthening of KMC Project. The Project's objective is to improve KMC's overall organizational competence, increase its effectiveness in mobilizing and managing its financial resources, and improve its capacity to deliver urban services. It is expected that the institutional strengthening of KMC as proposed by the Project will

allow the city to gradually assume responsibilities and functions as a local government as empowered by the Local Self Governance Act. The Project duration is till end 2000.

1.3.3.11 The Kathmandu Valley Mapping Program

The Commission of European Communities (CEC) is providing financial and technical assistance to KMC to implement the Kathmandu Valley Mapping Program. The Project commenced in May 1999 and is expected to continue till April 2003. The Project aims to improve the planning and implementation capabilities of KMC by establishing an Information Systems Unit using Geographic Information System (GIS) and Data Based Management System. It will also help to prepare integrated action plans, a strategic plan for Kathmandu, city center upgrading action plan, city core heritage action plan and solid waste management action plan.

Aerial photographs of the Valley are expected to be taken shortly which will be used to update the city's GIS and DBMS. The Project is currently in the process of preparing an integrated action plan for the city to identify ward-level priority projects for incorporation in the forthcoming annual programs of the city. Once the Project completes its ongoing data collection and analysis process, it will be in a strong position to review and revise the CDS being prepared under the current KMC/World Bank initiative.

1.3.3.12 Outcome of Past Planning Exercises

Despite the continuous production of revised urban development plans for Greater Kathmandu, it is rather unfortunate that government approval to implement them was not forthcoming and the statutory plan for KMC continues to be the 1976 Kathmandu Valley Development Plan. The 1976 Plan is not only out of date, it lacks clear zoning regulations and demarcations and does not have any specific programs to coordinate land development with infrastructure and

transportation. As a consequence, the city has grown in a haphazard manner with little consideration for the official plan.

Given the limited resources of the government and KMC to undertake large urban renewal and redevelopment programs, much of the urban development of the past must be taken as fait accompli. However, considering the ineffectiveness of the 1976 Plan to ensure planned physical growth of the city, KMC needs to urgently prepare and obtain approval for the implementation of a revised land use plan for the city, together with the attending zoning regulations, detailed area plans, infrastructure and transportation improvement programs. The plan would be guided by the broader valley-wide plans but would be more responsive to the specific issues and requirements of the city. New large-scale developments would probably be difficult to initiate within the existing municipal area. Such developments would have to occur in areas targeted for future urban expansion beyond municipal boundaries. Within the city area, improvements would have to be made phase-wise and on a smaller scale.

1.3.4 Land Use Planning

1.3.4.1 Land Uses in Kathmandu Valley

Agriculture use has been the predominant land use in the Kathmandu Valley, followed by forests and grasslands. Over the past decades urbanization has encroached upon "tar" agricultural land and more recently on more fertile agricultural land along the river flood plains closer to the developed areas of the city. It has also spilled over into adjoining VDCs converting agriculture land to urban use. Agriculture land of the Valley had reduced from 41,950 ha. in 1984 to 33,308

Table 6: Kathmandu Valley Land Utilization

Land Use	1984 ¹		1994 ¹		2000 ²	
	Area (ha)	%	Area(ha)	%	Area(ha)	%
Urban	3096	4.8	8378	13.1	9193 ³	13.8
Agriculture	40,950	64	33,308	52.1	27,570	41.4
Forest/Grassland	19,439	30.4	20,945	32.7	20,677	31.0
River	479	0.8	583	0.9	496	0.7
Others (airport/pond etc.)	NA	-	336	0.5	310 ⁴	0.5
Abandoned land	NA	-	414	0.7	NA	-
Rural Settlement ⁵	NA	-	NA	-	8404	12.6
Total	63,964	100	63964	100	66,655	100

1 Source: Regulating Growth; Kathmandu Valley; IUCN; 1995.

2 Source: Draft Development Plan 2020 for Kathmandu Valley; KVTDC; 2000.

3 Includes 2593 ha. of new residential development in VDCs which are mainly urban sprawl

4 Covers transportation only.

5 Consists predominantly of traditional village settlements.

ha. in 1994 and 27,570 ha. in 2000. Urban land had increased correspondingly from about 3096 ha. in 1984 to 8378 ha. in 1994 and 9198 ha. in 2000.

Because of differences in the calculation of the total area of the Valley, the increase in the percentage of land under urban use between 1994 and 2000 does not appear very significant. However, there has been a real increase in urban land use by about 820 ha. during the period. Halcrow Fox et al had estimated that the net area under urban development would be about 10,128 ha. in 2010 and 14,332 in 2015. Considering the fact that the study had quite significantly underestimated the future population of the Valley, it could be assumed that the estimated urban land use during the projected periods would be much higher. Similarly, ICIMOD had estimated that if current trends were allowed to continue, additional urban land requirement between 1991-2001 would be about 5286 ha, an area almost equal to the existing urban area. To counteract such trends ICIMOD had recommended enhanced densification and expansion of urban area with concomitant provision of adequate infrastructure and institutional/recreational and open spaces.

The Development Plan 2020 (KVTDC) had estimated that if a gross density of 300 persons per hectare could be achieved within the existing urban areas, the demand for urban land in the next 20 years would be slightly over 3600 hectares. However, considering the difficulty in effecting public perception about apartment housing and overturning the current trend of owner occupied single housing, demand for urban land will probably be much higher than envisaged.

1.3.4.2 Land Uses In Kathmandu Metropolitan City

A study undertaken by MSUD in 1989 had determined that only 62% of Kathmandu municipal area and 52% of Lalitpur municipal area had been built up. Quite a significant proportion of open land within the city probably comprised of pockets of undeveloped land restricted from being developed due to lack of access. This can be surmised from the fact that urban expansion had already been occurring in the peripheral areas even while chunks of undeveloped areas was available closer to the city center.

A more recent study by Kathmandu municipality indicated that during the intervening period much of the

Table 7: Kathmandu Metropolitan City Land Use 1995

Land Use	Area in ha.	%
Mixed residential/commercial	3273.6	64.5
Commercial/industrial	82.6	1.6
Institutional	239.2	4.7
Transport (airport/bus terminal)	166.3	3.3
Others (vacant/open land, VIP area, squatter)	1314.3	25.9
Total	5076	100

Source: Cities Data Book, KMC, 2000.

area within the city limits had already been developed, with residential land forming the predominant use. Institutional use also covered quite a significant amount of land. The KVTDC study had identified about 150 ha of urban land under military occupation. If lower order government institutions could be decentralized and the central jail, military and police units relocated to outlying areas or outside the Valley, substantial area of land could be released for crucial urban developments such as low cost housing, apartments, recreational areas etc. Only about one-fourth of the city appeared to remain undeveloped. If however, public open spaces, VIP areas and squatter settlements were deducted, the actual open undeveloped space would be much lower. These probably comprise mostly areas within the city still without proper access and areas more difficult to develop along the river flood plains.

Comparing the current development of KMC with the land use proposal of 1984, which is a slight revision of the 1976 Plan, it is interesting to note that developments have far exceeded the provisions of the Plan, rendering it ineffective and out of date. The Plan proposed to retain low density residential developments in the areas developed since the 70s such as Tahachal, Kalimati, Baneshwore, Lazimpat, Maharajgunj, Bansbari, Chabahil, Bouddha, areas south of core Patan city etc. It proposed to retain agricultural use along the Bagmati flood plain from Pashupati to the Manohara confluence, the Bagmati flood plain at Sankhamul, northern reaches of the Vishnumati and Dhobi Khola flood plains and the Bagmati flood plain west of Sanepa. The proposed low density areas-density had not been defined but was assumed to be less than 100 ppha- have turned into medium density areas with pockets of relatively higher density development. Similarly, the river flood plains have been mostly built over. Incidentally, the areas targeted for accelerated urban development after 1991 by the Kathmandu Valley Urban Development Plans and Programs were the same flood plain areas proposed by the 1984 Plan to be preserved and the proposed low-

density areas south of Patan city. Whereas, the total residential/commercial area proposed for the Greater Kathmandu area was 4204 ha., 3273 ha. had already been taken up for residential purposes in Kathmandu alone in 1995. Land designated for uses other than residential had already been converted to residential use. In other words, the Plan which continues to serve as the guiding document for urban planning of Greater Kathmandu does not incorporate the current changed situation and is in need of urgent revision.

1.3.4.3 Land Uses for Industries

Although Greater Kathmandu has served as the major administrative, economic and service center of the country, because of environmental considerations, there appears to be limits to the extent of industrial activities which could be allowed in the Valley. This has been well recognized by all the previous plans and studies as well as the report of the committee which reviewed the 1991 plan where it had been recommended that large industries should be prohibited from locating inside the Valley. The studies had suggested only small to medium scale industries, which would not adversely effect the environment, to be allowed in the Valley, preferably in well-defined favorable locations for efficient infrastructure servicing. Meanwhile, recognizing the importance of a thriving economy to sustain the city, the KVTDC plan has proposed to establish high-tech industries in Kathmandu as a substitute for the larger manufacturing industries which would be relocated outside the Valley.

Earlier, industrial estates had been created in Kathmandu, Lalitpur and Bhaktapur to accommodate industrial establishments. However, because of lack of strict land

use regulations, lack of coordination between the planning agencies and the Department of Industry which issued industrial licenses as well as the tendency of owners to set up industries in their own land, industries came to be located arbitrarily, without due consideration for surrounding uses or infrastructure capacity. As a consequence location of many industries resulted in incompatible land uses and environmental distress. When building permits became more difficult to obtain for industries within the urban areas, the industries started locating beyond the ring road to circumvent the regulatory process. Although today industries can be found scattered all around the ring road, they are more concentrated along the highways leading towards Thankot and Bhaktapur.

The Industrial Promotion Board had also attempted to regulate industrialization in the Valley. The category A industries which were considered to be larger and more polluting were not allowed in the Valley although existing ones were permitted to continue to operate but with restriction on expansion of activities. Less polluting category B industries were permitted in the Valley but they were required to be located beyond at least 5 km. from any settlement with a population in excess of 1000. This policy appeared impractical, as the industries would be forced out to the Valley rim where infrastructure servicing would be prohibitive. Halcrow Fox et al suggested locating these industries in areas closer to the city exclusively zoned for industries. One of the areas it had proposed for establishing a new industrial estate was the then undeveloped agricultural land beyond the ring road between the Bagmati river and Dhobighat. The area has witnessed increased residential development in recent years and probably would not be a suitable area today.

1.3.4.4 Prospects and Constraints for Future Land Use Planning in KMC

Because of the absence of clear zoning regulations in the statutory plan for KMC, only certain aspects of building bulk were regulated with no control over the use of the buildings. This had resulted in mixed land use development which was generally acceptable, except in certain instances, where incompatible uses were introduced but no legal basis existed to prevent their establishment. In the future it would be

Incompatible land use: Industry in residential area



advisable to maintain simplicity and to specify minimum number of land use zones. It would also be quite reasonable to continue with the past trends of mixed land uses, however, in the future it would be necessary to identify those uses which would be considered incompatible and would be prohibited in the specified zone. Existing incompatible uses would have to be gradually phased out or relocated to zones where such uses were permitted. Similarly, industrial enterprises would have to operate in industrial estates or areas designated for industrial purposes, located in the outskirts of the city. As the city currently does not possess large undeveloped land, it would have to either coordinate such programs with the adjacent VDCs and municipalities or expand its jurisdictional area.

Given the fact that much of KMC is already developed and residential use comprises the largest land use in the city, substantial changes in land use would be difficult to envision in the future. Almost one-fourth of the city's land use in 1995 comprised vacant/open land and land taken over by VIP area, squatter settlements etc. In reality, the city suffers from an acute deficiency of open recreational areas. Currently, large areas within the city are being occupied by the military and the police or by government institutions that have little central functions. If those units of these institutions, which do not specifically require an urban setting, are relocated to suitable locations outside the city, their land could greatly help to fulfill the shortage of space requirements for recreational purposes and low cost housing. In addition, all guthi land within KMC needs to be identified and those that are no longer serving useful purpose could also be used to provide vital urban services. In view of the regular seismic activities and the severe shortage of open space faced by the city, it is imperative to plan for and develop open areas within easy access of the city dwellers. If need be, the city may even have to acquire private land to maintain the required spatial distribution of open spaces as per the norms.

One of the major concerns of all the previous plans has been the continuous conversion of agricultural land for urban use. This, however, is an inevitable part of the urbanization process and cannot be avoided if the city is to grow both physically and economically. From the planning context, rather than restrict any further conversion of agricultural land, it would be more appropriate to identify agricultural land which would be most suitable for conversion to urban use and direct future expansion only to such areas. Currently, urban growth has encroached on agriculture land on the fringes

of the city and radially along the major arterial roads in an unplanned manner.

One of the difficulties of regulating conversion of agricultural land to urban use is the existing practice of designating all land uses, including urban land, according to its agricultural productivity rather than its actual use. To provide legal distinction between urban and agriculture land, there is a need for the land administration and land survey offices to specifically have a separate land use designation for land which is under urban use or is intended to be developed as urban land in the future. Regulations could then be introduced to permit urban development only in areas designated for urban use and any future conversion of agriculture land would be contingent upon its approval through a comprehensive planning exercise justifying such changes.

1.4. PLANNING LEGISLATIONS IN THE DEVELOPMENT OF KMC

1.4.1 Town Development Committee Act 2019

Various legislations were enacted at different times to implement urban development programs. The Town Development Committee Act 2019 (1963) was one of the first Acts to establish Town Development Committees (TDC) which were authorized to initiate urban development programs. TDCs were established by HMG for any town or administrative unit whenever the need arose for such a committee. As none of the towns were technically and administratively capable of preparing and implementing physical development plans, they were assisted in this work by the Department of Housing, Building and Physical Planning (DHBPP), only after the Department itself had improved its planning capabilities in the early 70s.

1.4.2 Town Development Plan Implementation Act 2029

The Town Development Plan Implementation Act 2029 (1973) was enacted with the primary aim of establishing regional centres in each of the development regions of the country. The physical development plans were prepared by DHBPP and Town Planning Implementation Committees (TPIC) were formed to implement the plans. The Kathmandu Valley Development Plan 1976

was prepared and the Kathmandu Valley Town Development Committee (KVTDC) and TPICs for the three towns of the Valley were established as per this Act. The 1963 and 1973 Acts were later repealed by the Town Development Act 2045 (1988) but the TDCs and TPICs were permitted to function until new committees could be formed as per the new Act. The Kathmandu Valley Development Authority proposed by the 2045 Act to replace KVTDC and the TPICs could not be realized and as a result the KVTDC and the three TPICs continue to function under the 1973 Act as per this special provision. This less than satisfactory situation has hampered the role and authority of KVTDC and the TPICs. It has been informed that a new Act is under consideration which proposes to merge KVTDC with the Kathmandu Valley Town Development Council and upgrade its role to that of an organization which will prepare valley-wide planning and development guidelines and monitor compliance by the individual local governments. It is also learnt that the new Act proposes to abolish the TPICs and transfer the responsibility of preparing land use plans and regulations and monitoring their implementation to the respective municipalities.

1.4.3 Land Acquisition Act 2034

The Land Acquisition Act 2034 (1977) permitted the government to acquire private land for development purposes by Eminent Domain. However, there was considerable public resistance to land acquisition under this Act because of the lengthy process involved and the unrealistically low compensation provided by the government. Although municipalities had the right to acquire, own and dispose of land, they did not have the right to acquire land by Eminent Domain (Culpin et al 1991). They had to negotiate for the land required for development purposes. Only after they had failed could they request the Government to acquire the designated land through Eminent Domain. Land acquisition was then carried out by the CDO on their behalf. The Local Self Governance Act 1998 also makes provision for municipalities to acquire land through negotiations and payment of fair compensation but does not give them the right to acquire land by Eminent Domain.

1.4.4 Acts for Local Government Units

The authority to prepare and implement comprehensive local development plans was given to the municipalities through an amendment to the Town Panchayat Act (1982)

and to the District Development Committees, earlier known as District Panchayats through the Decentralization Act 2039 (1982). Where Town Development Committees already existed, the new Acts created overlapping authorities and duplication of functions among the agencies. In reality, none of the towns or DDCs were capable of preparing comprehensive urban development plans on their own and therefore most of their development efforts had been limited to implementing local projects and infrastructure on a piecemeal basis. The Decentralization Act has been annulled by the Local Self Governance Act 1999, which authorizes the DDCs to develop settlements and markets in rural areas.

1.4.5 Town Development Act 2045

The Town Development Act 2045 (1988) empowered the reorganized TDCs to prepare and implement land use plans. The Act also provided a legal basis for the TDCs to intervene in the land development process through guided land development, land pooling and sites and services programs. In the case of Kathmandu, the KVTDC and the TPICs continued to function under a special provision of the previous Act and was responsible for physical planning of the city. In the absence of adequate manpower and resources most of the municipalities, including KMC, were unable to fully exercise the authority invested by the Act. It was only in 1994 that building permit functions were transferred from Kathmandu TPIC to KMC. Monitoring of adherence to building by-laws is the joint responsibility of KMC and TPIC but this arrangement has not been very effective as each agency tends to assume the other agency will take up the responsibility. KMC has not as yet taken on the larger planning functions as provided for in the Act. The Town Development Act has been repealed by the Local Self Governance Act 1999, however, KVTDC and TPIC will continue to function until KMC fully assumes their responsibilities under the new Act.

1.4.6 Kathmandu Valley Development Authority (KVDA) Act 2045

The KVDA Act 2045 proposed the establishment of a development authority, similar to those of the large metropolitan cities of India, which had jurisdiction over all development functions within the entire Kathmandu Valley. KVDA to be headed by a development commissioner was unique in that it had authority over more than one district. It was responsible for preparing physical development plans and implementing them after approval from HMG as well as providing the people of

the Valley with basic services. Unfortunately the Act was never brought into effect.

1.4.7 Municipality Act 2048

The Municipality Act 2048 (1991) had given individual municipalities the authority to adopt and implement plans, implying that it could formulate and implement urban development plans on its own. Previous Acts had bestowed these functions to KVTDC in Kathmandu and to TDCs in other municipalities. The Municipality Act was not clear on how to coordinate or apportion responsibilities among the agencies with overlapping authorities. This confusion in the Act did not have to face legal scrutiny as none of the municipalities were capable of independently undertaking urban planning and infrastructure development functions. One of the negative impacts of this Act had been the erection of building structures in valuable public land and open spaces by the municipalities for commercial purposes, disregarding plans or planning norms (IUCN, 1995). This Act has been annulled by the Local Self Governance Act which gives municipalities similar rights to prepare their own town development plans.

1.4.8 DDC and VDC Act 2048

The DDC and VDC Acts 2048 empowered these local bodies to prepare physical development plans for sub-urban areas and individual villages respectively. Resource constraints and technical limitations had virtually incapacitated these local bodies from undertaking any planning works. Nevertheless, as the DDC's jurisdiction extended to the municipalities in the district, conflicts sometimes arose between the DDC and the municipalities, especially in the use of natural resources and public lands. These Acts have been repealed by the Local Self Governance Act.

1.4.9 Local Self-Governance Act 2055

The Local Self-Governance Act 2055 (1999) has specified that the preparation and implementation of physical development plans is a mandatory function of the municipalities. In addition, the municipalities have to implement housing programs, install and maintain infrastructure services, issue and monitor building permits and develop open and recreational spaces. The

Act appears to have adequately empowered the municipalities to raise taxes and implement urban development programs. However, the Act does not specifically address the role or transgression of the responsibilities and jurisdiction of other agencies that currently own and continue to operate and maintain urban services which fall within the purview of KMC as per the Act. The Act is vague about the necessity, time frame or modality of transfer of urban services to KMC which tends to create confusion regarding KMC's authority to coordinate and regulate development activities within its area. The larger municipalities such as Kathmandu and the four sub-metropolises which possess greater financial and human resources have relatively better capabilities to incrementally assume such responsibilities but smaller municipalities and VDCs will have to continue to rely on the Government for technical and financial support in the foreseeable future. Currently, without technical and organizational strengthening of the various departments, even KMC, the foremost city of the country, lacks the capability to independently prepare and implement city development plans as envisioned in the LSG Act.

1.4.10 Prospects and Limitations of the Legislations for Urban Development of KMC

Currently, urban planning of KMC is governed by several Acts, which empower different agencies to undertake similar planning activities. This duplication of work and overlapping responsibilities has tended to lead to confusion and shifting of responsibilities and eventually to inaction. KVTDC is the agency directly involved in the planning of Kathmandu but since 1988 it exists and functions not on the basis of a strong and separate Act but on a special provision that continues to revive an Act that had already been repealed earlier. The recent moves to create a new Act to upgrade KVTDC and increase its planning jurisdiction to cover the entire valley and concurrently abolish the TPICs appears to be an attempt to assign separate roles for KVTDC and the municipalities of the valley. As per the proposed new arrangement KVTDC will prepare strategic plans to guide developments in the valley while the task of preparing detailed land-use plans, area plans, zoning regulations etc. will be the responsibility of the individual municipalities. This arrangement, if realized, will allow KMC to be directly involved and be primarily responsible for the planning activities of the city.

In the past, land acquisition for development purposes through eminent domain had been very unpopular because of the unrealistically low compensation provided. In the future, as provided for by the Local Self Governance Act, it would appear appropriate to negotiate for additional land requirements rather than resort to land acquisition through Eminent Domain except in very critical situations and even then compensation at fair market value would have to be provided. Where restrictions are expected to be imposed on developments, which unfairly affect the livelihood of the landowners, compensation for loss of development rights would have to be provided. Intervention in the land development process through land pooling and guided land development, as provided for by the Act, appears to be the suitable and acceptable form of developing pockets of undeveloped land within the city which needs to be continued in the future.

The Local Self Governance Act has given KMC ample scope to develop detailed land use plans and planning regulations for the city. The Act does not, however, repeal the provisions of earlier Acts that cause duplication of works and overlapping responsibilities with other agencies. Therefore, a system needs to be developed whereby coordination is ensured in the works of all the agencies that operate within the municipality and their work is carried out as per KMC's plans and programs. Close coordination also needs to be maintained with KVTDC so that the city's plans and programs are consistent with the overall plans of the Valley. Land to be developed as urban land needs to be categorized as such and not in the agrarian context of land productivity and registration and sub-division of urban land needs to conform to planning norms of the city. Issuance of industrial permits also needs to be coordinated with KMC's plans. Before proceeding to exercise the rights given by the LSG Act, however, KMC needs to strengthen and upgrade the units responsible for the planning of the city.

1.5. ORGANIZATIONS INVOLVED IN CITY DEVELOPMENT

1.5.1 Ministry of Physical Planning and Works

Earlier urban planning was undertaken by the Department of Housing, Building and Physical Planning

under the Ministry of Works and Transport. As low priority was given by the Ministry to housing and urban planning, a separate Ministry of Housing and Physical Planning was established in 1987 and the department was split into the Department of Housing and Urban Development (DHUD) and the Department of Buildings with DHUD primarily responsible for implementing the policies and programs of the ministry related to the urban sector. DHUD is supported at the regional level by offices of the Regional Directorates and at the district level by District Offices. As none of the municipalities were technically capable of preparing and implementing urban development plans on their own, DHUD and the Regional Directorates were and continue to be involved in assisting the municipalities in this task. Kathmandu Valley Town Development Committee is currently responsible for the physical development planning of Kathmandu and Lalitpur Cities. Very recently the Ministry has been reorganized as the Ministry of Physical Planning and Works and the two departments under it have been amalgamated into the Department of Urban Development and Building Construction. The subsidiary units under the Department continue to function as before under the unified Department.

1.5.2 Ministry of Local Development

The Ministry of Local Development is responsible for the management of local governments at the district, municipal and village level. The Ministry designates the chief executive officers and other key officials who are responsible for the overall executive functions of the municipalities, inclusive of all development programs. Although the designated officials are accountable to the respective mayors, since the Ministry is their parent organization where they eventually hope to further their careers, often their actions tend to favor the Ministry rather than the municipalities they are working for. This sometimes tends to create administrative bottlenecks and works against the interests of the municipalities. The frequent changes of the key officials also adversely affect the continuity and effectiveness of various municipal programs. The arrangement of seconding staff to the municipalities may have been justified earlier when the municipalities were weak in funds and manpower. With the changing scenario of municipalities assuming greater authority and responsibilities, there is a need for the creation of a separate cadre of management staff to look after the affairs of the municipalities.

1.5.3 Kathmandu Valley Town Development Committee and Town Planning Implementation Committees

The Kathmandu Valley Town Development Committee (KVTDC) along with Town Planning Implementation Committees (TPIC) for Kathmandu, Lalitpur and Bhaktapur were established under the Ministry of Works and Transport and the Department of Housing, Building and Physical Planning to implement the Kathmandu Valley Development Plan 1976. Unfortunately, the Plan did not cover the entire Valley as suggested by the name of the organization, but was limited mainly to the area enclosed by the ring road. At the time of establishment of KVTDC and the TPICs the municipalities of the Valley had very little technical and managerial capabilities and had little involvement in either plan preparation or implementation and monitoring of the plan. The Town Development Act 2045 repealed the Town Development Plan Implementation Act under which KVTDC and TPICs were formed, however, since the Act to create the Kathmandu Valley Development Authority which was supposed to replace them could not be officially enacted, the organizations were allowed to continue to function under a special provision of the Act. This has tended to constrain the functioning of the organizations. The TPIC has handed over the function of issuing building permits to the Urban Development Department of KMC, otherwise the rest of the planning and monitoring responsibilities remains with KVTDC and TPIC.

It had been informed that a proposal had recently been forwarded to the Government recommending Kathmandu Valley Town Development Committee to be strengthened and upgraded to the Kathmandu Valley Town Development Council which would be primarily responsible for preparing strategic plans and planning guidelines for the entire valley. The existing TPICs for the three larger municipalities would be abolished and the authority and responsibility for preparing detailed land use and local area plans for the cities, conforming to the larger valley plan, as well their implementation and monitoring would be devolved to the individual municipalities. The Council is expected to coordinate and monitor and, if necessary, assist in the preparation of the detailed plans of the municipalities and VDCs of the Valley. The Council would also penalize municipalities whose plans contravened its planning guidelines. While at first glance the proposal appears to be quite practical, it remains to be seen how effective

the new organizational set-up will be given the reluctance of the central government agencies in the past to cede authority as well as revenue sources to the local governments.

1.5.4 District Administration Office

The District Administration Office under the Ministry of Home is the agency responsible for law and security in the district. Together with the municipalities, the office is responsible for the protection of public open spaces and public properties. Because the police is directly controlled by the office, it provides the last resort action in developmental control.

1.5.5 Kathmandu Metropolitan City

The Mayor along with the Deputy Mayor, the Chief Executive Officer and the different departments under the Kathmandu Metropolitan City Office are responsible for the management of the Kathmandu Metropolitan City. The policies, programs and budgets of KMC are approved by the Metropolitan Council and Board prior to their implementation. The City Planning Commission is an independent advisory body which assists the mayor and the KMC Office in various aspects of urban planning and management. The KMC Office is presently divided into twelve departments of which the Urban Development Department and the Public Works Department are most closely related to urban planning of the city. Coordination is weak among the departments and the staffs also seem to be deprived of continued career development opportunities within the KMC, which has affected their morale and motivation. As dedicated and motivated staffs are the key to the success of city management, adequate incentives and career development opportunities need to be provided within KMC organization. Refer chapter on institutional development for further details on the organization and functioning of KMC.

1.5.6 City Planning Commission of KMC

The City Planning Commission was set up as an advisory body within KMC a few years ago along the lines of the National Planning Commission to plan, coordinate and monitor the works of the different departments of KMC. Given the lack of coordination among the departments

and their weak linkages and capabilities, the establishment of such a Commission appeared timely and justified. However, necessary cooperation from the Municipal Board and the departments is the key to the success in CPC functioning and any discrepancy in such mechanism can create inefficiencies in the CPC. Ultimately, the KMC will be deprived of the many benefits of CPC. Currently, no other department exists to fulfill the role of a think-tank as well as planning and monitoring cell of KMC other than the CPC. Unfortunately, CPC is not as active and influential as it once used to be.

1.5.7 Urban Development Department of KMC

The Urban Development Department and the Public Works Department are the units closely related to urban planning activities. The Urban Development Department is divided into the Building Permit, Transportation Planning and the Urban Planning Sections. The responsibility for issuing building permits was transferred from the TPIC to KMC in 1994, following which it has become the major activity of the Department. There is, however, an overlapping of authority with TPIC regarding monitoring of construction works to ensure compliance with the approved plans and building by-laws. KMC often makes site inspections when construction has reached the damp proofing height, to determine if the floor plans are as per approved plans, but its monitoring activities are limited thereafter. After relinquishing the building permit activity to KMC, the TPIC has also tended to remove itself from much of the enforcement responsibilities. As a result building by-laws are often flouted. Provisions exist to stop or demolish construction which is unauthorized or which does not conform to the by-laws, however, the means or the will to exercise such rights is often weak. KMC's City Police also does not have the legal authority to exercise the powers of the civil police. Therefore, if violators do not willfully rectify or remove unauthorized works, the city has to seek the assistance of the CDO who would then mobilize the civil police to take necessary action. The inability of KMC to take timely actions against illegal constructions has tended to give the people the impression that the city's regulations can be easily compromised, resulting in the proliferation of illegal constructions.

Meanwhile, in the absence of enough financial or manpower resources, the Transportation and the Urban

Planning Sections have remained more or less inactive, content to leave the responsibility of preparing and implementing city development plans to the concerned government line agencies. No significant work apart from the land pooling at Naya Bazaar has been undertaken by UDD. KMC is currently in the process of building up a capable planning and information unit under the Kathmandu Valley Mapping Program, but there appears to be little coordination or consultation between KVMP and UDD. UDD remains uncertain about how the KVMP units will eventually be merged with the Department.

1.5.8 Public Works Department of KMC

The Public Works Department (PWD) is responsible for planning, implementation and maintenance of infrastructure within KMC. However, apart from managing some of the works completed by KMC in 1999 under the Municipal Infrastructure Improvement Project and minor works undertaken in some of the wards, it has not been able to function properly because of financial and manpower constraints. Much of the city's infrastructure are owned, managed and maintained by the concerned Government line agencies who rarely consult KMC in planning and operational matters, except for Nepal Water Supply and Sewerage Department of which the Kathmandu mayor happens to be the chairman. Even if the government was willing to hand over the city infrastructure to KMC, PWD in its present state would not be able to take on the responsibility. It would appear more prudent to take on the responsibility only after the management capacity of PWD had been adequately strengthened.

For the planned growth of the city it is inevitable that there should be coordinated development of urban land, infrastructure and transportation. The UDD and PWD are presently too weak to look after any of these functions, let alone coordinate their future actions. There is some inter-departmental linkage between the two departments of KMC, however, in the absence of concrete citywide programs, their ability to coordinate and regulate urban development in KMC is rather limited.

1.5.9 Ward Level Organizations of KMC

The Ward Office is a key functional unit of KMC and the primary point of contact for citizens. Each ward has a committee which is headed by the Ward

Chairman, elected from the ward. The wards are allocated small amount of funds by KMC with which the wards initiate various local development works. Many wards have formed User Committees and neighborhood improvement committees known as "Tol Sudhar Samitis" which identify and participate in neighborhood improvement projects, many on an equitable cost sharing basis. Earlier, subject to the Board's approval of programs and availability of funds, each ward had been allocated a sum of Rs. 1.5 million irrespective of area or ward population. In the future funding is expected to correspond to approved programs rather than on a uniform basis. The ongoing Integrated Action Planning under the Kathmandu Valley Mapping Project is expected to facilitate the identification of future ward level projects to be implemented by the city. If properly mobilized, the wards could prove to be an effective medium through which most of the local level projects could be implemented.

1.5.10 Different Central and Local Level Government Agencies Involved in KMC

According to a recent study undertaken by the ADB assisted ISKMC Project, apart from various NGOs and private sector groups, there were more than 22 government ministries and departments which were, in some way or the other, currently involved in providing various services to the city, which as per the Local Self Governance Act 1999 were the primary responsibility of KMC. Despite the fact that almost all the city's infrastructure is presently owned and managed by the government line agencies, there is very little coordination among them. The agencies normally operate according to their own priorities and agendas and sometimes have certain overlapping functions. This often leads to duplication of works, incompatible actions and even to disputes among agencies. In the past the Kathmandu Valley Town Development Committee, chaired by the Minister of Housing and Physical Planning and secretary level representation from the different ministries, was established to ensure proper coordination between the planning and other line agencies. Infrequent meetings of the Committee and token representation from the ministries failed to improve the situation.

1.5.11 Prospects and Limitations of KMC's Institutional Capacity to Undertake Planning Functions

The current organizational set-up of KMC does not give it the capability to independently take up the comprehensive planning functions of the city. However, with improvements in its finances, there is a possibility for the city to strengthen and upgrade its entire organization. Although the City Planning Commission is not active at the moment, its role as a central planning, coordinating and monitoring unit of KMC will become even more crucial when the city decides to take on the responsibilities of preparing and implementing detailed city development plans. Therefore, there is an urgent need to strengthen and reactivate CPC.

If the proposal to upgrade KVTDC and demobilize the TPICs is approved, KMC will be compelled to assume the responsibilities of preparing and implementing urban development plans for the city. The Urban Development Department and the Public Works Department of KMC will have to be strengthened with more qualified staff and their works will have to be closely coordinated. The Kathmandu Valley Mapping Program is currently in the process of improving the planning and implementation capabilities of KMC and establishing an Information Systems Unit using GIS and a data based management system. The Project has recruited technical experts who would be involved in the preparation of various strategic and action plans for the city. If after the termination of the Project these trained manpower and the ISU could be assimilated into UDD, KMC's planning capabilities could be greatly enhanced.

Currently, the enforcement capabilities of KMC are hampered by the fact that UDD doesn't have a separate unit to oversee the regulatory aspects of planning. As a consequence violations of planning and building by-laws are quite common. Commitment to initiate action against the ongoing violations is also not strong. Therefore, the establishment of such a unit, backed by strong enforcement capabilities including equipment and manpower, would go a long way in ensuring compliance to prevalent regulations. A clear policy could also be formulated to address past illegal constructions. Whereas, demolition could be recommended for all constructions encroaching illegally on public land, such action for lesser infringements such as unauthorized

constructions in privately owned land would result in unnecessary economic loss. A system could be introduced to impose fines for such construction at a rate higher than the current market value so as to discourage similar infringements in the future. Many of the pending decisions on unauthorized constructions could thus be resolved through the regularization of these constructions. KMC could also benefit financially in this process.

Various possibilities exist to mobilize ward-level organizations in city development activities. Past experience has shown that close public interaction and involvement is forthcoming in small ward-level projects that have more tangible effects on the community. In the future the city must adopt a more decentralized approach and as far as possible carry out the community level development programs through the ward committees and organizations.

1.6 VISION AND FUTURE PROSPECTS FOR URBAN PLANNING IN KMC

1.6.1 Government Policy on Urban Development

The Government had acknowledged the importance of urban centres in national development since the Fourth Plan (1970-75) when regional development policy was introduced. Subsequent Plans have focussed on balanced regional development and complementary urban rural linkages and have stressed on the promotion of planned urban development to generate economic development and employment.

The current policy of the Government on urban development has been spelt out in the Ninth Plan (1997-2002). The Plan has recognized some of the shortcomings in previous government efforts such as lack of an integrated development policy for the Kathmandu Valley and poor coordination and duplication of works among the concerned agencies; inadequate physical services in urban areas; poor urban-rural linkages; inadequate efforts by the Government as well as the private sector to resolve housing shortages; lack of control on land sub-division and expansion into flood plain areas; unclear and overlapping duties and responsibilities of the town development committees and the local governing bodies and the ineffective functioning of the Kathmandu Valley Development Council.

As its long term goals, the Plan has proposed to develop Kathmandu Valley as a cultural and tourism center, increase urban-rural linkages and develop smaller urban centres to generate employment opportunities. In line with the national housing policy, it has advocated developing the housing sector by providing land and physical infrastructure and affordable housing.

Some of the relevant objectives of the Plan are to promote planned urbanization by initiating integrated physical and social infrastructure development; to strengthen the urban sector's role as centres of national production and employment generation; to mobilize resources from the private sector as well as the Town Development Fund towards infrastructure development and affordable urban housing. The Plan aims to develop alternate urban centres and increase urban-rural linkages and to assist the municipalities in planning until they are financially and administratively sound.

Some of the specific policies for Kathmandu Valley are to consider the entire valley as a single planning unit, upgrade squatter settlements, develop a few of the adjacent urban settlements of the Valley, extend land pooling programs and implement environmental improvement programs along the main river belts.

1.6.2 Vision Proposed for Greater Kathmandu

Previous studies as well as the current 9th Plan have all stressed the need for Kathmandu to be developed into an administrative, cultural and tourism center. There also seemed to be an implicit understanding that Kathmandu should be accorded special status as a capital city and large manufacturing and polluting industries should be discouraged from locating within the Kathmandu Valley. Alternatively, service and light industries should be promoted in the future. Cognizant of the developments occurring in the rest of the world, the Development Plan 2020 has proposed diversification to information technology. Considering the importance of Kathmandu as a cultural and political center as well as the physical limitations and the environmental consequences of uncontrolled urbanization of the Valley, the vision proposed earlier by the various plans continue to be relevant. Recently, KMC has envisioned establishing Kathmandu as a regional sports and convention center. Given the emergence of Kathmandu as an important city in the

South Asian region, the vision to host larger regional activities appears rational and achievable.

1.6.3 Stakeholders' Vision for Kathmandu Metropolitan City

Because of time constraint, a common all-encompassing vision for KMC could not be formulated during the stakeholders' workshop. Nevertheless, brief vision statements or key phrases for some of the individual sectors were developed by the respective focus groups. These were:

- Cleanest and healthiest city in Nepal
- Economically sound and managerially capable city government to provide quality urban services and facilities to the maximum satisfaction of city dwellers
- Clear strategy, well planned city and housing for all
- Well managed safe transportation

With respect to urban planning, the stakeholders' vision of KMC could be phrased as “a well planned, clean and healthy city with adequate housing, good transportation and infrastructure services managed by a strong and capable municipal government”.

1.6.4 Constraints and Opportunities for Planned Urban Development of the City

One of the biggest constraints to planned development of the city has been the shortcomings and ineffectiveness of the statutory plan for the city. The plan is outdated and totally irrelevant in the present context. Without a revised and updated city development plan, the city does not have a blueprint to guide development activities. The responsibility for preparing and implementing physical development plans has always remained a central government function with only peripheral involvement of KMC. This arrangement had earlier been generally accepted by KMC primarily because it had never had the institutional capability to independently take on such responsibilities.

The lack of proper plan as well as weak implementation has resulted in haphazard unplanned growth of the city. Developments have already spilled over beyond the municipal boundaries into areas which have not been incorporated in the plan. As a result the city has no legal

control over such developments which have grown without reference to any plans or planning norms. Little efforts have been made to coordinate land use with infrastructure and transportation services and the development activities of the various agencies, causing many areas of the city to be deficient in these services. Much of the flood plain areas have already been built over. This type of spontaneous and unregulated development has been occurring over the past few decades and has covered most of the city area. Given the resource constraints of the city and the legal and administrative complexities involved, there appears to be limited possibilities to undertake large urban renewal or redevelopment works to rectify the mistakes of the past.

Despite the planning failures of the past, possibilities to make small but marked improvements in the city's natural and built environment through proper planning still exist. Preparation of a new detailed land use plan and zoning regulations for the city and their strict implementation are bound to reduce many of the current problems and bring about more planned and coordinated developments of buildings and infrastructure. The revised plan could encourage densification and concentrated developments at selected locations through appropriate zoning and subdivision regulations and building bye-laws. Private sector involvement and cost recovery mechanisms could be introduced for infrastructure services so that resources could be generated to extend these services to other areas and urban expansion could be controlled and guided by infrastructure developments. The revised plan would need to cover the municipal areas as well as all the VDCs to be included in the proposed Kathmandu Metropolitan District, and at the minimum the adjacent VDCs that are urbanized or rapidly urbanizing and need to be annexed by the city at the earliest.

Because of its unique setting in the valley and sharing of borders with other municipalities, KMC shares many of the services with them and has common problems and issues. Some of these problems can only be tackled through collaborative efforts and require valley-wide strategies. KMC, being the largest and most developed city, needs to take leadership of any such collaborative efforts among municipalities and VDCs in the future. Strategic development plans for Kathmandu Valley will be prepared by KVTDC to serve as guidelines for all the local bodies. KMC can obtain technical assistance for urban planning from KVTDC whenever required. KMC has already initiated the formation of an informal grouping of valley municipalities to discuss common problems and strategies. This forum can be given a more

permanent status and used for coordinating development activities of the valley in the future.

Kathmandu as the capital city and center of administrative, tourism and economic activities is bound to continue to grow in importance not only nationally but also regionally. This is definitely going to result in continued investment in the city by the government and the private sector. The city's financial condition is expected to improve considerably after the new tax and fee collection system is fully introduced. The Local Self Governance Act has empowered KMC to prepare land use plans for the city. At the same time KVTDC is also in the process of limiting its planning responsibilities to the overall Valley and transferring the responsibility of preparing detailed city development plans to the respective cities. This provides KMC with the opportunity to initiate the preparation of a new land use plan for the city.

The Urban Development Department and the Public Works Department are not as yet technically capable of preparing and implementing the new land use plan for the city. With improved finances KMC can gradually strengthen its organization to take on the expanded functions. KMC has the added advantage of absorbing the staffs and Information System Unit of the ongoing KVMP into the planning departments after the completion of the Project, as a result of which the departments should be able to function as more capable units.

As KMC's institutions are gradually strengthened and their management capabilities are improved, in time they should be able to take over many of the local level functions and services currently being operated and maintained by government and semi-government organizations. With much of the city's services directly under its jurisdiction, KMC will be able to better coordinate their development in the future, thereby ensuring a more effective and efficient management of all its urban sectors.

1.7 CONCLUSIONS OF THE FIRST STAKEHOLDERS' WORKSHOP

Only few of the issues on urban planning were highlighted during the Stakeholders' Workshop. Among these were:

- a) Lack of Government policy to control urban population,
- b) Lack of urban planning and urban land use categorization,
- c) Failure to dismantle structures built on public land and road corridor,
- d) Failure to strictly enforce building construction norms,
- e) The failure of the land registration office to have a separate category for urban land,
- f) Lack of coordination among development agencies,
- g) Lack of access for fire brigades and emergency services,
- h) Lack of coordination between KMC's strategy and the development strategy of Kathmandu Valley,
- i) Institutional weakness.

During focused group discussion it was noted that Government policies existed on urban population but these were not being seriously implemented. Similarly, there was a city development plan for Greater Kathmandu, however, the plan had not been periodically updated and urban developments during the past decades had occurred in contravention of many of the provisions of the plan. Weak implementation of the plan and poor supervision had resulted in encroachment on public land. There was agreement that the earlier plan lacked adequate zoning regulations and as a result had failed to regulate urban land use. The different agencies involved in planning had not properly coordinated their actions. Similarly the city had not coordinated its activities with the overall plan for the Valley. KMC's institutional capacity to plan and manage urban development was very weak. The vision proposed by the focused group for urban planning was "A well managed city, and housing for all".

The Stakeholders' Workshop had come up with vision statements for some of the individual sectors but there was insufficient time to coalesce all of them into a common vision statement for the city. Nevertheless, the vision of Kathmandu as an administrative, cultural and tourism centre as proposed by previous studies needs to be assimilated with some of the sectoral visions to prepare a final vision statement for the city. This vision would determine the appropriate strategies for the development of KMC.

1.8 SUMMARY OF ISSUES ON URBAN DEVELOPMENT

Most of the issues on urban development can be divided into four broad categories which are listed as follows:

1.8.1 Planning and Infrastructure

- a) Urban development in KMC is occurring in an unplanned and haphazard manner without consideration for coordinated infrastructure servicing. There is a tendency of infrastructure to follow rather than guide urban development. Many new developments are occurring in areas with inadequate or no infrastructure.
- b) The statutory land use plan dates back to 1976 and is no longer effective in promoting planned development of KMC. The plan lacks adequate zoning regulations, sub-division controls, local area plans or standards for infrastructure development and the zoning boundaries are vague. Insufficient attention has been accorded to the implementation aspect of the plan. The Government has not endorsed subsequent revised and updated plans.
- c) Haphazard urban expansion has been occurring beyond the municipal borders and outside KMC's jurisdiction. KVTDC is also unable to regulate such developments because of the absence of approved plans for areas outside Greater Kathmandu.
- d) Lack of zoning regulations and weak monitoring has resulted in undesirable mixing of incompatible land uses.
- e) Lack of Government or municipal initiative in urban land development and housing has led to low-density residential development by individual landowners and brokers, resulting in inefficient land use and infrastructure services.
- f) A few initiatives by real estate developers to develop relatively larger parcels of land have not given adequate consideration to planning and infrastructure standards. Low FAR has discouraged large planned area developments as it makes such efforts economically unviable.
- g) There is little control on industrial locations due to lack of zoning regulations and tendency of industrialists to circumvent the requirements of building permit by locating outside the municipal areas.
- h) Squatter settlements have emerged along river banks and marginal land because of increasing rents and unaffordable housing and land prices as well as lack

of supervision of public land. There is also a lack of policy on urban squatter settlements.

- i) Current practice by land registration office of designating land use only according to agricultural productivity makes it difficult to legally demarcate and distinguish between urban and agriculture land and to regulate urban encroachment into agriculture land.

1.8.2 Institutional Problems

- a) The Government has been the primary agency responsible for the preparation and implementation of urban development plans. Its ability to tackle problems of urban development has been constrained by lack of resources, lack of coordinated plans and programs and conflicting interests of various government agencies which tend to give priority to their own programs rather than to the overall plans of KMC. Unclear and overlapping roles and responsibilities tend to cause duplication of works and sometimes to incompatible actions or disputes among agencies.
- b) KMC's ability to independently prepare and implement plans is hampered by resource and manpower constraints. Present organizational set-up of KMC's Urban Development Division is not capable enough to take up full-fledged planning functions. Similarly the Public Works Department lacks the resources to take on citywide infrastructure development works. There appears to be weak coordination between UDD and PWD and other departments under KMC.
- c) KMC's current role in urban development has been limited mainly to issuing building permits and monitoring building construction up to the plinth level. Monitoring and land pooling functions overlap with the responsibilities of the Town Planning Implementation Committee.
- d) There is little coordination between the planning agency, the land registration office and the Department of Industry. As a result land development does not conform to proper planning or infrastructure standards and industries need not obtain approval from the planning agency. Currently, urban land continues to be categorized on the same basis as agricultural land whereas its economic value derives not from agricultural productivity but from non-agricultural urban use.

- e) KMC's ability to take action against unauthorized construction has been hampered by the lack of clear legal mandate to take action against offenders. The City Police also does not have legal authority to take any police action and KMC needs to seek assistance from CDO to take action against violators. A separate unit to oversee the regulatory aspects of planning does not exist.
- f) Urban development has been hampered by the lack of political commitment and determination to implement approved plans and policies. Investment in the urban sector as well as monitoring of the plans and policies have also been weak.
- c) The Government has been unable to control development in areas prone to natural and man-made hazards. The city lacks adequate and easily accessible open spaces which serve as safety zones during seismic occurrences.
- d) Cultural heritage sites are being threatened by uncontrolled urban developments.
- e) The city is suffering from poor waste management and increasing air, land, water and noise pollution.
- f) Lack of adequate legislation for protection of the environment has led to untreated sewage being directly drained into the rivers.

1.8.3 People's Participation in Planning

- a) Limited involvement of the public in the planning process has resulted in inability to obtain strong public acceptance and support for the city plans and planning regulations. This public apathy along with weak monitoring has made it difficult to regulate developments as per the plans.
- b) There is strong public resistance to land acquisition by the government for urban development process because of the very low compensation provided.
- c) Ability and willingness of landowners to contribute to infrastructure developments is low even though they benefit from higher land prices. Absence of cost recovery mechanism in infrastructure developments has led to resource constraints to expand such programs into new areas.
- d) There is little control over developments occurring in prime agriculture land and river flood plains because of lack of regulations as well as lack of compensation for loss of development rights.

1.8.4 Environment

- a) The city has inadequate open urban space for parks and recreation. Newly developed areas also lack public open spaces while existing open areas are poorly managed.
- b) Overcrowding and congestion is occurring in the city core. Gradual deterioration of existing housing stock has given rise to slum conditions.

1.9 CONCLUSIONS AND RECOMMENDATIONS

From the very outset, the only officially approved land use plan to date for Greater Kathmandu was an incomplete document. Although it had designated various land uses for the city, the zone boundaries were vague and had not been transferred to the cadastral survey maps, which were and continue to be the legal basis for land registration and sub-division. The plan also did not have any zoning regulations to control use of land. Nor did the plan have any specific programs to integrate land use planning with infrastructure and transportation development. As a result the plan failed to provide the comprehensive framework for the development of the city and served mainly as a tool for issuing building permits. Because of weak implementation even this basic function could not be effectively regulated and quite a significant amount of construction works have contravened the byelaws. Decades of such laissez-faire planning have resulted in unplanned haphazard growth of the city, inefficient use of urban land and services and virtually no control over the intensity and type of land use which often has led to the undesirable co-mixing of incompatible land uses.

Whereas much of the population growth of KMC could easily have been accommodated within the existing areas of the city through densification and accessing the landlocked areas, urban expansion had occurred unchecked into the low lying flood plain areas, outlying fertile agriculture land and adjacent VDCs. While the city center continued to be congested and faced gradual deterioration, low density development with randomly located pockets of undeveloped land was proliferating

in the outer areas, making infrastructure servicing difficult and expensive. Little effort had been made to coordinate the works of all the different agencies involved in development activities in the city. Agencies often tended to work in isolation of each other towards narrow sectoral goals rather than towards a common unified goal. KVTDC, which was primarily responsible for overseeing urban development in the city, had neither the plans nor the legal authority to intervene in areas outside the city limits. Within the city it did not have the authority to obtain mandatory cooperation and coordination from the different agencies providing services to the city, contributing to the poor urban management of the city. Although KMC had concurrently been legally empowered to independently carry out the urban planning and development functions for the city, its financial and institutional limitations had earlier prevented it from actively taking on these responsibilities. Even today its role in city development continues to be limited and dependent on other government agencies.

To counteract the prevailing trends and ensure planned development of the city in the future, the most urgent and essential task is to prepare and strictly implement a revised land use plan for the city. Unlike the existing statutory plan, the revised plan needs to be complete, especially in the regulatory aspects of zoning, subdivision and building construction byelaws and detailed programs for integrated development of land use with infrastructure, transportation, housing etc. Furthermore, the plan must take into account the future land requirements of the city and incorporate those VDCs it considers suitable for immediate or long term annexation by the city. Densification of the city must be promoted at suitable locations through appropriate policies. The city must make adequate provision of open spaces and planned housing schemes. Land for these purposes could be made available by relocating government organizations that do not serve central functions and making use of idle guthi land. Infrastructure expansion must precede rather than follow urbanization and it must be used effectively to guide the urban growth of the city. The Plan needs to be reviewed and updated regularly to respond timely to the everchanging urban situation.

As provided for by the Local Self Governance Act, KMC needs to take the lead role in the preparation and implementation of the city development plans as well as take ownership and responsibility for all local level functions including future expansion and maintenance of all the urban services. This will provide it with a better opportunity to improve the urban management of the city. Its current financial and institutional capacity to undertake such a responsibility, however, leaves much to be desired. Therefore, KMC needs to take immediate measures to strengthen its financial and institutional capacity and gradually proceed to take over the facilities and functions of other organizations. It is anticipated that inputs from a few of the ongoing projects such as ISKMC and KVMP will assist KMC in this process. While assuming the total responsibility for city development, KMC must focus more on overall management and supervision of programs and try as much as possible to involve the private sector in project implementation if it is to avoid creating another huge bureaucracy to replace the existing bureaucratic agencies currently operating the services within the city.

KMC, while preparing the revised land use plan, will need to take into consideration the broad guidelines provided by KVTDC for the development of the valley. KVTDC as well as the other municipalities and VDCs of the valley will have to be closely consulted throughout the planning process and the effects of city's programs will have to be gauged on a larger context.

Strategic actions to bring about improved and more effective urban planning of the city will directly or indirectly help to fulfil the broad objectives of CDS. It is anticipated that better planning will inevitably lead to a well planned city with good urban services which will contribute directly to improve the city's livability. Improvements in institutional capabilities will result in good governance while improvements in the built environment and services will attract more investments to the city, which will have a cumulative effect of improving the city's bankability and competitiveness.

Table 8: Urban Planning Issues and Implications

ISSUES	IMPLICATIONS	ACTORS
1. Existing statutory plan for KMC is outdated and ineffective in regulating urban development	Unplanned haphazard urban growth	KMC, KVTDC, VDCs and related stakeholders
2. Lack of coordination between physical planning and infrastructure development	<input type="checkbox"/> Deficiency of infrastructure services <input type="checkbox"/> Inability to control and direct urban growth	KMC, NWSC, NEA, NTC, private sector
3. Low density urban sprawl with pockets of inaccessible land within city	<input type="checkbox"/> High infrastructure cost and inefficient use of land <input type="checkbox"/> Lack of access to parts of city areas	KMC, KVTDC, Ward Committees
4. Unplanned and non-integrated urban expansion occurring beyond municipal areas into adjoining VDCs	<input type="checkbox"/> Unplanned urbanization in VDCs <input type="checkbox"/> Erosion of city's tax base	MLD, KMC, DDC, VDCs, KVTDC
5. Lack of space within existing municipality area for requisite development purposes	<input type="checkbox"/> Deficiency in urban services <input type="checkbox"/> Inability to make future expansion plans	MLD, KMC, DDC, VDCs, KVTDC
6. Inadequate zoning regulations and weak monitoring of development activities	<input type="checkbox"/> Incompatible land uses <input type="checkbox"/> Violation of bye-laws <input type="checkbox"/> No control on location of industries	KMC, DOI, KVTDC, DOS, DLA
7. Land developed by brokers and real estate developers not according to planning norms and standards	<input type="checkbox"/> Deficiency of road width, open spaces and infrastructure services in developed parcels	KMC, DLR, Private brokers and developers
8. Current land registration process based on agricultural productivity and not according to actual use or potential for urban use	<input type="checkbox"/> No control on urban encroachment on prime agricultural land	KMC, DLA, DOS, KVTDC
9. KMC institutionally weak in urban planning and urban management functions	<input type="checkbox"/> Inability to prepare and implement plans <input type="checkbox"/> Lack of involvement in planning functions <input type="checkbox"/> Lack of agency solely responsible for overall urban management	KMC, KVMP
10 Lack of coordination among agencies involved in development activities within Kathmandu City	<input type="checkbox"/> Unplanned and inadequate provision of services <input type="checkbox"/> Poor management of urban services	KMC, concerned agencies
11 Lack of control on industrial establishment	<input type="checkbox"/> Haphazard industrial location <input type="checkbox"/> Incompatible land uses	KMC, DLA, DOS, DOI
12 Violation of planning and building bye-laws	<input type="checkbox"/> Encroachment on public land <input type="checkbox"/> Inadequate access <input type="checkbox"/> Unsafe buildings <input type="checkbox"/> Unauthorized construction	KMC, MLD, DA
13 Lack of people's participation in the planning process	<input type="checkbox"/> Lack of acceptance and support for city development activities	KMC, Ward Committees
14 Inadequate cost recovery for infrastructure services	<input type="checkbox"/> Deficient services <input type="checkbox"/> Poor maintenance of services <input type="checkbox"/> Inadequate resources for expanding services	KMC, related agencies
15 Lack of open spaces	<input type="checkbox"/> Public deprived of open recreational spaces <input type="checkbox"/> Absence of safety areas during times of seismic activities	KMC, GS, HMG
16. Lack of clearly defined river domain	<input type="checkbox"/> Encroachment on river domain	KMC, DLA, DOS

BIBLIOGRAPHY

1. Archer, R. W.; Planning and Guiding Urban Land Development in the Kathmandu Valley, 1988.
2. Center for Economic Development and Administration; Kathmandu Valley Town Planning and Its Impact; 1979.
3. CITIES Data Book; KMC, 2000.
4. Chhetri, P. B.; Urban Planning Practices in Nepal-an Overview; unpublished article.
5. Culpin Planning Ltd. (London), Institute for Housing Studies (Rotterdam), Center for Economic Development and Administration (Kirtipur); Needs Assessment and Policy Review, Preparation of National Shelter Strategy; Shelter Institutions and Legal Framework; 1991.
6. Department of Housing and Physical Planning; The Physical Development Plan for the Kathmandu Valley; 1969.
7. Department of Housing and Urban Development/ Ministry of Housing and Physical Planning; National Urban Forum: Conclusions of the First Regional Workshop for the Kathmandu Valley; 1995.
8. DHUD/ MHPP; Recommended Policies and Strategies for Urban Development, 1991.
9. DHUD/ MHPP; Review of Kathmandu Valley Urban Development Plans and Programs 1991; 1996.
10. DHUD/ADB; Nepal Urban Sector Strategy, Inception Report and Draft Report; 2000.
11. Halcrow Fox and Associates et al; Kathmandu Valley Urban Development Plans and Programs; 1991.
12. HMG/ Kathmandu Valley Town Planning Team; Kathmandu Valley Physical Development Concept; 1984.
13. HMG/ Kathmandu Valley Town Development Committee; By-laws for Kathmandu Lalitpur Municipal Areas and Urban Expansion Areas of Kathmandu Valley; 1994.
14. HMG/ Kathmandu Valley Town Development Committee; Draft Report: Development Plan 2020 for the Kathmandu Valley; 2000.
15. HMG/ IUCN; Regulating Growth: Kathmandu Valley; 1995.
16. Institutional Strengthening of Kathmandu Metropolitan City; Inception Report; 1999.
17. International Center for Integrated Mountain Development; Economic and Environmental Development Planning for Bagmati Zone; Vol. III, Kathmandu Valley Urban Region; 1993.
18. Joshi, J.; Housing and Urban Development in Nepal; 1998.
19. Joshi, J.; Planning for Sustainable Development; 1997.
20. Kathmandu Valley Mapping Program; Overall Work Plan; 1999.
21. Local Self-Governance Act 2055; 1999.
22. Lumanti, NEWAH, WaterAid, Water and Sanitation Program-South Asia; The Water Supply and Sanitation Situation of the Urban Poor in the Kathmandu Valley; Results of a Research Study; 2000.
23. MSTP/ UNDP/ World Bank; Kathmandu-Lalitpur Structure Plan; 1987.
24. MSTP/UNDP/ World Bank; Infrastructure Assessment Report-Kathmandu and Lalitpur Nagar Panchayat; 1988.
25. MSUD; Nepal Urban Development Policy Study; 1989.
26. National Planning Commission/HMG; The Ninth Plan, Human Settlements and Urban Development; 1996.
27. National Society for Earthquake Technology-Nepal/ GeoHazards International (GHI); The Kathmandu Valley Earthquake Risk Management Action Plan; 1999.
28. Nepal Rastra Bank; Household Budget Survey, Urban Nepal; 1999.
29. PADCO; Kathmandu Valley Urban Land Policy Study; 1986.
30. Slusser, Mary Shepherd; Nepal Mandala: A Cultural Study of Kathmandu Valley; 1982.
31. Snowy Mountain Engineering Corporation/CEMAT; Greater Kathmandu Drainage Master Plan Studies; 1990.
32. Tiwari, Sudarshan Raj; The Pattern of Settlements in Ancient Nepal; unpublished Ph.D. dissertation; TU; 1995.
33. Thapa, Kishore; Existing Policies and Programs on Land Development; 1995.
34. Thapa, Kishore; Upgradation of Squatter Settlements in Kathmandu; unpublished Masters Thesis; 1994.

URBAN ECONOMICS

Dr. Bhuban B. Bajracharya
URBAN ECONOMICS SPECIALIST

LIST OF ABBREVIATIONS

GDP	Gross Domestic Products
HBS	Household Budget Survey
HDI	Human Development Index
KCDS	Kathmandu City Development Strategy
KMC	Kathmandu Metropolitan City
MT	Metric Tonne
NLFS	Nepal Labour Force Survey
NLSS	Nepal Living Standard Survey
NRB	Nepal Rastra Bank
SAARC	South Asian Association for Regional Cooperation
SAF	South Asian Federation
SLC	School Living Certificate
TIA	Tribhuvan International Airport
VDC	Village Development Committee
WTO	World Trade Organization

TABLE OF CONTENTS

List of Abbreviations	48
Table of Contents	49
List of Tables	50
2. URBAN ECONOMICS	51
2.1 Introduction	51
2.2. Context	51
2.2.1 Objectives of the Study	51
2.2.2 Overall Economy and the Context of Kathmandu	51
2.3 Setting The Strengths	53
2.3.1 Capital City	53
2.3.2 Human Development Index	54
2.3.3 Kathmandu's Economy	54
2.3.4 International linkage	55
2.3.5 Employment	55
2.3.6 Employment Sources	56
2.3.7 Income Level	56
2.3.8 Human Resources	57
2.3.9 Educational Institutions	57
2.3.10 Infrastructure	58
2.3.11 Business and Cargo	58
2.3.12 Tourism	59
2.3.13 New Prospects	59
2.4 Constraints And Limitations	59
2.5 Looking Ahead	60
Bibliography	62

LIST OF TABLES

- Table 1:** Composition of GDP (in percent)
- Table 2:** Annual Percentage Change in GDP and its Components (in percent)
- Table 3:** Custom Revenue from Tribhuban International Airport (Rs. in million)
- Table 4:** Distribution of Household Members by Employment Status (in percent)
- Table 5:** Percentage Distribution of Employed Population by Occupation Group
- Table 6:** Annual Average Per Capita Income by Source (1995/96)
- Table 7:** Annual Average Per Capita Income by Occupation (1995/96)
- Table 8:** Annual Per Capita Income by Decile Groups and Income Distribution Pattern (1995/96)
- Table 9:** Distribution of Population (6 Years of Age and More) by the Attainment of Education Level (Kathmandu) - 1991
- Table 10:** Urban Economics - Issues & Implications

2.

Urban Economics

Kathmandu has remained a seat of power and an economic power center ever since the beginning of modern Nepalese history. In recent years, it has grown at a fast pace keeping pressure upon its limited social and physical infrastructures as well as upon the natural resources. The geographical boundary of Kathmandu Metropolitan City presents a somewhat incomplete picture for assessing the pressure upon its infrastructures in so far as settlements and other establishments are gradually expanding to many near-by Village Development Committees (VDCs).

2.1 INTRODUCTION

So far the growth of Kathmandu has taken its own shape and trend, and planned efforts to develop it have been successful in a very limited way. The horizontal expansion even to the neighboring VDCs and the tendency towards the vertical expansion particularly in the core commercial centers now call for more systematic efforts. However, these systematic efforts need to be streamlined along the requirements of the city. Such requirements are in turn guided by the role and nature of the city under consideration. So, in this context, it is essential to see how Kathmandu is growing, what roles it is in, and how it wants to grow in future. Towards this effort, the World Bank, upon the request of Kathmandu Metropolitan City, has provided technical assistance for preparing a Kathmandu City Development Strategy (KCDS).

In this section, an attempt is made to assess the socio-economic features that are likely to lead the city in the future.

2.2. CONTEXT

Kathmandu, as we have seen, displays a typical example of a haphazard and unplanned growth. To arrest this trend and to give direction to the future growth of the city together with defining a concrete and definite role for Kathmandu Metropolitan City (KMC) towards this venture, the Kathmandu City Development Strategy was thought of and formulated.

2.2.1 Objectives of the Study

CDS Objectives The principal objective of this Strategy study is to assist KMC in improving the city's livability, competitiveness, bankability, governance, and management capacities.

The first two objectives bespeak of the need for improving the environment of Kathmandu to make it a livable and at the same time a competitive place. The remaining three objectives touch upon the implementation part and indicate the need for building and strengthening institutional and management capacities.

Rapid growth of the city is accompanied by the prevalence of urban poor. They consist of, both, mostly migrated people sheltered in slum areas, and the indigenous local people who could not move along with others primarily because of lack of access to skills, and other resources, and at the same time due to social exclusions. Hence, the other objective of this strategy formulation is to address the problem of urban poor.

2.2.2 Overall Economy and the context of Kathmandu

2.2.2.1 Per Capita and HDI

Nepal ranks amongst the poorest countries in the world. With a per capita income of about US \$ 220, its human development index (HDI) is not that high either. It stands at

0.463 for 1999, which is low even by the South Asian standard. Defining poverty line as Rs. 4,404 per person per annum, 42 percent of the people are estimated to be below this poverty line in 1995, 23 percent in the urban area and 44 percent in the rural area. Going by this definition, urban areas of the Kathmandu Valley have a very nominal population below poverty line - just 3.6 percent. However, it has to be interpreted somewhat with caution for the reason of differences in cost of living and the composition of food and non-food items across different regions.

For this particular year when the Nepal Living Standard Survey was undertaken, per capita income was estimated at Rs. 7,690 at the national level. For the Kathmandu Valley, it was estimated at Rs. 24,084 - thus showing a difference of more than three times between the national average and that of the Kathmandu Valley. This difference will be more than four times if comparison is made with the region with the least per capita income i.e. the rural west terai. Such difference could be a proximate indicator for the reasons of attraction towards the Kathmandu Valley.

2.2.2.2 Economy

Nepal's economy is pre-dominantly agricultural - its share in the Gross Domestic Products being still at 40 percent. In 1985/86, it used to be more than 50 percent (Table 1). The decline in the share of the agriculture sector in the GDP is compensated by the increase in the shares of financial and real estates, community and social services, transport and communication, construction, and manufacturing. It is to be noted that the sectors, which have brought about this structural change in the economy,

are the ones concentrated in the urban areas. It is observed that these developments in the urban areas are not strong enough to bring down the poverty incidence.

Many of the economic activities that developed in the urban areas are in the Kathmandu Valley. The construction boom, establishment of new financial institutions, new airlines etc. all occur in Kathmandu. It is therefore not surprising that the urban-based economic activities are more Kathmandu centric. The liberal economic policies vigorously pursued after the political change in 1990 saw a quick response from the non-agricultural sectors located mostly in the urban areas (Table 2). The annual percentage change or the annual growth rates show an increase for these non-agricultural sectors. On the other, the agriculture sector, which still largely depends upon the vagaries of monsoon is not that price sensitive. Its growth rate is in fact found to be declining as compared to late 1980's. As a result, rural economy could not make a similar progress.

The reasons for Kathmandu Valley centric economic activities are often attributed to the centralized decision making system. It is argued that even if the socio-economic infrastructures are developed in other parts of the country as well, the centralized decision making has attracted entrepreneurs and major economic activities into the Valley. This tendency may not continue for long as the government is pushing the decentralization schemes with letter and spirit, and the local government agencies are being gradually equipped with greater authorities. The Local Self-Governance Act provides the local authorities with revenue sources through different tax measures, which so far used to be with the central government. Though Kathmandu has a distinct

Table 1: Composition of GDP (in percent)

Originating Sectors	1985/86	1990/91	1995/96	1999/00**
1. Agriculture, Fisheries & Forestry	50.3	47.5	41.2	39.2
2. Mining & Quarrying	0.4	0.5	0.5	0.5
3. Manufacturing	6.2	6.3	8.7	9.5
4. Electricity, Gas & Water	0.5	0.8	0.8	0.8
5. Construction	8.7	9.3	9.9	9.6
6. Trade, Restaurants, & Hotels	10.5	10.5	11.1	11.1
7. Transport, Communication & Storages	6.0	6.6	7.7	8.5
8. Financial & Real Estate	8.8	9.5	9.9	10.2
9. Community & Social Services	8.5	9.2	10.2	10.6
Agricultural GDP at factor cost	50.3	47.5	41.2	39.2
Non-Agriculture GDP at factor cost	49.7	52.5	58.8	60.8
Total GDP at factor cost	100.0	100.0	100.0	100.0

**Preliminary estimate

Source: Economic Survey - 1999/2000, Ministry of Finance

Table 2: Annual Percentage Change in GDP and its Components (in percent)

Originating Sector/Period	1985/86- 1989/90	1990/91- 1994/95	1995/96- 1999/2000
1. Agriculture, Fisheries & Forestry	4.1	1.5	3.5
2. Mining & Quarrying	5.5	5.8	5.9
3. Manufacturing	5.2	14.0	7.4
4. Electricity, Gas & Water	13.9	10.1	8.0
5. Construction	6.5	6.5	4.4
6. Trade, Restaurants, & Hotels	4.4	7.5	4.4
7. Transport, Communication & Storages	5.3	9.8	6.9
8. Financial & Real Estate	5.2	6.4	5.7
9. Community & Social Services	6.7	6.8	5.7
Agricultural GDP at factor cost	4.1	1.5	3.5
Non-Agriculture GDP at factor cost	5.5	8.2	5.7
Total GDP at factor cost	4.8	5.0	4.8

advantage due to a big development gap between it and other cities, towns and settlements, and is not threatened due to its preeminent position, it also means that Kathmandu needs to be more competitive in the future.

Liberalization policy, SAFTA, and the Nepal's efforts to join the World Trade Organization (WTO) will require Kathmandu to be more competitive at the regional and international setting. The role of the central government is gradually getting concentrated upon regulating and monitoring. Different reform measures in financial, real and external sectors are already in implementation. Under these policy measures, custom walls have to be gradually brought down, subsidy and quota to be eliminated or brought down to non-existence level, public enterprises need to be privatized, PEs need to compete with private sector by opening all sectors for private sector participation. Now, there are no more regulated interest rates. Exchange rates are determined by the market. All these policy measures invites the private sector to participate more competitively in the market. Though the absence of stability in the policy measures, and other uncertainties have yet to energize the private sector to a desired level, future perspectives have to be framed along this direction.

2.3 SETTING THE STRENGTHS

2.3.1 Capital City

Kathmandu has been a capital city and it still is. Though occasionally suggestions are made to shift the capital city elsewhere particularly due to the pressure that has been put upon its natural resources, it is not an easy

option. First, heavy investment is needed to develop an alternative capital city and such investment will not be forthcoming in view of the fact that many other priority programs of the government have still not been met. Second, pressure upon natural resources is bound to come everywhere, and on that basis only it is not practicable to keep shifting the capital. It has to be a strategic decision. So, there is little likelihood of shifting the capital away from Kathmandu.

The growth of Kathmandu with all these activities has been made possible by the facilities available in the city and the investment made on these facilities. Moreover, such investment from private, government, and non-government sectors have taken place in an evolving manner over the years. Therefore, investment of such scale from various sectors is unlikely to take place in other metropolitan cities in Nepal. In other cities also, investment will increase in a gradual and evolving manner rather than in an abrupt and autonomous way. The time taken for the rehabilitation of the central secretariat after the devastating fire in the Singha Durbar amply speaks of the difficulty in making a huge investment for creating different infrastructures for a capital city. So, from an economic consideration, the vast amount of investment needed, in shifting the capital city, will keep Kathmandu as a capital city in a foreseeable future.

Being a capital city, it is a center for executive as well as for legislative and judiciary branches. Likewise, many constitutional bodies have their offices in Kathmandu only. So, with all the government and other paraphernalia being centered in Kathmandu, it has attracted one and all, and it has contributed significantly in its growth.

Capital City means it has some disadvantages, primarily in defining the roles of the central level government departments and local level government bodies. In the capital city, central government departments also have important roles to play in developing and maintaining infrastructures at the acceptable standard in international comparison. At the same time, higher allocation of central budget to the capital region invites criticisms. Such a situation demands a greater role for Kathmandu Metropolitan City. It has got implications with both responsibilities and authorities for resource mobilisation for KMC.

2.3.2 Human Development Index

Kathmandu district has the highest human development index of 0.603 for 1996 as against the national value of 0.325. Such high human development indicator is a result of high life expectancy at birth (67 years), high literacy rate (70.6 percent), and high income (per capita annual income of NRs. 24,000). The status of women is also high with the Gender sensitive Development Index (GDI) estimated at 0.460 for 1998. The female literacy rate stands at 57 percent. These figures can be expected to be even higher for Kathmandu Metropolitan City.

2.3.3 Kathmandu's Economy

Official statistics do not provide GDP estimates at the regional and sub-regional level due to which the Gross Domestic Product of the city is not known. Though it is not feasible to estimate Kathmandu's GDP, some ideas on it can be obtained from the trend of some of the major

components of GDP. From the expenditure side, GDP consists of consumption, investment and government expenses. With an estimated city population of about 600,000 and annual per capita expenses of about Rs. 27,250 (HBS, 1999), the total consumption expenditures at the household level can be somewhere around Rs. 16,350 million i.e. US \$ 224 million. Assuming this consumption expenditure to be 70 percent of GDP, Kathmandu's gross domestic products can be roughly assessed at Rs. 23,357 million i.e. US \$ 320 million (at one US \$ = Rs. 73). It is just an indicative figure and should be used with caution.

The other measure of Kathmandu's economy is the custom revenue from Tribhuban International Airport. The custom revenue from this point constitutes a significant portion in the total custom revenue though showing a large annual variation - from 26 percent in 1996/97 to 11 percent 1999/2000. In view of the alleged leakage, such shares can be fairly assumed around 20 percent.

It is to be noted that despite bringing down the custom rates, custom revenue from TIA shows an annual average percentage increase of 16.1 percent in the 1990's. In the later years of the decade, it has shown a negative growth primarily because of the weakened tax administration at the airport. The peak collection is reported for 1996/97 when Rs. 2,146 million was collected in custom revenue. It was more than three times the amount collected in 1990/91. The custom revenue collection indicates both its own consumption strength and its importance as the trading center. Since air transport is preferred for exports and imports, the existence of an

Table: 3 Custom Revenue from Tribhuban International Airport (Rs. in million)

Year	Target	Actual Revenue Collection	Index of Progress	Annual Percentage Change	Three years Average of Percentage Change	TIA's Share in Total Custom Revenue (In %)
1990/91	500	563	112.6	-		18
1991/92	619	648	104.7	15.1		19
1992/93	726	546	75.2	15.7		14
1993/94	731	1,235	168.9	126.2	36.8	24
1994/95	1,493	1,431	95.8	15.9		20
1995/96	1,702	1,399	82.2	2.2		19
1996/97	1,478	2,146	145.2	53.4	22.4	26
1997/98	2,436	1,446	59.4	32.6		17
1998/99	1,899	1,156	60.9	20.1		12
1999/00	1,509	1,216	80.6	5.2	-15.8	11

Source: Department of Custom, Ministry of Finance.

international airport is an important factor for this phenomenon.

2.3.4 International Linkage

Kathmandu's importance lies also, in being the only city with strong international connections particularly through air services. International linkages through air services have increased both in terms of different international destinations, and number of airliners operating. The international airport at Kathmandu is one prominent factor contributing to this.

The proposal of an alternate international airport outside Kathmandu can have mixed effects upon the city. Production units like readymade garments and carpets can get located outside Kathmandu. Likewise, the number of the tourists may also show some decline. However, there may not be a significant decline in the number of tourists since only limited accommodation facilities are available elsewhere outside Kathmandu, and hence tourists have to be transferred to Kathmandu. At the same time, there are mixed opinions on further expanding the capacity of Tribhuban International Airport.

The other international linkage is provided by the presence of different international agencies. Apart from the embassies of different countries and the country offices of different international organizations, several regional offices of these organizations are also located here in Kathmandu. The location of SAARC headquarter in Kathmandu indicates not just Kathmandu's capability to house such institutions but also politically the more amiable status of Nepal in the South Asian perspective. The location of these international agencies indicates the availability of transport and communication infrastructures and other facilities from both public and private sectors.

2.3.5 Employment

The recently concluded Nepal Labor Force Survey (1998/99) points to some interesting features of an advanced urban center in the Kathmandu Valley. The average family size is reported at 4.6, and the current unemployment rate is estimated at 9.6 percent - second highest after the eastern terai region. It is somewhat less than the estimate by the Nepal Living Standards Survey in 1995/96. There are some definitional changes, which

make it difficult to make a comparison between these two figures. The NLFS has broadened the definition of employment by including such activities like collection of wood for fuel and fetching water in the economic activities. Whichever definition we take, it is evident that unemployment rate hovering around 10 percent is high and not unusual for an urban center. The NLSS has reported that the urban centers of the Kathmandu Valley obtain just about 3 percent of total income from agriculture sector. The Household Budget Survey by the Nepal Rastra Bank for the year 1995/96 reported an even lower share of agriculture sector in the total income. When 97 percent of total income is derived from non-agricultural sources, and when population growth is high at around 6 percent per annum due to migration, demographic and frictional unemployment are likely to be high. This is visible in Kathmandu too.

The Household Budget Survey (1995/96) reports that about 58 percent of the employed people are employees - almost 43 percent in the private sector. Little more than 23 percent of the economically active population is self-employed. For the female population almost 50 percent are employees, and their employment status as unpaid family is also high at 32 percent.

Of this economically active people, only about 15 percent are engaged in agriculture as against 80 percent at the national level. About 22 percent in manufacturing and processing followed by trade/commerce and related sectors (21 percent). General laborers constitute little more than 4 percent.

Women's participation is also high, with more than 34 percent of the economically active population being female. Leaving few sectors like transport and communication, construction, and legislative/

Table 4 : Distribution of Household Members by Employment Status (in percent)

Employment Status	Kathmandu Valley		
	Male	Female	Total
Employer	1.2	-	0.8
Self-employed	25.7	18.5	23.2
Employee	62.0	49.5	57.7
(Government)	(8.5)	(6.9)	(7.9)
(Semi-government)	(8.2)	(5.1)	(7.1)
(Private)	(45.3)	(37.5)	(42.7)
Unpaid family workers	11.1	32.0	18.3
TOTAL	100	100	100

Source: Household Budget Survey (1995/96), Nepal Rastra Bank

management/administrative jobs, their involvement in other occupations is quite significant (HBS, NRB, 1995/96: 37).

2.3.6 Employment Sources

Kathmandu offers a wide range of non-farm employment opportunities. The NLSS has shown that 85 percent of sampled households belonged to the uppermost quintile income group, which helps in creating demand for diverse goods and services. The other non-farm employment opportunities are provided by the ever-booming tourism industry.

A host of other business activities have come up in the Kathmandu Valley indicating new business prospects and employment opportunities. The consulting activities, private airlines, banking and financial institutions, delivery of social services by the private sector, specialized services like audit and accounting, joint ventures and foreign direct investment etc. are some of the business promoted by the liberal economic policies pursued vigorously after the restoration of the multi-party political set-up in the country. It is reported that seventeen domestic, including private, airlines provide direct employment to about 5,000 people.

The diverse employment sources can be discerned from the distribution of the employed population by occupation groups.

Table: 5 Percentage Distribution of Employed Population by Occupation Group

Occupational Group	% of Employed People
All Households	100
Professional and Technical	11.5
Administrative and Managerial	4.5
Clerical	7.7
Agriculture	15.3
Sales and Service	11.8
Production	15.0
Construction	20.7
Transport and Communication	4.5
General Laborers	4.5
Others	4.5

Source: Household Budget Survey (1995/96, Nepal Rastra Bank)

From this Table, it is evident that there is no, one, overwhelming occupation in which the employed people are engaged.

2.3.7 Income Level

Both NLSS and HBS report a per capita income of urban areas of Kathmandu Valley at more than Rs. 24,000 per annum. It is interesting to note that near about 25 percent of the average annual per capita income is derived in kind and of this more than 17 percentage points are the imputed rental value of the owned house.

Table: 6 Annual Average Per Capita Income by Source (1995/96)

Sources of Income	Income in Rs	in %
Total Monthly Income	24,561	100
Current cash income	18,632	75.9
wages and salaries	8,667	35.3
enterprise income	5,183	21.1
(agricultural)	(317)	(1.3)
(non-agricultural)	(4,866)	(19.8)
Property rental income	2,828	11.5
Pension and assistance	1,586	6.5
Other cash income	367	1.5
Income in kind	5,929	24.1
Home produced	71	0.3
Free of cost	689	2.8
Received as part of pay/wages	5	
enterprise income	940	3.8
(agricultural)	(911)	(3.7)
(non-agricultural)	(28)	(0.1)
Rental Value of a self-owned home	4,225	17.2

Source: Household Budget Survey (1995/96, Nepal Rastra Bank)

The highest per capita income estimated for administrative and managerial persons is Rs. 47,534 while that of general laborers is the lowest at Rs. 10,121 only - a difference of more than three times.

Table 7: Annual Average Per Capita Income by Occupation (1995/96)

Occupational Group	Income in Rs
All Households	24,561
Professional and Technical	31,981
Administrative and Managerial	47,543
Clerical	18,698
Agriculture	20,651
Sales and Service	25,725
Production	22,156
Construction	14,504
Transport and Communication	16,334
General Laborers	10,121
Others	25,927

Source: Household Budget Survey (1995/96, Nepal Rastra Bank)

Per capita income in a way reflects the productivity, and from this perspective, agriculture has also shown a respectable per capita income and productivity. It clearly shows that commercialisation of agriculture yields good returns in agriculture.

The highest per capita income indicates the opportunities that the urban areas of the Kathmandu Valley provide. It is also the reason that competitive and successful people from around the country migrate and stay here.

The Household Budget Survey does not indicate a big gap in the per capita income between different decile groups. The difference between the lowest decile and the top decile is just about three times. However, in terms of income distribution it can be seen that the top 10 percent of households control about 26 percent of the total income. People at the bottom 40 percent have just about 21 percent of the total income. The inequality and skewed income distribution in the face of a not very large gap in the per capita income level suggests a high degree of competition is needed to reach to that level.

Table 8: Annual Per Capita Income by Decile Groups and Income Distribution Pattern (1995/96)

Decile Group	Annual Per Capita Income	Percent of Income	Percent of Population
1	16,565	3.74	12.42
2	16,806	5.44	12.44
3	14,869	5.53	10.42
4	17,006	6.20	10.02
5	24,200	8.63	11.74
6	18,342	8.05	9.29
7	21,529	9.96	9.49
8	24,022	11.32	8.72
9	29,191	15.10	8.53
10	48,085	26.03	6.93
All Households	24,561		

Source: Household Budget Survey (1995/96, Nepal Rastra Bank)

The per capita income level of the urban areas of Kathmandu Valley thus shows the competitiveness of Kathmandu as compared to the other parts of the country.

2.3.8 Human Resources

If we are to observe a breakdown of the literate people, there is a strong concentration of highly educated people in the Valley, more so in the metropolitan area. The

Population Census of 1991 clearly indicates that 35 percent of the total people have an education level of S.L.C. and above. As the human resource is a prime factor propelling the development process, such human force is bound to take the city much ahead particularly in the atmosphere of liberal economic policies which promote the efficient use of resources. The KMC still

Table 9: Distribution of Population (6 years of Age and more) by the Attainment of Education Level (Kathmandu) - 1991

Education attainment level	Kathmandu city
No schooling	34,454 (12)
Primary (1-5)	66,047 (23)
Secondary (6-10)	74,469 (26)
S.L.C. and equivalent	36,682 (13)
Intermediate and equivalent	28,805 (10)
Graduate and equivalent	24,884 (9)
Post Graduate and equivalent	8,377 (3)
Others	31 (-)
Level Not Stated	11,654 (4)
TOTAL	285,403 (100)

Source: Population Census (1991), Central Bureau of Statistics. Figures within parentheses are percentages.

has the potentiality for attracting such highly educated people for various reasons.

2.3.9 Educational Institutions

Kathmandu has a number of good educational institutions at different levels. There were 599 public schools in 1998 with a total of 141,903 students. With the teachers' strength at 6873, the student teacher ratio comes to 21:1. In the Kathmandu Valley, another 151,212 students study in private schools. A Study on Cost Sharing Options for Quality Secondary Education indicated that in 1996/97, out of the seven best performing public schools in SLC examination from among 76 sampled public secondary schools in Nepal, three happened to be from Kathmandu, one happened to be from Lalitpur district - so altogether 4 from the Kathmandu Valley itself. Though Kathmandu has only one university, a host of colleges affiliated with four universities are operating in the city. Apart from the humanities and management stream, many engineering colleges have recently started. Now, the country can produce 4 to 5 thousand engineers in a year, and more than 50 percent of

them will be from Kathmandu Valley alone. The private initiatives in establishing these institutions indicate the demand for these subjects.

2.3.10 Infrastructure

Kathmandu's growth is facilitated by the presence of well established if not well maintained infrastructures. It has a good road network with other parts of the country. Arniko Rajmarg connects Kathmandu with Tibet the autonomous region of China. Of late, its economic importance has significantly improved with the emergence of Khasa in Tibet as a prime business center. Besides, tourists are moving to Lhasa via this highway. Kathmandu has communication facilities of international standards, and for that matter a proposal was earlier developed and discussed to develop Nepal as an international financial center. The satellite connections in the telecommunication sector have made modern facilities available in Kathmandu. The extensive infrastructures at the retail distribution level have made these facilities accessible to every nook and corner of the city. As of July 2000, there will be more than 100,000 telephone connections in Kathmandu. It is about 160,000 in the Kathmandu Valley.

Electricity is provided by a national grid system, and so far the demand outstrips the supply, inviting load shedding particularly during winter. This situation will be reversed once the power from Kaligandaki 'A' will be supplied. Kaligandaki 'A' is likely to commence in early 2002. The assured power supply will encourage some new ventures.

Kathmandu is gradually experiencing a transformation in providing utility services. Delivery of utility services is gradually being made commercial and institutional. Nevertheless, there is still a great leap forward required to meet the demand of a modern day metropolitan - both for providing utility services and making payments through banking institutions.

The construction of buildings of different qualities at the private sector, though criticized as unproductive investment, has also greatly reduced the public housing problems which would otherwise be a headache for the government. At the same time, it has facilitated the stay of foreign nationals.

2.3.11 Business and Cargo

The other business oriented activities have their reflection in the outgoing air cargo, which has reached

the peak of 12,000 MT in 1993 and recently gone down to about 8,000 MT in 1998. The incoming air cargo is around 6,000 MT. The presence of the international airport in Kathmandu has prompted some of the export oriented production units in the Valley. Carpet and readymade garment production units were established in different parts of the city. However, for different reasons, their production has gone down considerably, and many such units were closed down. Mostly these two export oriented industries are established in the Kathmandu Valley, the other industries polluting the environment and existing in the Valley are brewery and distillery, cement, feed, soap and chemicals, solvent oil and vegetable ghee, marble, quarrying, textiles etc. But the existence of the international airport and the easy availability of skilled and semi-skilled manpower in the Valley has made them stay in the Valley. Some of these industries were in existence long before, when Kathmandu was still a little town.

For reasons of environmental problem, Kathmandu can sustain only high value and the low volume products for production within the city. Of recent, the export of handicrafts and silver ornaments has increased from Kathmandu. In the meantime, there are efforts to relocate the environmentally polluting industries from the Valley. As the industries are yet to pay for any environmental cost, there is less incentive for them to relocate. Though water supply has emerged as a critical problem, harnessing and use of ground water without having to pay for it has kept these industries moving elsewhere. Therefore the introduction of payment for environmental cost and for the use of natural resources will make them re-evaluate their continuation in the Valley.

Kathmandu is an important business center, though it is not possible to estimate the business establishments currently working in the city, it can be guessed that it goes well into the thousands. Near about 20,000 firms are registered under the Company Act. However, it is not quite clear how many of them are actually working. One rough estimate suggests the survival rate to be about 25 percent, and accordingly, about 5,000 firms can be expected to be operating throughout the country under the Company Act. More than 50 percent of this is expected to be in the Kathmandu Valley. Besides, there are business units registered under other different acts such as Partnership and Agency acts. So, anywhere between 8,000 to 10,000 units can be expected to be operating from the Kathmandu Valley. It can be assessed also from the fact that almost all the banking and non-banking financial institutions have their principal

business center in Kathmandu. One important development in the business sector is the institutional change towards a more organized and better-managed institutional set-up. However, the pace is not enough. The private sector in Nepal is fragmented and many of the organizations come together to secure a monopoly hold. Corporate culture and good corporate governance need to be vigorously promoted for making the private sector of Kathmandu competitive not only within Nepal but also in the regional and international context. This is absolutely necessary to enhance the management strength.

2.3.12 Tourism

Number of tourists is growing at an annual rate of 8 percent. Apart from the number of tourists reaching the 500,000 mark, the number of hotels and hotel rooms are also showing a steady rise. The number of hotels has risen from less than 100 in 1988 to 325 in 1997 in the Kathmandu Valley. There are four 5-star hotels in Kathmandu. The total number of beds has gone up from 6,125 to 16,681 in the same period. Tourism and business activities have attracted various international airliners into the country, and at present more than a dozen international airliners are operating their services in Kathmandu. Concerning tourism, Kathmandu is gradually emerging as a regional destination. In view of opening of Tibet for tourism, Kathmandu is in an even more advantageous position.

In 1998, Nepal received about 464,000 tourists. Of this, almost 400,000 tourists entered Nepal through Kathmandu. That means, 86 percent of tourist entering Nepal by air come to Kathmandu. Assuming about 3 days of average stay in Kathmandu, it has an estimated 1.22 million days of tourist stay. It amounts to about US \$ 35 million of tourist spending in Kathmandu on the assumption of spending of US \$ 30 per day i.e. NRs. 2,562 million (at the current rate of US \$ = NRs. 73). The tourism activities of this scale are evident from the tourism services and other tourism infrastructures in the Valley. The tourism spending in the Valley could be even higher as the trekking arrangements and bulk purchases for them are all made here.

These tourists come to Kathmandu for various purposes - from sight seeing to business to conferences. Kathmandu has good tourism prospects - cultural tourism, business visits, conferences, and small treks in and around the Valley. The city of Kathmandu including

Kirtipur has several world heritage sites known for their grandeur, rich art works, and cultural activities. Besides, the surrounding areas of the Kathmandu Valley attract people for the Himalayan range and natural splendor. Apart from these scenic attractions, Kathmandu as a 'city' has also started attracting visitors for different purposes such as business, conferences, sports, a small 'hop' for Tibet bound visitors etc.

2.3.13 New Prospects

As we have seen earlier, the strong human resource of the city coupled with equally good communication infrastructure can promote the prospects of information technology in the country. Though the government has a policy of promoting software development in the country, it is not quite sure about its location. Earlier, some initial works were taken to develop an IT park outside Kathmandu. The private initiatives towards the software development industry have made some significant strides ahead and could work as a foundation for a more organized effort.

The other advantage for Kathmandu lies in it being an important capital city of one of the South Asian countries. The SAARC Secretariat is in Kathmandu, and it also symbolizes the acceptance of Kathmandu as an advantageous location for undertaking regional activities. Such regional activities relate to business, sports and culture, politics and administration. Of recent, Kathmandu has shown its potentiality for hosting international level sports activities with the successful conclusion of the 8th. SAF Games, and the first ever international cricket event in the country. The tourism growth in the Valley has increased accommodation facilities considerably. So, sports facilities for professional games could be an attractive proposal for Kathmandu. Weather, political acceptability, security, accommodation facilities are some requirements with which Kathmandu is already endowed.

2.4 CONSTRAINTS AND LIMITATIONS

At the same time, Kathmandu is a small valley surrounded by mountains. Despite good road networks and air routes, the entry and access to the Valley is always found to be technically challenging. So, there is a proposal for an alternate international airport outside the Kathmandu Valley. This will not only help in lowering

the pressure upon Kathmandu but also require it to be competitive.

The other constraint is posed by the limited water supply. Demand for water is increasing due to the increase in population and the change in lifestyles. The growth of industries requiring huge volume of water is simply not possible, and there is pressure to shift the existing industries out of Kathmandu due to the scarcity of water. Though Melamchi water can be expected in the foreseeable future, its industrial use is less likely to be feasible due to the fast growing consumption need and the cost of supplying water.

Of recent, Kathmandu has experienced a rapid expansion, and it is mainly horizontal expansion extending to the near-by Village Development Committees. Such growth has put pressure upon the physical infrastructures particularly upon the water supply and sewage facilities. Despite the increase in the number of vehicles the length of urban roads have virtually remained the same. So, even at this early stage of development, a necessity is felt to restrict the number of vehicles.

Besides these physical limitations, there are institutional limitations in the form of inadequate authorities within the Kathmandu Metropolitan City, unclear relationship between the Center and local government agency, and KMC's own organization. Though there are classification of municipalities, its reflection in the responsibility and authority is not defined. Therefore the provisions that may be required for a small VDC and municipality could be very restrictive for KMC. As is indicated earlier, the central level government ministries and departments play their roles in the development of a capital city thus the responsibilities are often overlapping. It becomes particularly critical when resources do not get to the hands of the KMC, and individual ministries and departments express their difficulty in allocating more resources to the city in their own programs.

It could be a critical constraint in a broader context as well. The central government is finding it increasingly difficult to manage and enhance the quality of education and health facilities provided by the public institutions. The role of the local government is not yet clear, and the central government has not been able to devise any modus operandi to pass on some of these responsibilities and resources to the local government institutions.

2.5 LOOKING AHEAD

Future prospects for the city have to be thought of both in terms of sectors and programs, and the implementation capability. While doing so, we should not be guided by the past only, and hence some unconventional thinking should also be encouraged. Besides, Kathmandu has to be evolved not just in the context of Nepal, but also in the regional and international contexts.

From the past tourism has shown a great prospect in Kathmandu. The tourist attractions together with the development of the tourism infrastructures can provide a still greater impetus to its growth. Since Kathmandu is the most convenient gateway to Lhasa, Tibet, which is emerging as a tourism destination, Lhasa bound tourists are likely to increase in the years to come. This growth in tourism can be further promoted by promoting sports activities. Some of the professional sports such as cricket and golf can be promoted in Kathmandu by greater coverage through satellite television.

Information technology and computer software development are two promising economic activities that are coming up throughout the world. Their demand is ever increasing. As it does not put much pressure upon natural resources, these activities are even more ideal. Similar other industries having minimal impacts upon the natural resource are the assembling industries.

Trade and business are the two major activities taking place in Kathmandu Valley from time immemorial and they still have more prospects. However, its nature will not remain the same, and moreover, Kathmandu needs to be visualised as a regional trade center. Now, the business needs to be more organized, and also conform to the international norms. The private sector also needs to come out from the traditional and conservative cocoon of doing business at the 'individual level'. More organized efforts at the 'industry' level have to be made for keeping the quality at a competitive level, taking the benefit of economies of scale, understanding and disseminating the international norms. Understanding and moving along the macro perspective of the business environment and preparing for it is absolutely essential for the private sector to grow into an internationally competitive sector. Now, with the technological advancement in transport and communication bringing all the countries closer, no country can camouflage itself from international competition.

Table 10: Urban Economics Issues and Implications

ISSUES	IMPLICATIONS	ACTORS
Need for identifying the role, and make Kathmandu and the country competitive in the international context.	Keep up and promote competitive edge based on the states of technology and economic relationships	HMG, KMC, CBOs, Donors particularly multi-lateral.
Inadequate investment and inefficient physical infrastructures	Inefficiency in production process and increase in cost of production	HMG, KMC, private sector including joint ventures, Donors particularly multi-lateral.
Resource crunch with KMC	Poor infrastructure, environmental problems, and poor service delivery	HMG, KMC and private sector
Weak implementation capacity of KMC	Poor service delivery, poor revenue collection, unruly city development	HMG, KMC and donors
Limited role of KMC in development activities	Sterile image as local government bodies	HMG, KMC

BIBLIOGRAPHY

CBS (1996), Nepal Living Standards Survey Report - 1996, Vol. I: Main Findings, Central Bureau of Statistics, Kathmandu.

CBS (1997), Nepal Living Standards Survey Report - 1996, Vol. II: Main Findings, Central Bureau of Statistics, Kathmandu.

CBS (1999), Nepal Labour Force Survey - 1998/99, Central Bureau of Statistics, Kathmandu.

DoE (2000), School Level Educational Statistics of Nepal - 1998, Department of Education, Ministry of Education and Sports, Bhaktapur.

ICIMOD (1993), Economic and Environmental Development Planning for Bagmati Zone, Vol. III: Kathmandu Valley Urban Region, A: Assessment of Current Conditions, B: Plan and Programmes, ICIMOD, Kathmandu.

METCON (1999), Cost Sharing Options for Quality Secondary Education in Nepal, a report prepared for Secondary Education Development Project, Kathmandu.

Ministry of Tourism and Civil Aviation (1998), Summary of Tourism Statistics.

NESAC (1998), Nepal Human Development Report - 1998, Nepal South Asia Centre, Kathmandu.

NRB (1999), Report on Household Budget Survey - Urban Nepal, Nepal Rastra Bank.

World Bank (2000), World Development Report - 2000/2001: Attacking Poverty, World Bank.

INSTITUTIONAL DEVELOPMENT

Dr. Dev Raj Adhikari
INSTITUTIONAL DEVELOPMENT SPECIALIST

LIST OF ABBREVIATIONS

ARC	Administrative Reform Committee
CDS	City Development Strategy
CEO	Chief Executive Officer
CPC	City Planning Commission
DCSI	Department of Small Scale Industries
DDC	District Development Committee
DI	Department of Irrigation
DOI	Department of Industry
FNCCI	Federation of Nepalese Chamber of Commerce and Industry
GWRDB	Ground Water Resource Development Board
HDM	Department of Hydrology and Meteorology
KMC	Kathmandu Metropolitan City
LSGA	Local Self-Government Act 1999
MC	Metropolis Council
MLD	Ministry of Local Development
MLJPA	Ministry of Law, Justice and Parliamentary Affairs
MLRM	Ministry of Land Reform and Management
MLT	Ministry of Labour and Transport
MOF	Ministry of Finance
MOH	Ministry of Health
MOH	Ministry of Home
MOI	Ministry of Industry
MOPE	Ministry of Population and Environment
MPPW	Ministry of Physical Planning and Works
MTCCA	Ministry of Tourism, Culture and Civil Aviation
MWR	Ministry of Water Resources
NEA	Nepal Electricity Authority
VDC	Village Development Committee
WC	Ward Committee
WEC	Water and Energy Commission

TABLE OF CONTENTS

List of Abbreviations	64
Table of Contents	65
List of Tables -	66
3. INSTITUTIONAL DEVELOPMENT	67
3.1 Introduction	67
3.1.1 Background	67
3.1.2 Historical Perspective of KMC and Decentralisation in Nepal	68
3.1.3 A Brief Introduction of the CDS in a Broader Perspective	68
3.1.4 Activities	70
3.2 The Context	70
3.2.1 Background	70
3.2.2 The mandate	70
3.2.3 CDS Objectives and its Interrelation to Institutional Development	70
3.2.4 Stakeholders	71
3.3 Existing Institutions Responsible for City Development Activities	77
3.3.1 Background	77
3.3.2 Institutions Involved in the City Development Activities	78
3.4 Review of Existing Policies, Acts and Regulations in the City Development Perspective and CDC in Particular	80
3.4.1 Background	80
3.4.2 Policies, Acts and Regulations	80
3.4.3 Facilitating Implementation of CDS	86
3.5 KMC as an Institution	86
3.5.1 Background	86
3.5.2 Organisation and Management of the KMC	86
3.5.3 KMC: Foundation, Capacity and Performance	91
3.6 Arrangement of Institution in the Context of CDS	100
3.6.1 Introduction	100
3.6.2 Foundation: Issues	100
3.6.3 Capacity: Issues	100
3.6.4 Performance: Issues	100
3.6.5 Issue-Action Matrix: the Gate Way to Vision	101
3.7 CDS Management and Institutional Strengthening Costs	101
3.7.1 Introduction	101
3.7.2 CDS Steering Committee	101
3.7.3 Financial and Human Resource Needs	101
3.7.4 Accounting and Audit	102
3.7.5 Risk Factors in Implementing CDS	102
3.7.6 CDS Can be Implemented	103
3.7.7 Monitoring and Evaluation of CDS	103
3.7.8 Training for Electoral and Staff	104
3.8 Conclusions	104
Bibliography	109

LIST OF TABLES

- Table 1:** Financial and Human Resource Needs
Table 2: Institutional Development - Issues and Implications

3.

Institutional Development

The policy of decentralisation implies the process for transferring authority and responsibility to local bodies in the formulation, implementation and effective management of development plans and projects with active participation of the local people. However, effective involvement of the people in development activities will be largely guided by the national constitution, rules and regulations, motivation, honesty and democratic principles.

3.1 INTRODUCTION

3.1.1 Background

With the advent of democracy in 1990, roles of the central and local government institutions have substantially changed. The Interim Government completed the task of making Nepalese constitution. In course of implementing the new constitution a number of administrative problems were witnessed in the policy making and implementing agencies. Many faulty administrative legacies of the Panchayat regime continue to be in practice even after the arrival of the new constitution. Some of these are: a highly centralised system of administration where high level decisions are imposed on the lower level, and there is a lack of commitment and responsibility in carrying out official tasks. All ministries, departments, local government offices and local elected bodies have inherited the traditional way of doing things. This has created a lot of confusion among the administrators and politicians about who are policy makers and who are the real implementers. Realising this fact the first elected government of Nepal constituted the Administrative Reform Committee to revamp the prevailing administrative system, procedure and mechanism of the outdated Panchayat legacy. One of the objectives of the Committee was to strengthen the local democratic process and speed up local development activities. To achieve the above objectives the Committee decided to work on:

1. to make guidelines to devolve power of the central government to the local elected bodies on issues such as drinking water, health and education;
2. to determine relation between local government offices and the local elected bodies;

3. to determine the required financial resources to the local elected bodies; and
4. to recommend on personnel administration of local elected bodies.

After a rigorous exercise and series of meetings the Committee made several policy recommendations which are to be implemented in the future suggesting a new role for the local elected bodies such as the Village Development Committee, the Town Development Committee and the District Development Committee. However, even after the recommendations of the ARC and formulation of the new Local Governance Act the situation of the local elected bodies have not been improved as expected. Since the Kathmandu Town Development Committee has been renamed as the Kathmandu Metropolitan City (KMC) it is taken as the local body rather than the local elected government. Some major initiatives and projects currently have been taken to strengthen KMC institutionally are; Institutional strengthening of Kathmandu Metropolitan city (Agricultural Development Bank); implementing corporate accounting system in KMC (RUDO/ USAID) and The Urban Governance Initiative Programme to support KMC in good governance (UNDP). These initiatives are going on piecemeal basis rather than an integrated package.

Perhaps, KMC needs to build up its operational capacity to keep up with the growing demands for urban services and to keep pace with the growing problems of its rapid urbanisation and the associated implications for the management of land, service delivery, housing, cultural/ natural heritage conservation and management, environment management and so forth. Realising these facts the proposed City Development Strategy (CDS) aims to enhance its competitiveness and governance of

KMC. However, in the lack of institutional reform and client-response services of KMC, the above objective will probably remain unfulfilled. It is therefore, one of the main aims of the CDS is to strengthen institutional development and governance of KMC in an integrated way.

3.1.2 Historical Perspective of KMC and Decentralisation in Nepal

KMC was established in the name of "Safai Adda" during the Rana regime after the "Bhotahity order" by the then Rana Prime Minister, Chandra Samsher JBR in 1901. It had two levels- upper and lower levels. The upper level was responsible for the administrative works where as the lower level was for cleaning the city. Representatives were nominated by the Rana government. The total number of representatives were 18 in Bhim Samsher's time. In 1918, two Municipalities- Kantipur and Patan-were established (Source: Municipality Section of the MLD). During this regime there were no administration rules to regulate employees working in different organisations. All government forces were centralised, keeping people away from development activities. The basic concern of the Ranas' was patronage and membership of the institutions rather than merit or efficiency (Blakie et al., 1983).

When the Regime was overthrown in 1950 the new political model adopted in Nepal was parliamentary democracy under the aegis of the constitutional monarch. After the revolution in 1950-51 the Panchayati Act-1951 was enacted which made provision for five municipalities in Kantipur, Biratnagar, Patan, Bhaktapur and Birgunj. In 1953 the new act known as the Nepal Kingdom Municipality Act was constituted, adding two more municipalities- in Bhadrapur and Tansen (Palpa). However, after the royal take over by King Mahendra a party less political system (known as Panchayat system) begun. The Constitution of the Kingdom of Nepal-1962 for the first time envisaged the idea of decentralisation. Since the advent of a single party system different commissions were constituted to initiate the process of decentralisation in the country. During the 1960s three commissions reported on decentralisation, namely, Biswa Bandu Thapa Commission, Bhoj Raj Ghimire Commission and Jaya Prakash Commission. The provisions were made to constitute a Village and District Panchayat. Afterward in 1982, for the first time, the Decentralisation Act was enacted based on the report

submitted by the Ranadhir Subba. However, the main problem was its implementation due to the lack of human resources to formulate plans and programmes and to monitor the development activities at the local level. In addition, because of the attitudes of the power holders at the centre, who either ignored or did not share power with the local political and development organisations, the decentralisation efforts of the past remained a futile exercise. In fact during the Rana and Panchayat regimes the whole government machinery and forces were used to counter the pressures of the oppositions and never permitted to develop the local elected bodies institutionally.

After the restoration of democracy in 1990 the Village and District Panchayat was renamed as the Village and District Development Committee. With a view to make local elected bodies active in the development process, a policy of decentralisation was envisaged in the Eight-Plan (1992-1997) to delegate development authority and responsibility to the local bodies. In 1998 a high level Decentralisation Committee was constituted under the chairmanship of former Prime Minister Sher Bahadur Deuba. The Committee recommended the need for the Local Governance Act- 1998, subsequently the Local Governance Act was promulgated in 1999. However, the act was implemented without prior institutional preparation of the Municipalities including Kathmandu Metropolitan City.

3.1.3 A Brief Introduction of the CDS in a Broader Perspective

In the year 1991 the population of KMC was 421,258 registering a growth rate of 6% in between 1981-91. If this rate continues it is expected that the population of KMC will reach 1,011,105 in the year 2011. Thus, there will be problem of unplanned urbanisation resulting in the inefficient use of the lands. Currently, there are about 10 Ministries and 15 associated Departments directly or indirectly involved in planning, governing and providing services in Kathmandu valley only. They all have different objectives, priorities and in some cases, conflicts due to the lack of clarity of their jurisdiction and authority.

There is a growing problem of transportation and traffic management in the KMC. In Kathmandu, there is 270 KM length of road, on which, per day, 17,000 vehicles and about 80,000 motor cycles travel. If the current growth rate of vehicles at 7 percent continues, the

number of vehicles will reach 2,88,000 by the year 2020. Moreover, the increasing population and the increasing number of vehicles brings various problems related to traffic, roads and other activities in KMC. Some major issues related to the transportation management are: a lack of effective co-ordination within various units of the line Ministry, overlapping of functions between different agencies and the lack of management of physical and public transport factors.

Of the total urban population, about 20 percent are sheltered in an area of about 5,076 hectares of the KMC area. In a study conducted by the IUCN in 1995 it was estimated that there were 80,246 households in KMC. It is estimated that in the year 2001 the total population of KMC will reach 729,690 and thus require 137,677 houses. However, there will be a deficit of 33,160 houses by the year 2001 creating a great housing problem in the city. In addition, there are about 2,031 households with a population of 11,862 settled on public land as squatters. Although KMC has taken initiative to work on this problem, due to the lack of clarity of policies among various government agencies. It has no total institutional arrangements to undertake this function.

The heritage of the historic city of Kathmandu contains important values of historical, scientific, socio economic and other significant aspects. They carry more value for the future rather than the present. Realising this fact, KMC is involved in conserving its heritage by instituting a separate department namely Heritage and Tourism Department. The Kathmandu Vision-2020 aims to involve youth for the conservation and preservation of the valley's cultural heritage. There are a number of studies and documents including UNESCO's, The Master Plan for Conservation of Cultural Properties in Nepal-1978 addressing the management of significant cultural and heritage property. However, it is necessary to develop national-local and non-governmental organisations to preserve our cultural heritage properly. There is therefore an urgent need for trained manpower to institutionalise the heritage management properly.

In KMC problems of water pollution, water supply and sanitation, drainage system and solid waste management are accompanied by its urbanisation process. KMC has to manage about 300 Metric Tons of solid waste per day. There are many organisations working in the environment sector in Kathmandu. Since KMC is authorised to administer the proper management of solid waste, co-ordination among the various institutions is imperative to improve KMC's environment.

There are a varied number of development activities going on with community approach in KMC. Such activities include infrastructure development, preservation of heritage and culture, and services related to education and public health they are primarily carried out through government and non-government and local initiatives. They are also involved in many other sectors such as environment, slums and squatters, street children, women and children rights and equity activities. However, there are problems with regard to co-ordination of activities and communications among these institutes.

One of the fundamental problems of KMC is its inability to mobilise resources. KMC needs sources for funds for making administrative and capital expenditure. With the abolition of octroi tax system it cannot meet the above expenditure so there is a problem of widening the resource gap, and as a measure, with the enactment of Local Self-Governance Act 1999 municipalities and Metropolis are authorised to collect taxes and fees. However, the lack of proper institutional arrangements is making it difficult to manage urban economy and city finance for KMC. In addition there is no co-ordination in the revenue collection activities of the government and metropolitan.

From the above presentation it is clear that KMC has to be prepared to face environment, community, heritage conservation, land management and housing related problems in the near future. In this direction, the role of CDS (City Development Strategy) is paramount to cope with the future by addressing the above said challenges on a package basis. The current CDS is prepared with the approach to be an effective mechanism to assist cities in identifying KMC's issues, constraints, opportunities and formulating a vision for the city, along with a concrete action plan for implementation. Broadly, the CDS aims to address the following issues:

- a) Municipal finance;
- b) Urban economics;
- c) Participatory planning and community development;
- d) Institutional development and strengthening;
- e) Municipal and environmental engineering;
- f) Housing and slum/squatter upgrading; and
- g) Decision support information system.

This part of CDS aims to work on strengthening its institutional development. The activities to be carried out in this work are mainly for the implementation of CDS. The main objectives of the study include:

- a) To analyse the institutional development context of the KMC;
- b) To examine institutional characteristics of the KMC ;
- c) To develop institutional framework for the implementation of CDS; and
- d) To estimate and assess financial and human resource needs to operationalize the proposed CDS.

3.1.4 Activities

This study includes the following activities:

- 1) Review the current organisational structure of KMC and its local bodies;
- 2) Study the current problems on networking of activities with government and non government organisations;
- 3) Analyse the capability of local political leaders (KMC representatives) and staff to promote transparency and better understanding of KMC's problems;
- 4) Assesses the present institutional capability to determine whether the number, qualifications, background and training of staff are commensurate to provide the necessary outputs in a timely manner required by the KMC;
- 5) Develop institutional development strategy
- 6) Risk analysis
- 7) Recommending M&E for CDS
- 8) Estimation of budget for the institutional development of KMC.

In the next chapter the context of institutional development will be discussed.

3.2 THE CONTEXT

3.2.1 Background

In this chapter the broad objective envisaged in the proposed CDS and its interrelation to institutional development will be discussed. In this context stakeholder analysis, identification of institutions responsible for relevant city development activity, examination of KCM as an institution will be made and discussed in the chapter. Finally, a SWOT analysis is presented in the context of CDS to know the internal strengths, weaknesses and external opportunities and threats of KMC.

3.2.2 The Mandate

After the people's movement in 1989 a favourable climate for decentralisation began. The new constitution of Nepal has made provisions for basic human rights and democratic freedom. According to the Constitution of the Kingdom of Nepal 1990 "It shall be the chief responsibility of the State to maintain conditions suitable to the enjoyment of the fruits of democracy through wider participation of the people in the governance of the country and by way of decentralisation, and to promote general welfare by making provisions for the protection and promotion of human rights, by maintaining tranquillity and order in the society". In this background, it is the responsibility of all related stakeholders and institutions, no matter whether they are government, non-government agencies or private sector, to support KMC to grow into an efficient and capable local governing body to attain the following objectives:

- 1) To mobilise financial resources and maintaining of its books of account;
- 2) To plan and execute physical development planning;
- 3) To employ, manage and utilise quality staff;
- 4) To solve environmental problems resulting from mismanagement of solid waste, drinking water and pollution;
- 5) To develop Kathmandu as a city of culture and heritage, supporting education and sport;
- 6) To manage and maintain roads and other subsidiary activities;
- 7) To encourage local citizens, NGOs and private sector to participate in the activities of KMC; and
- 8) To solve increasing population, housing and poverty problems in the future.

The proposed CDS attempts to address the objectives said above.

3.2.3 CDS Objectives and Its Interrelation to Institutional Development

As described in the draft, Kathmandu City Development Strategy TOR 'the principal objective of proposed CDS for Kathmandu is to assist in improving KMC's livability, competitiveness, bankability, governance and management capacities by jointly working with various national and local-level stakeholders and bilateral/

multilateral development partners, in order to utilise the limited resources efficiently through a holistic and participatory CDS formulation process'. It is clear from the above objectives that the success of CDS primarily depends on the ownership and participation and thus requires a rational institutional model advocating efficiency and responsiveness through decentralisation.

3.2.4 Stakeholders

In case of KMC the main stakeholders are the government ministries, departments, local citizens, hotels, travel and environmental protection associations, business communities, urban poor communities, slums/squatters communities, local NGOs and INGOs. The aims of stakeholder analysis is to understand their relations with KMC and to examine their interests in KMC.

3.2.4.1 Judiciary

There is a three tier hierarchy of courts in the Kingdom of Nepal:

- a) Supreme Court
- b) Appellate Court
- c) District Court

The Supreme Court is the apex court in the judicial hierarchy. All other courts are under the Supreme Court. The extraordinary power rests in this court. Any Nepali citizen may file a petition in the Court to have any law or any part thereof declared void on the ground of inconsistency with the Constitution.

In some cases there are provisions to appeal in the Appellate Court and District Court in case any citizen is not in agreement with the decisions made by the KMC. In addition, there should be co-ordination between these courts and the Law and Litigation Department of KMC.

3.2.4.2 Ministry of Local Development (MLD)

The main functions and responsibilities of the MLD include;

- Formulating national policies relating to local development including administering and co-ordinating local bodies;

- Monitoring, supervising and supporting local governments at district, town and village levels;
- Promoting community development and mobilisation and integrated rural development;
- Conducting research and training relating to local development and co-ordinating local development programmes;
- Formulating decentralisation policies and programmes and its implementation;
- Determining the boarder limit of village, city and district;
- Promoting works for the development of village women and local technology.

Being the line ministry of the KMC, its roles and responsibilities are highly inter-linked with the MLD. Without proper co-ordination and networking of their activities it is difficult to solve local level problems. In addition, there are special projects undergoing that are related to the activities of the KMC.

10.2.4.3 Ministry of Physical Planning and Works (MPPW)

There are two different but interrelated functions of MPPW. The Ministry is responsible for legislation and planning in the sphere of land use, water supply, sewerage and sanitation as well as pollution control. It administers the provision of financial assistance and support to municipalities through the Town Development Fund Board (TDFB). The Department of Housing and Urban Development (DHUD)men's recently renamed as Department of Urban Development and building construction (DUDBS) looks after the physical planning with Human settlements and Environment division. The Department of Water supplies and Sanitation (DWSS) and Water Supply Corporation (WSC) handle water supply and sewerage. The Kathmandu Valley Town Development Planning Committee (KVTDC) has been constituted to co-ordinate urban physical planning and development. The Ministry has the obligatory responsibilities for raising awareness, conservation and improvement of environment, develop skills and capacities of local bodies towards minimizing, controlling and managing pollution, towards restoring healthy environment and formulating legislation, regulations, standard guidelines and procedures to regulate and enforce implementation measures.

The main responsibilities of the Transportation Ministry include: alignment and construction of roads and bridges

and their maintenance, as well as associated storm drains throughout the country. The construction Engineers have to develop sensitivities to the environmental dimension in their professional applications to make effective use of the resources as well as to safeguard against environmental damage. Providing essential infrastructure services to the newly located industrial districts. Improvement and construction of roads, and highways in KTM valley and outside and selection and provision of parking spaces in various parts of the valley.

3.2.4.4 Ministry of Population and Environment (MOPE)

MOPE is primary responsible for:

- ❑ Formulating and execution of national level manpower planning and development policies;
- ❑ Establishing networking at the time of implementing population and environment policies
- ❑ Preparing Acts, Regulations and Guidelines ;
- ❑ Conducting surveys, studies and research;
- ❑ Disseminating information and carry out publicity;
- ❑ Monitoring and evaluating programs;
- ❑ Developing human resources;
- ❑ Acting as a national and international focal point in the domain of population and environment.

KMC has to co-ordinate various matters relating to population and environment with the Ministry to run long term and sustained programmes.

3.2.4.5 Ministry of Water Resources (MWR)

Ministry of Water Resources is responsible for making and executing policy to conserve and cover water potentialities, pollution, as well as its proper and effective utilisation. The different offices executing water resource functions under the Ministry are: the Water and Energy Commission (WEC) for research advice and policy - setting on water resources; the Department of Irrigation (DI) for irrigation development; the Groundwater Resource Development Board (GWRDB) for groundwater investigation and exploitation; and, the Department of Hydrology and Meteorology (HDM) for collecting hydrological and meteorological data.

The Nepal Electricity Authority (NEA) deals with hydropower development. The Authority makes policies for the production and utilisation of water resources and distribution of electricity in the country. In the future

KMC and NEA can work together with a view to supply electricity to the KMC area.

3.2.4.6. Ministry of Industry (MI)

Ministry of Industry is primarily responsible:

- ❑ To formulate industrial policy with a view to economic growth for import substitution and export promotion;
- ❑ Making policy to encourage private sector for the development of industries and growth of export;
- ❑ Developing environmental standards to minimise its negative impact on public health;

The Ministry has a separate Environment and Technology Transfer cell which looks at the policy related to the workings of the industrial pollution control. The management agency of the industrial pollution control project and the liaison and co-ordinating unit of energy efficiency project are supporting the cell. The Department of Industry (DOI) and, the Department of Cottage and Small Scale Industries (DCSI), each has an environmental cell. The main functions of these cells are to enforce the discharge standards; to critically examine EIA and IEE; to issue permit to the industries; and to monitor the discharges.

3.2.4.7 Ministry of Labour and Transport

The objective of the ministry is to work out a meaningful balance between the demand and supply of labour and act towards reducing magnitude of unemployment as well as safeguard the basic rights and well being of the labour. It has a mandate for institutional provision and legislative measures to regulate employment exchange with effective information center, determine labour absorbing provinces, promote self- employment operations with technical assistance and financial incentives as well as provide tax concessions to those enterprises making investments to promote skill capabilities of the works.

3.2.4.8 The Ministry of Finance (MF)

It prepares and controls government budget and has a mandatory role in the instrumentation of taxation and financial conditioning in support of all government activities. Ministry of Finance has become imperative

in broadening the understanding for the pursuit of raising the local governments in self- functioning and self-contained manner.

MOF is one of the crucial Ministries for formulating national level economic and financial policies. Its main responsibilities include:

- a) Formulating and implementing national economic policies;
- b) Preparing HMG budget;
- c) Controlling and monitoring foreign currencies and administering HMG fund;
- d) Making necessary provisions relating to public loan;
- e) Formulating policies relating to money, banking and insurance, revenue collection and administration, salary, allowances, travel allowances and pension for all different services in the Civil Service;
- f) Maintaining public accounts, carrying out economic analysis of the country and administering foreign aids;
- g) Signing agreement with friendly nations or international agencies relating to grants and loan.

With the introduction of Local Self Governance Act 1991 KMC is allowed to collect revenue from various sources from within the KMC area. In many cases it requires proper coordination with the Ministry to mobilize revenue. In addition, the Department of Customs and VAT Offices can provide information on various revenue collection matters to the KMC with a view to collect revenue from the local sources. In such a context, the ministry is advised to consider transference of responsibility for essential services to the municipalities and agree to a revenue sharing arrangement between HMG and local authorities by authorizing the Municipalities to impose new forms of direct taxes and thus enlarge its own source of income.

3.2.4.9 Ministry of Law, Justice and Parliamentary Affairs (MLJPA)

MLJPA is primarily responsible for:

- suggesting, drafting and reviewing national code, ordinance, rules and orders;
- Conducting research relating to existing Nepalese law, international law, judicial system and administration;
- Reviewing and improving the existing laws;

- Developing and suggesting new laws as per needs;
- Providing legal suggestions;

KMC needs assistance and support to implement its currently available rules and regulations from the ministry. The role of MLJPA is to draft the current Local Governance Act and Regulation.

3.2.4.10 Ministry of Tourism, Culture and Civil Aviation (MTCCA)

The main roles and responsibilities of MTCCA are as follows:

- Formulate national level tourism, culture and civil aviation policies;
- Promote the tourism industry, travel and trekking agencies and other agencies relating to travel, tourist guide and hotel management training and mountaineering and liaising with and getting the co-operation of international agencies involved in tourism;
- Promoting collection, protection and conservation of archaeological objects archaeological exploration and excavation and research of national history.

The Tourism Board the Ministry is responsible for the formulation and implementation of tourism policies in the country.

3.2.4.11 Ministry of Health (MOH)

The main functions of MOH are as follows:

- Formulating national level health policy;
- Researching, planning, and developing health services;
- Formulating health policies regarding health and nutrition education, health related training, environment health programme, family planning and mother and child welfare, population control programmes;
- Formulating policies relating to research, production, quality, abuse, price, distribution, sales, and export import of medication;
- Research and development of preventive, protective and curative medication of allopathic, homeopathic and Unani treatment system.

The Health Service Department, as a main part of the MOH, is concerned with reducing infant mortality rate,

controlling birth rate and expanding the life expectancy of the people. Similarly, many hospitals in the area of KMC are located under the ministry. Functions of KMC's Health Department, although not overlapped, is closely related with some of the functions of MOH in the KMC area.

3.2.4.12 Ministry of Land Reform and Management

The main functions and responsibilities of the MLRM comprises:

- a) Formulating national policies relating to land reform administration and management;
- b) Formulating policies relating to land revenue, land registration and Guthi Sansthan;
- c) Promoting land survey and conducting geodetic survey, preparing topographic maps and aerial survey.

Land Survey Department and Land Revenue Department can provide enough information about land ownership, area and revenue collecting methods. The documents which are kept in these departments are useful to get information about land management within the area of KMC.

3.2.4.13 Home Ministry

The Ministry is responsible for enforcing law and order of the Kingdom. Its other functions include:

- Providing central security services for the residence of central secretariat, ministries and chief of constitutional bodies;
- Formulating policies relating to control of explosives, traffic control, citizenship, control of government vehicles, vigilance of foreigners and deportation, immigration, embarkation/disembarkation, natural disaster relief operation, registration of vital information, fire fighting, drug abuse control and other functions not assigned to other ministries;
- Announcing public holidays, urdi and public functions;
- Protection of international borders, government houses.

The Police Head Quarter is its central level line organisation administering police force at national as well for the Kathmandu valley area. It is responsible

for maintaining law and order in the country, preventing and investigating crime as per the existing law and controlling vehicular traffic and issuing driving license among other things. KMC has its own Re-enforcement department whose personnel are trained by the Nepal Police. The Chief District Office (CDO) is a locally authorised body for maintaining peace and security in the District. KMC has to operate together with the CDO with relation to the peace and security of the KMC's area.

3.2.4.14 District Development Committee

The DDC has a member each from nine llakas (a political boundary within the District), a Chairman and Vice Chairman, who are elected indirectly by the VDC leaders. The DDC Secretariat is headed by the Local Development Officer (LDO), who is deployed by the MLD. The LDO is responsible for executing local development activities and co-ordinating other local development bodies.

The District Development Committee is responsible for implementing decisions made by the District Development Council. In addition, its main function, duties and rights include:

- Formulating, implementing, monitoring and evaluation of district level agricultural policies and programmes;
- Formulating drinking water plans for the rural areas in the district;
- Formulating, implementing, executing, distributing and repair and maintenance of district level hydro electric and other energy projects;
- Formulating works and transportation policy and implementing them at the district level;
- Construction, repair and maintenance of roads under its authority;
- Conservation of government and unregistered lands in the district;
- Making policies relating to the welfare of women, children and the disabled;
- Formulating plans relating to forest, plant resources, bio diversity, land conservation;
- Recommendation for the establishment of schools on priority basis;
- Recommendation based on the viable reasons for opening and closing schools;
- Assisting in running schools by supervising and monitoring their activities;
- Determining wage rate of the labour

- ❑ Executing programmes relating to abolition and rehabilitation of child labour;
- ❑ Documentation, conservation and protection of culturally and religiously important places, heritage, language and arts;
- ❑ Development of industrial estate in the district;
- ❑ Planning and management of district level health clinics, hospitals, health centres and Health units; and
- ❑ Protection, conservation, expansion, and utilisation of district level natural, cultural, historical and tourism resources;

KMC has to co-ordinate with DDC in the implementation of above said matters.

3.2.4.15 *The Municipality*

The Municipality is an elected body, constituted in the town/ city area. The municipal board comprises of the Mayor, Deputy Mayor and Elected Ward Members. The number of wards depends on the size of the Town/ City.

The Municipalities of Kathmandu, Patan and Bhaktapur are the major providers of municipal urban services. They are elected bodies constituted under the Municipality Act, 2048 (1991) and are governed by municipal boards or councils which comprise of the elected ward chairman, presided over by a mayor or chairman and assisted by a deputy mayor. Executive responsibilities are vested in the mayor. The day-to-day administration is under an Executive Secretary, a government official appointed by MLD. The executive Secretary has 2 or 3 assistants who are generally along functional lines such as tax and revenue collection, building permits, planning and engineering, sanitation, administration and accounts, litigation, and inspection. Major activities of the Municipalities include: street cleaning; collection of wastes from the interiors up to skips; maintenance of water supply pipes; cleaning mud and blockages in sewer manholes; approval of septic tanks; minor surface drain construction; street lighting; city management; building permits; and, some health and sanitation related activities.

Under the municipality Act 1991, the responsibility assigned to the municipalities can be put in the following categories:

- ❑ Protection of monuments and public places
- ❑ Urban planning and development
- ❑ Health and sanitation

- ❑ Birth and death registration
- ❑ Construction and transportation
- ❑ Social welfare
- ❑ Drinking water and electricity
- ❑ Environmental health and improvement
- ❑ Fire prevention
- ❑ Administrative and miscellaneous

After the promulgation of LSG Act 1999 this Act has been repealed. However, provision of LSG Act have yet to be fully introduced.

3.2.4.16 *Village Development Committee*

As described in the Local Self-governance Act 1999 the main functions, duties and rights of the VDCs are the following:

- ❑ Executing and motivating agricultural development programmes including local Haat Bazar , animal husbandry and pharmacy;
- ❑ Preparing drinking water project, executing and maintaining the project;
- ❑ Preservation and maintenance of water bodies;
- ❑ Formulating rural road planning, executing it and repairing and maintenance of roads and bridges;
- ❑ Establishment of pre-primary schools and give permission to establish the same;
- ❑ Supervision and management of schools;
- ❑ Establishment and execution of library facility at rural level;
- ❑ Providing scholarships for the disadvantaged communities, women and rural poor;
- ❑ Construction of community buildings, rest houses and public toilets;
- ❑ Preparing land use plan ;
- ❑ Establish and run hospitals, clinics and health posts;
- ❑ Formulating and executing programmes relating to primary health education, cleaning and refuse management;
- ❑ Executing and motivating to execute forestation programme;
- ❑ Assisting in herbs farming;
- ❑ Formulating programmes relating to forests, plant, bio diversity and soil conservation;
- ❑ Preservation and promotion of culture and heritage;
- ❑ Promotion of tourism and industry;
- ❑ Working as a motivator to develop small scale industries;
- ❑ Managing the development of local human resources, employment, and self employment opportunities at the rural level.

3.2.4.17 National Planning Commission

Headed by the Prime minister, this is one of the apex national planning body consisting of 5 members. It works in close co-ordination with the relevant ministries in developing national level plans, policies, programmes, and priorities. The main responsibilities of the Commission include:

- Formulation of national level plans;
- Co-ordinating the implementation of the national level plan among regional and local level offices and supervising development works;
- Evaluating development projects and making the necessary recommendations to the Council of Ministers;
- Estimating Nepal's internal and external resources including manpower;
- Monitoring state of environment and deciding on measures to be taken to preserve the balance between environment and development.

The Eighth and the current Ninth Plan, documents some important guidelines on the decentralisation and institutional development of local political bodies. These have been provided below.

The Eighth Plan

During the Eight Plan political decentralisation was recognised as the best means to remove obstacles to development. The Plan's document mentions that decentralisation goes beyond the concept of formal government and involves the freeing of local non-governmental and private organisations as well. The role of the government is therefore not to dictate but to support the development activities of non-governmental organisations. Realising the importance of local government the Eighth Plan envisaged to support and assist all development activities implemented by the people at their own initiative and to seek to develop the local government as well as non-government organisations involved in such activities. To realise the above objective the Plan made the policy to upgrade the working capacity of the local bodies under the leadership of local representatives. The Plan emphasised three main policy improvement measures, they were, institutional, policy level and operational.

The Ninth Plan

One of the objectives of the Ninth plan is to make local elected bodies institutionally capable of making themselves accountable to the local people. The Plan emphasises the importance of the local governing unit

as a backbone of decentralisation. Priority is given for the institutional development of local elected bodies to make them more responsible by involving them in the local development and construction activities. During the plan period efforts are being made to implement the following policies to institutionalise the decentralisation system among the local governing bodies:

- a) Development of local elected bodies institutionally;
- b) Co-ordination and integration of local development programmes;
- c) Strengthening capacity of local level organisations;
- d) Development of institutionalised participatory development process;
- e) Mobilisation of Users' Committees and Non-government organisation;
- f) Transparency in the performance of local bodies;
- g) Participation of women and disadvantaged communities in the decision making process;
- h) Making government machinery responsible and accountable to the local elected body.

The aims and policies of the Ninth Plan is a guiding map for the initiation of institutional development of KMC with a view to implement CDS in the future.

3.2.4.18 Federation of Nepalese Chamber of Commerce and Industry (FNCCI)

FNCCI formulates policies on urban development and co-operates with the government for implementation. It has sub-committee on Environment and Technology Transfer. The FNCCI also promotes the awareness programs on mitigation measures in their industrial establishments.

A number of non-government organisations like Green Camp, Nepal Environment Journalists are working as interest and pressure groups. The advocacy of these organisations is for the enforcement of discharge standards and relocation of some industries.

3.2.4.19 NGOs and INGOS

NGOs started to function in Nepal from the early '60s in the form of welfare associations such as Family Planning Committees, Nepal Red Cross Society etc. In a more coordinated manner, NGOs started only after the constitution of the Social Service National Coordination Council Act in 1977 by His Majesty the King. Under

the SSNCC, there were six sub- committees, which included Health Service, Handicapped Service, Child Welfare, Community Service, Youth Activities, and Women Service. The entire social / voluntary organisation need to be registered under the council. In 1982, a full-fledged ministry was set up in the name of Ministry of Labour and Social Welfare, whose function was to be a link between the NGOs (through SSNCC) and the government regarding the social welfare programme in the country.

After the restoration of democracy in 1990, when the registration process was liberalised, the numbers of NGOs have dramatically increased. By 1994, NGOs affiliated with the Social Welfare Council alone, stood at 1,942. NGOs have also gained their capability and resources with the support of other INGO's working in Nepal.

More than 7000 NGOs and 80 INGOs are operating in the Kingdom of Nepal (Social Welfare Council, 1995). About 1000 of these are located in the Kathmandu Valley. Similarly, according to the Nepal Institution Manpower Directory 1994, in 1992 there were 55 INGOs based in Kathmandu Valley.

Since KMC has to deliver its services to different wards relating to health and sanitation, environment, housing, settlement of squatters and slums and so on it is (expected to serve a population of about 729,690 in 2001). Thus, it is difficult to deliver such services only with its current organisational structure. It is imperative to develop a network with many of the NGOs and INGOs to participate in delivering services to the citizen in the above social matters. Moreover, NGOs and INGOs are working as pressure groups against KMC's and HMG's health, sanitation and environmental policies.

3.2.4.20 Airlines/Hotels/Travel Agencies

There are 16 airlines conducting international flights and 8 airlines making local flights to different national and international destinations. All airline offices are concerned about the increasing environmental problems due to the mismanagement of refuse collection and disposal practice, which is the joint responsibility of

MLD and KMC. In addition, proper conservation and maintenance of heritage and culturally important places is necessary for the airline business.

There are 6 five star hotels within KMC. Similarly there are many four and three star hotels whose business, to the larger extent, depends on a clean environment, culture and heritage and prompt service delivery activities of the KMC.

Similarly, more than 95 percent of travel and trekking agencies are located in Kathmandu. They are concerned with the KMC service delivery and functional activities.

Airlines, hotels and travel agencies, are and will be, good sources of revenue for the KMC if it succeeds in providing prompt and quality services to them.

3.2.4.21 Diplomatic Missions and Donor Agencies

A number of diplomatic mission and donor agencies reside in Kathmandu valley. There are 17 multilateral donor agencies and 11 major Bilateral Donor Agencies. Many of these agencies are interested in the work of KMC. Proper coordination and net working with these donor agencies could be beneficial for the KMC. The World Bank, EU, UNDP, US AID and ADB are involved in the various programmes of KMC.

3.3 EXISTING INSTITUTIONS: RESPONSIBLE FOR CITY DEVELOPMENT ACTIVITIES

3.3.1 Background

There are a number of institutions engaged in the city development activities. Some are ministries, some are departments and some are donor agencies. Unless and until there is an operational co-ordination among these institutions there will be duplication of roles which will create problems of networking in the various socio-economic activities at the city level. Realizing this fact, in this chapter various institutions are identified which are working in line for the development of the city in the Kathmandu valley.

3.3.2 Institutions Involved in the City Development Activities

S.No.	INSTITUTION	FUNCTIONS AND ACTIVITIES
1.	Ministry of Local Development	Formulation of national policies relating to local development including administering and co-ordinating local bodies.
2.	Ministry of Physical Planning and Works	Making physical planning, road management at the national level, constitution of Town Development Committees
3.	Ministry of Tourism and Culture	Formulating national level tourism, culture and civil aviation policies
4.	Ministry of Water Resources	Making national policies on water resources
5.	Ministry of Population and Environment	Formulation and execution of national level manpower planning and development policies.
6.	Home Ministry	Formulating policies relating to control of explosives, traffic control, citizenship, control of government vehicles, vigilance of foreigners and deportation, immigration, embarkation/disembarkation, natural disaster relief operation, registration of vital information, fire fighting, drug abuse control and other functions not assigned to other ministries.
7.	Ministry of Education	Pre-primary schools, support for other schools, scholarship for disadvantage community and adult literacy programme.
8.	National Planning Commission	Making economic development planning and formulating decentralisation policies and programmes for the planned period.
9.	District Administration Office	Maintaining Law and Order, rent fixation, recovery of municipal dues from the defaulters and non payers and amounts of irregular expenses as per the Audit reports. Committee for determination of schedule of rates for various construction works and wage rates for labour.
10.	District Road Office	Road extension and improvement of roads under the Department of Road
11.	District Police Office	Maintaining Law and Order and Traffic management
12.	District Revenue Office	Land registration, land revenue collection.
13.	District Tax Office	Collection of different types of taxes other than those collected by the Excise Office.
14.	District Land Reform Office	Solve land dispute cases, issue of land ownership certificate.
15.	District Maintenance Survey Office	Surveying, plotting and registration of land
16.	District Court Office	Provide judgement on dispute cases
17.	Town Development Committee	Physical plan formulation, development of buildings, roads and prescribe standards for other activities suitable for the town.
18.	Nepal Water Supply Corporation	Drinking water supply, development of sources and distribution, provision of public taps, pipe line extensions, drainage, sewerage construction and management.

S.No.	INSTITUTION	FUNCTIONS AND ACTIVITIES
19.	Nepal Electricity Authority	Street lights, line extension and maintenance.
20.	Town Development Fund Board	Provide grants and loans for Municipal infrastructure and income generating projects.
21.	District Development Committee	Functions, responsibilities and duties relating to agricultural development, hydro electricity, works and transportation, land reform and land management, women and disabled, forests and environment, education and games, determination of wage rates, irrigation and landslides, communication, development of language and culture, small scale industries and health services in the district level
22.	Private Housing Companies and Land Development Companies	Develop and provide developed plots and houses in urban areas.
23.	Urban Development through Local Effort Project	Technical and financial support under Nepal German co-operation project for supporting urban planning and Municipal organisational structure development programme in collaboration with MLD and MHPP and TDFB for loans and grants programme for Municipalities.
24.	Chamber of Commerce and Industry	Management of stock and retail trading, price control and commodity price list publication in the municipal areas.
25.	Federation of Nepal Chamber of Commerce and Industry	Protecting rights of business and industrial communities, advising government in the commerce and industry related matters.
26.	The Kathmandu Valley Mapping Programme (KVMP)	Commenced with the technical support from the Commission of European Communities (CEC) to improve the planning and implementation capabilities of KMC through the establishment of an Data Based Management System, develop participatory planning approach to prepare integrated action plans.
27.	Institutional Strengthening of Kathmandu Metropolitan City	With the technical support of ADB the project aims to improve the overall organisational competence of KMC, increase the effectiveness of KMC in mobilising and managing its financial resources and improve KMC's capacity to deliver urban services.
28.	RUDO/USAID Programme	To provide training support and to help KMC implement corporate accounting system.
29.	The Urban Governance Initiative	Supported by the UNDP focusing on good governance in environmental management and is supporting the Information Department of KMC.
30.	Nepal Urban Sector Strategy	The ADB provided a technical assistance to HMG to prepare the Nepal Urban Sector Strategy.
31.	Kathmandu Valley Development Plan	The Kathmandu Valley Town Development Committee (KVTDC) is in the process of preparing the Kathmandu Valley Development Plan 2020.
32.	Housing Finance Committee	Constituted under Ministry of Physical planning and works provides housing loans to the local citizens

S.No.	INSTITUTION	FUNCTIONS AND ACTIVITIES
33.	Department of Building	Making design and drawing of government buildings, making building codes and criteria
34.	UN Park Committee	Under MPPW to make park beside Bagmati rivers
35.	Kathmandu Valley Town Development Committees	Preparation and execution of land use development plan and housing plan
36.	Water and Sanitation Board, HMG	Preservation and maintenance of water bodies
37.	Kathmandu Valley Development Authority	Established under KVDA Act 2045. Its main functions are to develop the entire Kathmandu Valley in a planned manner, to formulate and implement physical development plans, and to provide the people of the valley with basic services. However, this is not operating currently.
38.	Kathmandu Urban Development Project	A multi-sectoral project designed to improve the urban environment and productivity through an interaction of the implementation of physical development works and policy development with particular emphasis on local resource mobilisation.
39.	Pashupati Area Development Trust	Established to conserve, protect and develop Pashupati Nath Temple's surrounding areas.
40.	Solid Waste Management and Resource Mobilisation Centre (SWMRMC)	The Centre is established aiming to improve the solid waste management in the valley, and formulating policies relating to the enactment of solid waste management projects.

From the above presentation it is clear that there are many institutions involved in similar areas from socio-economic development to environment problems which are in keeping with KMC's activities.. It is imperative for the KMC to coordinate its activities to develop its service delivery capacity among other institutions too.

3.4 REVIEW OF EXISTING POLICIES, ACTS AND REGULATIONS IN THE CITY DEVELOPMENT PERSPECTIVE AND CDS IN PARTICULAR

3.4.1 Background

From the presentation in the last chapter it is clear that there are many institutions involved in activities for the city's development, many of which intersect and overlap in practice. The fundamental challenge for KMC is how to work in coordination with these agencies. In this chapter different policies, acts and regulations will be reviewed which directly or/and indirectly makes provisions for management and development of Municipality.

3.4.2 Policies, Acts and Regulations

There are different policies and legislation which have made, or are making, provisions for the development of KMC and its environment.

1. The constitution of the Kingdom of Nepal
2. Administrative Reform Commission-1991
3. Land Management Act 1967
4. Nepal Environmental Policy and Action Plan (NEPEP) 1993,
5. Aquatic Animals Protection Act, 2017 (1960),
6. Solid Waste Management and Resource Mobilisation Act, 2044 (1987), Regulation 2046 (1989),
7. Pashupati Area Development Trust Act, 2044 (1987),
8. Kathmandu Valley Development Authority Act, 2045 (1988),
9. National Environment Act 1992
10. Water Resources Act, 2049 (1992), and Water Supply corporation Act
11. Industrial Policy Act 1992
12. Local-self Governance Act and Regulation 1999

3.4.2.1 The Constitution of the Kingdom of Nepal:

1990 clause 25 (4) states that "It shall be the chief responsibility of the State to maintain conditions suitable to the enjoyment of the fruits of democracy through wider participation of the people in the governance of the country and by way of decentralisation, and to promote general welfare by making provisions for the protections and promotion of human rights, by maintaining tranquility and order order in the society". It provides a clear mandate for the decentralisation of authority, responsibilities and resources to the local political bodies.

In addition, time to time Directives are issued by the HMG which also affect the functions of Municipalities.

3.4.2.2 The Administrative Reform Committee 1991:

Realising the need to give some of the authorities of the government to the local elected bodies, Administrative Reform Committee 1991 (ARC 1991) made the following recommendations to devolve:

- a) functions that are to be delivered by co-operating and co-ordinating local government offices, partially owned government organisations and non-governmental organisations;
- b) functions that are to be delivered by utilising local skills, resources and capacities available at the local level;
- c) functions that are to be delivered according to local conditions and imperatives by using different work processes and methods;
- d) functions that are to be delivered according to willingness of the local people by being accountable to them;
- e) services that are to be delivered in the integrated form at the local level and;
- f) functions which can be accomplished only with the help and participation of the local people.

ARC made clear recommendations for the delivery of the following functions by municipalities:

a) Education and Culture Related:

- Adult literacy programmes
- Management of pre-primary and primary education
- Assistance and promotion of middle and high schools
- Development of sports and physical health
- Establishment, execution and management of libraries and clubs

b) Health Related:

- Establishment, execution and management of health centres and health posts
- Family planning and population education
- Prevention and treatment of viral diseases and epidemic
- Environmental health
- Others related to the public health

c) Housing and Physical Developments Related:

- City drinking water (up to 50,000 people)
- City area drainage system
- City development planning
- Housing development (in the less developed areas)
- Refuse collection management
- Environment conservation
- Development of green belts, parks and recreation centres

d) Internal Information and Management Related:

- Registration of births and deaths
- Fire brigade
- Management of local markets

e) Forests and Environment Related:

- Controlling watershed areas and soil erosion with local participation

f) Miscellaneous

- Fire brigade and slaughter house arrangements
- Supervision of religious places, temples and public areas.

Moreover, the following major recommendations have been made to guide the formulation of the Local Governance Act by the ARC report:

- 1) According to the ARC report although District Development Committee is granted as a focal point of all elected bodies on different levels, all functions and responsibilities in the municipal area should be autonomously executed by the concerned municipalities. The ARC report clearly mentions that while making acts, provision should be made to authorise Municipals for making decisions; and formulating and implementing M&E of Municipal planning.
- 2) There is a need for a planning unit at the Municipal level. Employees should be trained and developed to make plans and to execute it properly. HMG

- has to take responsibility to strengthen the plan execution capacity of the local governing agencies.
- 3) With a view to make the Municipal financially strong, in addition to a certain percentage of central tax, it is necessary to authorise municipals to collect additional land tax in urban areas.
 - 4) With a view to make decentralisation effort successful and effective it is essential to select qualified employees and to build up their morale and attitude. Efficiency of employees depends on the selection of qualified persons, opportunities for career development, provision for appropriate training and system of rewards and punishments. It is therefore, necessary to constitute a Service Commission for Local Elected Agencies. To make the local agencies services more effective it is necessary to: institutionalise employees recruitment, selection, transfer and promotion systems; make employee service permanent and make provisions for pre-service and service training.
 - 5) In all cases, the Executive Officer should be deputed from the line Ministry.

3.4.2.3 The Land Management Act (1967) emphasises the need to develop a physical plan for the Kathmandu Valley, and a Master Plan for Drinking Water and Sewerage where initiative needed to be taken in terms of having a firm will at the decision making level.

3.4.2.4 Nepal Environmental Policy and Action Plan, (1993) the most recent environmental policy document developed by HMG realises and proposes the urgent need for an action plan for urban and industrial development:

- Provide legal measures to prevent and control air/water pollution;
- Improve efficiency of water allocation among competing needs;
- Reduce constraints facing NGO's to promote community based development; and ;
- Integrate environmental consideration with development objective as well as economic incentives to encourage environmentally benign activities.

3.4.2.5 Solid Waste Management Act makes provisions for managing accumulated solid waste properly and to be used as a resource itself. Pollution generated from the solid waste needs to be controlled to ensure protection of public health and maintain essential health service facilities.

The act provides for the establishment of Solid Waste Management and Resource Mobilisation Center (SWMRMC) as an autonomous body. It is empowered to establish special waste disposal facilities and direct producers of such waste to use it. The center also advises local authorities.

Solid Waste Management Act, Sec.3.1 function of the Center, some of which are as follows:

- Plan, implement and monitor activities regarding waste management;
- Construct and maintain physical infrastructure required for waste management, with the assistance of municipalities if necessary;
- Provide containers at appropriate places and on request for collection of waste;
- Make provisions for transferring and proper disposal of collected waste without polluting the area;
- Produce briquettes, compost and Bio-gas from waste;
- Make provisions for recycling waste;
- Categorize and manage hazardous waste;
- Conduct research activities on waste management;
- Provide technical assistance, training, and create public awareness in individuals, institutions and the general public;
- Construct public toilets, slaughter houses and bathing places where necessary;
- Use mass media to mobilize public participation in solid waste management' and,
- Co-ordinate the activities of various agencies.

WSC and SWMRM Acts have legal coverage. SWMRC Act is exhaustive and empowered to control waste disposal but these plans are very weakly implemented. The solid waste management is referred to three agencies: (I) Municipality (ii) NWSC, and (iii) SWMRC.

3.4.2.6 Pashupati Area Development Trust Act is authorised to provide sewerage management as a pollution control measures and to also manage water supply, water sources and sewerage systems, etc. It is empowered to regulate a planned development of the area, and demolish any object for this purpose. The Act is limited to the protection, conservation, and management of the environment of only a small part of the Bagmati River.

4.2.7 Kathmandu Valley Development Act aims to reconstruct, extend and develop towns with reference

to accommodate the population pressure and urban growth within Kathmandu Valley. Essential services and emerging facilities are made available to the people in common through a planned physical infrastructure. Health support facilities are emphasised in income generation undertakings for the common people in a sustained environment.

3.4.2.8 National Environment Act defines, Solid waste, Emission/ Effluent, Bio- diversity, National Resources, Environment, Pollution, Conservation, Initial Environment Examination (IEE), Environment Impact Assessment (EIA) and designates to the "Ministry of Population and Environment" as the concerned executing authority. In the act there is provision for appointing an Environmental Inspector who is responsible for minimising and controlling pollution and processing the papers enclosed with IEE/ EIA Reports. To enforce these rules the Inspector is authorised to fine to the obstructing party an amount not exceeding RS. 50,000.

3.4.2.9 Water Resources Act is an important legal instrument to give absolute recognition to the state's ownership and control of all national water resources. It authorises the government to issue water rights/ permits or licenses for water resources development to agencies in any sector as covered by the Act. But the use of resources for drinking water, domestic and group or community irrigation purposes which enjoy the order of priority under the Act, are absolved from requiring licenses.

Furthermore, it empowers the government to prescribe and enforce standards and pollution limits in order to maintain the quality of water resources (Sec. 19.1). It also prohibits the pollution of water resources by any means, which exceeds the prescribed pollution tolerance or limits, including the discharge of industrial wastes, poisons, toxic or hazardous chemicals etc. The absence of appropriate institutional authority and procedures to enforce these laws could make the legislation ineffective.

The Ministry of Water Resources exercises the control of water resources. The agencies responsible for drinking water supply need to be licensed by MWR to operate their drinking water supply services. In such a situation any rules being developed may complicate the problem. The rules presently being developed by the water sector line agencies will have to address these jurisdictional issues.

3.4.2.10 Water Supply Corporation Act is promulgated to establish and activate the Water Supply Corporation to provide for and manage a clean drinking water system

and a reliable drainage/ sewerage network in different parts of the country to maintain public health.

This Act established the Nepal water Supply Corporation (NWSC) as the legal authority, authorising it to set and enforce water fees, prosecute illegal connections and prevent misuse of drinking water within 12 towns, over which it has jurisdiction. It assigns responsibility to the Nepal Water Supply Corporation for providing urban water and sanitation, controlling water pollution and, empowers and directs the NWSC to build and maintain urban sewerage systems.

The Industrial Policy Act, 1992 lists air pollution prone industries, such as cement, brick and stone crushing, as "industries affecting public health and environment", and requires them to obtain permission for their establishment, extension and diversification.

Industries in "A" category will not be allowed to be located in the Kathmandu Valley, including the cement industry. However, if an industrialist wishes to establish "A" type category industry the licenses may be issued on the condition that an effluent treatment plant will be installed. Category "B" industries, which includes the brick industry, must be located at least 5 km away from the city area and other densely populated areas. Licenses for both categories "A" and "B" industries will be issued on the condition that they have to operate without giving any trouble to others and without causing environmental pollution.

3.4.2.11 Local Self-Governance Act and Regulation comprises the following principles and policies of decentralisation :

1. Devolution of power, responsibility, means and resources;
2. Building and development of institutional mechanism
3. Devolution of power to collect and mobilise means and resources
4. Local bodies to be oriented toward establishing a civil society
5. Arrangement of effective mechanism to make local bodies accountable to the people
6. Encouraging private sector for participation.

There are five parts and 286 sections in the Act. The five parts are: introduction; provisions relating to Village Development Committee; provisions relating to Municipality; provisions relating to District Development Committee; and provisions relating to General Provisions of the local bodies.

In the first part there are definitions of the different terminology used in the Act. In the third part provisions relating to Municipality/Metropolitan are discussed. It starts from section 72.

Chapter I: This chapter states methods of determining city territory, division of Wards, changes in the territory and constitution of Ward Committee.

Chapter II: In this chapter provisions relating to the Municipal Council, such as, its formation, tenure of its members, qualifications of membership and disqualification of members.

Chapter III: In this chapter the provisions given relate to the formation of municipality, self-governance, tenure of members, oath of office, resignation process of the Mayor and Deputy Mayor, qualifications and disqualification of members, declaration of property and classification of municipalities.

Chapter IV: In this chapter description of meetings and working procedures have been given, for example that the meeting of the Ward Committee will be held, at least, once in a month. In case of the Municipal Council, the Mayor has to call meetings at least twice in a year. The Secretary of Municipal will function as the Secretary of the MC. The majority is 50 percent of the total number of members who attended the Meeting. Decisions in the meetings are made by asking each member to express his or her vote verbally at his or her respective turns; by asking to rise hands for and against the resolution; and by grouping the members in two groups, persons voting for the resolution in one group and the persons voting against the resolution in the other. The Secretary is responsible for recording the decisions taken at the meeting in the minute-book and getting it signed by the members present in the meeting.

In the Regulations, there are further provisions for the formation of sectoral committees, such as, Infrastructure and Construction Development Committee, Agriculture, Forest and Environment Committee, Population and Social Committee, Organisation and Administration Committee and Water Resources and Land Committee. Similarly, the municipal can form Advisory Committees with a view to provide necessary opinions, advises and recommendations on any subjects within the working areas on which the Municipality has requested for.

Chapter V: In this chapter the judiciary rights of municipalities are presented. Under this chapter,

judiciary rights, formation of Moderation Committee, list of Moderator, use of rights, process of decision making, procedures used for legal cases, rights to appeal and implementation of decisions.

Chapter VI: In this chapter the process of plan formulation and execution is discussed.

Formulating Plan: To formulate a plan for the coming year it has to prioritise and select those plans:

- ❑ Which is productive and result oriented;
- ❑ Which can assist to increase employment, income and living standard and assist in reducing poverty;
- ❑ Which can be implemented with minimum costs and with maximum people participation;
- ❑ Which can be executed by local materials, resources and skills;
- ❑ Which can provide direct benefits to women and children;
- ❑ Which conserve and promote environment protection.

Follow directives: The municipal however, has to follow directives from HMG and DDC while preparing such plans. Similarly planning should have to be formulated based on the demands for projects of WCs, UCs, and NGOs.

Periodical plans: Each Municipality needs to formulate a periodical plan for at least five years for the development of its area. This planning has to be approved by the MC. This plan includes sectoral programmes.

Plan Formulating Process: The Regulation also provides the detail plan formulation process for formulating the plans, which include:

- ❑ Estimation of the amount to be derived from the resources of the Municipality;
- ❑ Estimation of the grant from DDC;
- ❑ Estimation of the amount to be received from DDC;
- ❑ Estimation of the resources to be received from sectoral bodies;
- ❑ Estimation of the resources to be received from financial and semi-governmental bodies;
- ❑ Estimation of the resources to be received from national and international non-governmental organisations and associations
- ❑ Estimation of the amount to be received from other persons or institutions.

Selection of the project: Project selection is based on source maps and feasibility study reports. Only those projects, which are favourable to environmental

preservation and protection, are selected. Maximum people's participation and local labor contributing projects are also selected. Once the cost is estimated of the project, the project is selected on a priority basis. The Municipality is reasonable for informing the local people of the selected projects so that they are aware of the projects and its location.

Coordination During policy and program formulation, coordination has to be done with government, non-government and donors on following issues:

- ❑ To avoid duplication of investment of municipality and concerned line agencies.
- ❑ Complementary coordination among the investors
- ❑ To maintain the roles of the consumers between the both sectors
- ❑ To identify the system that maintains the benefits of the local citizen's operation, time frame and implementation of various activities.

Plan Implementation; Municipality level programmes whether it is from municipality source, district development grant, HMG grant, national or international NGO grants have to operate under a financial mobilisation system. Once the project is selected, an operational calendar has to be prepared and maintained. No NGO's activities are allowed to be implemented without the municipality's census and agreements.

Execution and Management: The Secretary has to make project execution schedules. The Secretary implements these plans in co-ordination with the Ward Committee. Projects which are directly relating to the people are to be implemented by the local NGOs.

Project Review and Evaluation: Each project needs to be reviewed and evaluated. There should be a quarterly review of municipal level projects. In this context the Municipality has to constitute a Supervision and Monitoring Committee comprising of three members. The Committee supervises and monitors the following matters:

- ❑ Whether or not the project is being implemented as per the determined calendar;
- ❑ Whether or not a regular supervision has been made by the technician;
- ❑ Whether or not the works have been done as per the fixed standard;
- ❑ Whether or not there is progress in the implementation in proportion to the expenditures incurred in the project or programme;

- ❑ Whether or not the particulars, bills receipts, documents of the expenditures have been duly kept;

Auditing: The Municipality has to audit its books of account. The MC will select the Auditor. After the final audit it should be submitted to the Account Committee including the financial statement.

Chapter-VIII: The chapter includes provisions relating to taxes, fees, service charge and building constructions. The Act and Regulation makes provisions and provides rates of land revenue and house and land tax, rent tax, enterprise tax, vehicle tax, integrated property tax, entertainment tax, commercial video tax, parking fee and service charges.

Provisions Relating to Employees: In chapter 1 of part 5, provisions are made on vacancy fulfillment, disqualification of candidate and formation of vacancy fulfillment committee. The Secretary, as per the decision of the concerned local body, appoints the candidate recommended by the vacancy fulfillment Committee.

II. CDS Perspective: A local body may appoint any person in the technical post, of the approved list of posts, on contract. According to the provision in the Regulation any employee, appointed for the first time shall be put on a probation period of one year. In chapter 2 of part 5 provisions are made for the transfer, promotion, the service period required for promotion, basis for promotion and rights for appeal. Chapter 3 describes regulations for punishment, stoppage of remuneration increment, removal or dismissal from service, authority to impose penalty, procedures relating to punishment, actions of suspension, end of suspension, appellate authority, procedures for appeal, sending of appeal and getting remuneration and allowances if reinstated in the service of the local body. In the next part provisions are made for different leaves. The last chapter of this part has provisions for remuneration, deputation, training, resignation, compulsory retirement, work performance evaluation, Dashain allowance, conduct of employees, employee welfare fund, treatment allowance, additional financial assistance and gratuity.

In part six The Regulation makes provisions for transfer, establishment of sectoral section, oath of office, procedures of certification of relationship, procedures for granting approval to build cinema hall, delegation of powers, bi-laws may be framed, guidelines may be framed and repealed and saved.

3.4.3 Facilitating Implementation of CDS

Since CDS is a programme package including various dimensions of city development it can not be implemented without a proper legal base and institutional capacity. Thus, the success of CDS is only possible when there are clear rules and regulations, missions, objectives, institutional capacity and capacity to perform effectively. There are many provisions in the Act which principally empower all the municipalities of the country to act autonomously. However, due to the poor resource mobilization capacity of the municipalities they have to be dependent on the local development fund of the government. This trend extends control of government machinery over the activities of Municipality.

With the analysis of above policies, acts and regulations it is clear that there are overlapping in the roles and responsibilities of other institutions with the KMC. There are no clear cut demarcations of roles of the municipality over the authority in roads, water resource management and collection of taxes, fees and charges. Whereas the KMC's authority demands for a local government status from the act, it is not stated anywhere in the act to recognize a local body as the local government. It means that there is a difference in the basic philosophy of the Metropolitan management between the KMC authority and the government.

3.5 KMC AS AN INSTITUTION

3.5.1 Background

In this part of the chapter, current organization and management of the KMC shall be examined with a view to implement CDS. After evaluating the current institutional framework a SWOT analysis will be made to understand the internal strengths and weaknesses and external threats and opportunities of the KMC.

3.5.2 Organisation and Management of the KMC

The Metropolis Council is an apex body of the KMC. At the top of the management hierarchy the main bodies are the Metropolis Board, Advisory Board, Office of the Mayor and Deputy Mayor and Office of the Chief Executive Officer. In addition, there are other offices supporting the Council, Board, Mayor and Chief

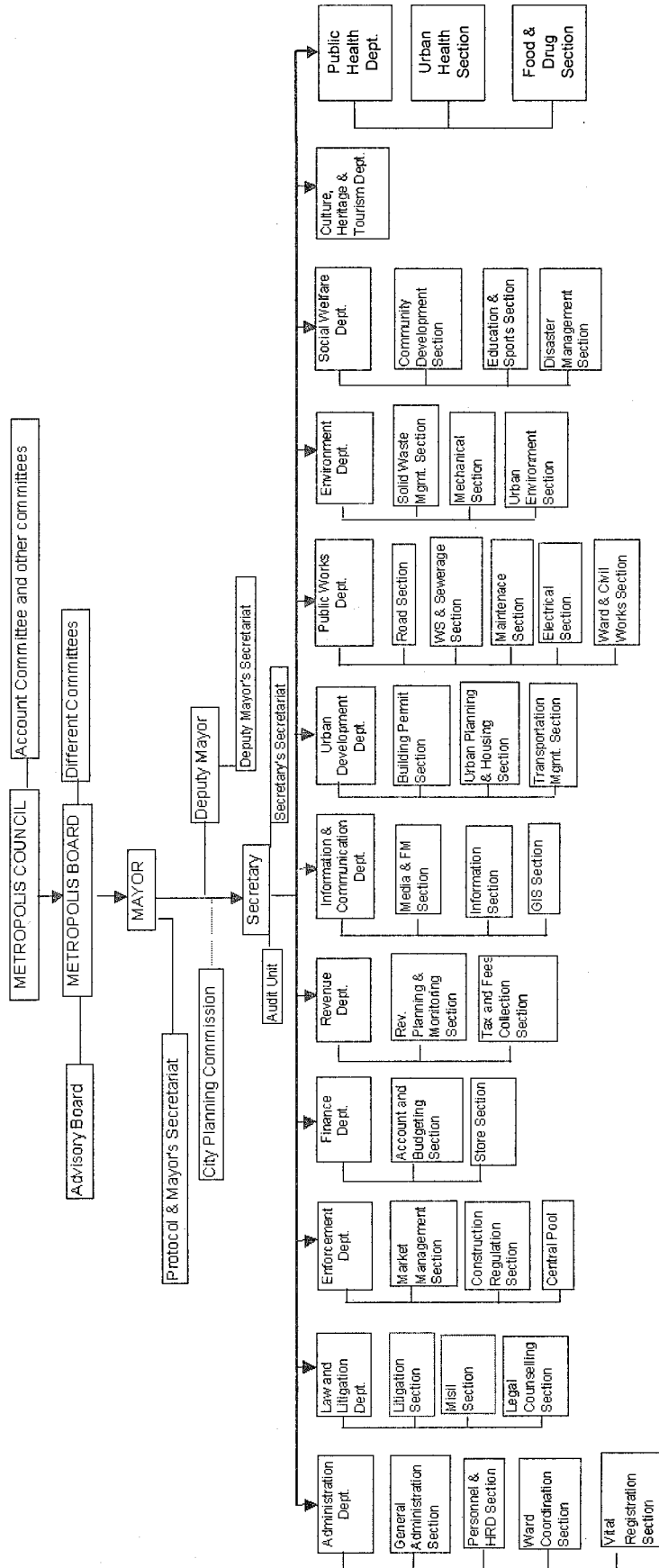
Executive Officer. Organisation structure of the KMC comprising of 12 departments and 33 sections. The Mayor is the head of the KMC elected directly by the people of the 35 Wards in the KMC. One Deputy mayor, one Chief Executive Officer, Department Chiefs and Section Chiefs support his day-to-day work. Currently, there are 2,475 staff (This figure also includes the total number of ward level staff) working from the executive officer level to the lowest sweeper or equivalent level. Similarly four ward Members (including one women member) represent each Ward Committee (WC) and one Ward Chairman elected directly by the people.

a. Metropolis Council

The Metropolis Council (MC) is one of the vital organisational body of KMC. Members of the MC include the Mayor, Deputy Mayor, elected body of the WC and a minimum of 6 or a maximum of 20 nominated members from within the KMC territory, representing women, disadvantaged and backward communities. The detailed functions, rights and duties of the MC as stated in the Local Self Governance Act 1999 (LSGA) are as follows:

- 1) To pass the budget, plan programmes as submitted by the Metropolis;
- 2) To pass tax, fee and charges proposal as proposed by the Metropolis;
- 3) To pass proposals relating to taking loans or selling fixed assets or transfers;
- 4) To discuss the discrepancy that are mentioned in auditors report and direct the KMC to clear the discrepancy, if any;
- 5) To pass positions created, salary, allowances and other facilities to be provided to employees from its internal sources;
- 6) To direct the Metropolis after evaluation of the Metropolis administrative functions;
- 7) To direct the Metropolis after the evaluation of development works within the territory of the Metropolis;
- 8) To pass regulations of the metropolis;
- 9) To evaluate whether or not the directives given in connection to the proper arrangement and mobilisation of the amount collected from grants or other sums by HMG and from the taxes and fees, have been properly followed, and to give the necessary directives to the Metropolitan;
- 10) To issue necessary directives, subject to the Act and Regulation, in order to remove the hurdles that may arise in the functioning of the metropolitan and Ward Committees.

Improved Organizational Structure Kathmandu Metropolitan City Office



Total Departments and Sections:	
Proposed Structure	Previous Structure
No. of Department = 12	No. of Department = 11
No. of Section = 33	No. of Section = 43

In the last two / three years there has been substantial progress in the handling of Council meetings. However, there are still many problems to be solved:

- a. The Councils meetings are not timely held and it is difficult to manage two meetings in a year.
- b. Instead of making guidelines for the future development of KMC the meetings are held in an extremely political background keeping the development agenda behind the scene.
- c. During the meeting, many of its members are concerned with the sum of the budget rather than the nature of the development programmes. For other works, too, the Committee focuses on the input rather than the output.
- d. The decisions made by the committee is not properly followed,

b. Accounts Committee

An Accounts Committee, has been constituted to report during the council meeting informing them about the collection of capital as estimated in the budget, execution of the programme as stipulated in the annual budget and on the matters of regularisation, realisation and settlement of the unsettled and irregular amounts. In pursuant to this, it is the duty of all concerned to make available the documents demanded by the Accounts Committee and to be present and give one's own advice and opinion at the Accounts Committee. It has to conduct meetings, maximum number being six, in one fiscal year.

c. Advisory Committee

Advisory Committee constituted according to LSGR Act-1999 consists of members from different social, academic and technical backgrounds. The main duty of the Committee is to provide necessary opinions, advise and recommendations on various subjects within the working areas that the KMC has requested for.

d. Functions, Duties and Power of the Mayor

Functions duties and power of the Mayor as describe in the Act is presented below:

1. To call meetings of the Metropolitan Council and Metropolitan
2. To keep or cause to be kept books of accounts and other documents securely

3. To implement or cause to be implemented decisions made in the Metropolitan and the Metropolitan council
4. To supervise and control or cause to be supervised and controlled so of Metropolitan daily administration
5. To make recommendation as referred to in the act
6. To take care and repair and maintain or cause to be cared and repaired and maintained Metropolitan's fixed and variable property
7. To make necessary arrangement to formulate and plan a budget
8. To allocate functions to ward members
9. To settle or cause to be settled the unsettled amounts as seen from the auditing, and the amounts given as advance from the Metropolitan
10. To co-ordinate or cause to co-ordinate the governmental, non-governmental and financial organisations within the Metropolitan area.

e. Functions, Duties and Power of Deputy Mayor

The following are the main functions, duties and power of the Deputy Mayor

- ❑ To work as an acting Mayor in the absence of the Mayor and to exercise the powers of the Mayor during the time of working as the acting Mayor
- ❑ To take part at the meetings of Area-level Service Centres
- ❑ To carry out other functions as prescribed by the Metropolitan or the Mayor.

f. Functions, Duties and Powers of Members

Following are the functions, duties and power of members as prescribed in the Act:

1. To formulate and submit ward level development works in the Metropolitan
2. To manage to sent feasible planning from Users' Committees and NGOs after making discussion at the ward level
3. To submit the particulars as per demand relating to ward
4. To assist UCs and NGOs to select and formulate planning
5. To make recommendation as referred to in the act
6. To assist to manage supply

7. To assist the Mayor in the formulation of plan and programme of the Metropolitan
8. To submit the roaster of the plans and programmes prepared by the Community Based Organisation, Association, and consumer committees to the Metropolitan through Ward Committee
9. To carry out other functions as prescribed by the Metropolitan or Mayor.

g. Functions, Duties and Power of Ward Members

The following are the main functions, duties and powers of the ward members:

1. To assist the Ward Committee in various works relating to the development and conservation of our heritage and culture, and other natural resources;
2. To assist the Ward Committee in formulating programmes and action plans and to implement these programmes and action plans;
3. To notify the Ward Committee whether the construction work within its territory is as per the rules or not;
4. To notify the Ward Committee on the status of the contract work or user committee or the development work executed in Amanat;
5. To assist the collection of taxes, fees and charges as sanctioned by the Metropolitan Council;
6. To assist the Ward Committee to keep the ward clean and healthy to live in
7. To assist the Ward Chairman in the formulation of the plans and programmes of the Ward;
8. To carry out publicity works to inform the local people about the needs, importance and the utility of the projects conducted by the Ward, in connection with their implementation.

h. Functions, Responsibilities and Rights of the Secretary

The functions, responsibilities and rights, of the Secretary include:

1. To perform all the administrative works under the direction of the Mayor;
2. To execute the city development programmes under the direction of the Mayor;
3. To maintain books of accounts of all the expenditures related to the development work;

4. To document programmes that have been executed by the User Committees and NGOs;
5. To maintain books of account : income and expenditure, auditing, clear discrepancies, and collect or cause to collect the amount of discrepancy in pursuant to the act;
6. To incur within the limit of the budget, sanctioned with a view to implement decisions;
7. To account and conserve fixed and variable property of the Metropolitan;
8. To supervise and control the activities of the employees deputed from HMG and employees of the Metropolitan;
9. To be present in the Metropolitan meeting.
10. To maintain a record of the population status within the Metropolitan territory;
11. To be present in the Metropolitan and MC Meetings, make minute of decisions, keep decisions register and verify decision;
12. To take administrative control of the Metropolitan staff.

i. City Planning Commission

City Planning Commission is another important part of the KMC responsible for providing expert services to the KMC, its plans and policy implementation, assisting elected representatives in many ways and monitoring departmental performance and activities. The main objectives of the CPC are as follows:

1. To manage expert services for KMC
2. To play a role of bridging gaps between the policy making body and the executing body
3. To assist departments and sections in implementing plans and assurance of results
4. To assist departments and sections to take up their role effectively
5. To assist KMC's elected representatives and executive body when presenting to the international, regional, national and local forum
6. To monitor departmental performance and activities
7. To facilitate downward and upward communication of KMC

Since its formation it has played a vital role in making plans and policies for the KMC.

Other important components of KMC include Account Committee, Advisory Board, Protocol and Mayor's Secretariat, Deputy Mayor Secretariat and Audit Unit.

The main functions of the KMC include: finance, physical planning and development, environment and

sanitation, education and sports, works and transport, health, social welfare, industries, tourism and others.

j. Functions, Duties and Rights of KMC

According to the LSG Act 1999 KMC's functions and duties are categorised as follows:

1. Finance:

KMC has to prepare the budget, plans and programmes and present it to the Municipal Council for its final approval. According to the Financial Act of HMG it has to maintain books of accounts and related documents to keep the amount of income and expenditure up to date. It is authorised to collect taxes, fees and other charges. Currently, these responsibilities are under the jurisdiction of the Finance and Revenue Department of the KMC.

2. Physical Development:

The Act clearly authorises the local authorities to prepare and execute land use development and housing plans. In addition, KMC is responsible for the management of drinking water and sewerage, development of public recreation areas, construction of public toilets and development of green areas within its territory. Currently, the Department of Public works and Construction and Department of Urban Development of KMC collectively undertake some of these functions.

3. Water Resources, Environment and Sanitation:

The major functions under this category include: preservation and maintenance of water sources, planning and execution of irrigation facilities, control and prevention of flooding, controlling and maintaining water, air, and noise pollution, protection of forests and vegetation, executing health and sanitation awareness programmes, managing solid waste disposal system and the generation and distribution of electricity in the KMC area. Currently some of these functions are executed by the Department of Environment and Department of Public Health.

4. Education and Sport:

The main functions under this heading include: establishment and management of pre-primary schools or permitting the establishment and management of such schools, supporting schools for the development of education and sports, providing scholarships for the disadvantaged community of the area, executing programmes on adult literacy and informal education. These functions are currently undertaken by the Department of Social Welfare.

5. Culture:

The functions under this heading include: maintaining records about the religious and culturally importance places in the KMC with a view to preserve and maintain those places. The conservation, promotion and utilisation of heritage matters, language, religion, art and culture of the KMC territory. The Department of Heritage and Tourism is responsible for such functions.

6. Works and Transport:

Under this category the main function includes: construction and maintenance of roads belonging to the KMC, execution, management, registration and control of parking areas for buses, rickshaws and push carts. In the KMC, Department of Works and Department of Urban Development are responsible for executing these functions.

7. Health:

The main health related functions include: establishment and management of hospitals, clinics and health posts, formulation and execution of family planning, vaccination, population education and public health programmes and monitoring the sale of consumer goods and necessity items which are publicly hazard. Such functions are currently executed by the Department of Public Health of the KMC.

8. Social Welfare:

Social welfare related functions are mainly: burial of unclaimed deceased, caring for orphans and executing programmes for the welfare of women and children. This function is undertaken by the Department of Social Welfare of the KMC.

9. Industry and Tourism

The main functions includes: promotion small and medium scales industries and conserving and expanding natural, cultural and tourism resources in the city area. The Department of Tourism and Heritage of the KMC is responsible for the promotion of tourism and industry in the city.

10. Others:

The Act provides 26 different functions and duties under this heading. The main functions include: preparation of by laws by the Municipality, protection of barren and/or unregistered lands, promotion of trade and commerce, maintaining population and housing statistics, preparing for natural disaster and calamities, birth and death certification and registration, managing street lighting, honouring distinguished delegates and controlling rabies and executing income generating activities.

k. Departments, Sections and Staffing in KMC

There are 12 Departments and 33 sections of the KMC. Currently, the total number of staff is 2,147 (Institutional Strengthening of KMC: ADB TA 3185 NEP) . The organisation chart is presented below.

S.N.	Departments	No. of Sections	No. of staff
1.	Social Welfare	3	10
2.	Administration	4	65
3.	Public Works	5	56
4.	Enforcement	3	114
5.	Finance	2	92
6.	Public Health	2	62
7.	Law and Litigation	3	24
8.	Revenue	2	39
9.	Information and Communication	3	27
10.	Solid Waste and Environment	3	1433
11.	Culture, Heritage and Tourism	-	7
12.	Urban Development	3	56

There are some other functional units which act as Protocol and Mayor Secretariat, Deputy Mayor Secretariat and Secretary's Secretariat. These units function as the private offices of the Chiefs.

After presenting the organisational context of KMC, it is important to explore its various strengths, weaknesses, opportunities and challenges.

3.5.3 KMC: Foundation, Capacity and Performance

Three main basis of institutional analysis are: foundation, capacity and performance. With a view to explaining issues relating to the institutional development of KMC, in the next chapter these three characteristics are selected.

1) Foundation: The foundation of KMC is the basis on which it establishes an identity and defines its functions. It consists of the purpose and goals, legal base and constituency.

2) Capacity: The capacity of KMC is the central element determining its functioning. This starts with the leadership, financial, human and material resource needed to carry out its mission and be an effective organisation.

3) Performance: The performance of KMC is determined by the results achieved with the foundation and the

capacity. The type of activities it carries out, and the way they are selected and prepared, defines it. Performance is also defined by the relevance of activities, particularly in meeting the challenge of the city and its citizen.

In the forthcoming part of this report KMC is analysed on the basis of its foundation, capacity and performance. After describing KMC as an institution in these three perspectives, a SWOT analysis will be presented. The analysis of KMC's internal strengths, weaknesses and external opportunities and threats are based on the above three broad organisational characteristics.

3.5.3.1 KMC's Institutional Foundation

Mission/Vision: KMC has a long history, of about 99 years. It has started its long journey from a 'Safai Adda' to "My Legacy, My Pride, My Kathmandu" during this time period. However, there are no clear goals and objectives of KMC. In fact it is unclear what it wants to achieve on a planned and objective basis. Although there are provisions for making short-term and periodic plans, it fails to make these plans on time. Only a yearly plan is prepared and submitted in the Council meeting, which is also difficult to hold, in time as stipulated in the Act.

KMC authorities and staff argue that KMC is a local government whereas the government argues that it is only a local body. The line ministry argues that to be a local government it has to be self-sufficient in all respects. Legally, KMC is a local body.

Due to the lack of goals and mission, local politicians are interested in the short term political and economic outputs and benefits. It is working to solve the problem on a piece meal basis and improve the organisation for long run benefits. In such a situation it is natural that politicians always seek temporary and short-term solutions for the problems. It is because of this reason that KMC's problems cannot be solved, and even if they are solved their effect will be just marginal.

Legal Base: The legal base of KMC is the Self-Governance Act. It has to work in conformity to the Act and Regulation. All its powers are derived from the Parliament and there are no general competence laws except Local Autonomous Governance Law and Regulations allowing the KMC to do things autonomously. Functions, duties and responsibilities of the Metropolitan, Metropolitan Council, different Committees, Mayor, Deputy mayor, Members and Ward

Committees are clearly defined in the Act and Regulation. However, there are no clear cut provisions about the responsibilities of the electoral and staff. Some of the rules and regulations are contradicting and intersect each other.

Metropolis Board is not sufficiently monitoring the performance of KMC. The Advisory Board is not strong enough to advise the Mayor. It is only a provisional body where people are have ceremonial positions instead of supporting the KMC policy level. There is no clear-cut responsibility and accountability of different Boards and Committees.

City Planning Commission, which was the main think tank body for planning KMC 's activities is almost defunct. It was a professional body which provided valuable support to the Mayor and Metropolitan. However, some elected members and staff had expressed some reservation on its roles and working style. Many argue that the CPC had two weaknesses: first, its members' began to interfere in the day to day functions of line executive body and second, it failed to recognize the role of KMC's staff in the planning process. Currently, many members of CPC have left office. In addition, there is no proper documentation of CPC activities. It is difficult to know about its formation order, activities and future plan from its office.

Whereas the Act has provided many roles and responsibilities, KMC still has to do a lot of home work to develop working procedures to implement it in practice. Whereas in the LSG Regulation it is clearly stated that local body are authorised to make their own bye laws , in the lack of a clear frame work, which has to be provided by the Ministry, they are not able to formulate such bye laws. Moreover, in the absence of proper modus operandi, authority of the KMC remained unused. Mechanisms of using KMC's authority and power provided by the Act needs to be redesigned and restructured to work effectively and efficiently in the future. In other words, KMC has to be very receptive for the use of power and authority given by the Act. Furthermore, after the introduction of the Act there are confusions in the functions, roles and responsibilities of KMC and other Acts, Rules and Regulations. There are duplication of functions and activities between KMC and other government agencies in the areas such as construction and maintenance of roads, water resource management, housing planning and collection of taxes, fees and other charges. There is an example of

Development Committee Act 2013 which provisions intersects with the provisions of LSG Act and Regulation.

KMC is the member of the Federation of Municipality. According to the current Act its status is recognised as the local elected bodies rather than local government. Thus, instead of making independent decisions it understands and accepts its responsibilities as a local body of the government. In the absence of a comprehensive legislation for KMC it is difficult to handle problems from a capital city prospective and to maintain its position of autonomy and independence while working closely, as a responsible social partner with the government and other non-government agencies.

Constituency: KMC extends its services to a population of about 421,258 (as per the census of 1991) which is growing at the rate of 6 percent in the 35 Ward Committees. From each Ward Committees there are five representatives. There are clear rights, duties and responsibilities of these WCs. Members are also clear about their functions, duties and responsibilities as are defined by the Act. In addition, a number of NGOs are involved in implementing KMC functions at ward level. Private sector is interested in the areas such as bus park management, solid waste management and in the construction activities. A number of government ministries, departments and offices are located in the KMC area. Similarly, its services are required for cleaning the city by dumping 300 tones of garbage, to increase national revenue by satisfying its stakeholders making it more friendly, clean, livable and a competitive city of the future. It has to accommodate not only its current population but also plan for its territorial expansion to accommodate more people in the future.

SWOT Analysis: Foundation

Strength:

- A long history of its establishment
- Self-governance Act and Regulation
- Clearly defined functions, duties responsibilities

Weaknesses:

- No explicit objectives
- No periodic plan for five years
- Short term approach to get benefit
- Ineffective Board, Committees and advisory bodies and Commission
- No clear cut internal rules and regulations
- Lack of accountabilities

Opportunities:

- ❑ To work in the capital city perspective

Threats:

- ❑ No proper direction for city development
- ❑ Lack of recognition it to work as the local government
- ❑ Increasing city population
- ❑ Possibility of territorial expansion in the future

3.5.3.2 KMC's Institutional Capacity

Leadership: KMC has no clear and straightforward governing structure with defined roles and accountabilities for its bodies, committees, members and staff. At all levels of the organisation accountability has not been well established for both political and executive personnel. There is a state of confusion prevailing in the relation between: the Mayor and Deputy Mayor, Advisory committees and staff, Committees and staff, Department heads, Ward Committees and Advisory committees, Ward Committees and KMC staff. In such a situation it is difficult to predict how decisions are to be made and executed at the different levels of the KMC. Leaders at different levels are not seen to be committed to their posts. The relation between the Mayor and Deputy Mayor and within their secretary level is not satisfactory.

Politically the KMC is divided into different ideology groups. This has made it difficult to make timely decisions for organisational and planning matters. One party electorate attempts to dominate the others, keeping aside their goal of city development. The impact of such feelings has been clearly seen on the development and environment management capacity of the KMC.

It is difficult for the KMC to undertake its functions without the close co-ordination and consultation of ministries, departments and other government offices located in the KMC. Matters about whom to report to in the hierarchy is unclear, similarly, what the relation should be between the CEO and the Mayor's personal assistant is unclear as well. The activities of the Department of Public Works, Department of Urban Development and Department of Environment have to be closely related with this organisation. It cannot act without the proper co-ordination of the government agencies such as Ministry of Local Development, Ministry of Land Reform and Management, Ministry of Law, Justice and Parliamentary Affairs, Ministry of

Public Works and Transportation, Ministry of Water Resources, Ministry of Health and Ministry of Tourism and Culture. Since these ministries have their own departments and local offices within the city it is one of the challenges for the KMC to work in co-operation with them.

Furthermore, KMC has no mechanism to enforce its authority and power without proper co-ordination with the government Ministries, departments, offices and authorities. This makes it difficult to collect financial resources. No clear cut direction of relations exist between HMG and KCM in co-ordinating roads and transportation, refuse collection, street cleansing public health and power distribution. There is still a domination of the government agencies in the development activities at the city area.

There is no co-ordination between the local political representatives and the KMC employees. A sense of co-operation is lacking between ward level representatives and divisional heads. However, neither the central KMC office has any proper mechanism for ward level participation nor do the divisional heads seeking ward level co-operation for programme implementation. In fact, the working style of the KMC employees, consultants and other specialist staff is completely centralised and individualistic. In such a situation even if the Act makes provisions for decentralisation its implementation is less feasible with the present institutional strength.

The Secretary solely dominates administration. Among the staff, Chief of Administration, Public Works and Environment Department are relatively busy and powerful in comparison to the other administrative chiefs and staff.

Resources: In this part issues related to resources are divided into three section:

I. Human:

Human capacity is the skill, knowledge and experience of the elected members, staff and consultants to plan, organise, motivate and coordinate the activities and resources of the KMC. As said earlier elected members are politically divided into various groups and this has affected the capability of the elected members.

Executive level employees must have a clear vision on how to manage the divisions. There is a need to improve the current capability of all division chiefs to tackle their specific

tasks. Political representatives should on the capacity of these staff. There should not be any sign of favouritism for any section, division, individual or group of person or staff within the KMC system ,to allocate its scarce resources.

Some stakeholders argue that the KMC has neither the capacity to make dialogue with the government nor the skill to manage public utilities within its areas. Thus, there is a need to develop skill and knowledge of current human resources to match with the KMC's current requirements. With the current style of management and HR process it is difficult to make a systemic improvement at the KCM. It requires a systemic development mechanism where each and every member can use this to bargain for power from the government and to build confidence among the local citizens that it can deliver services that are better than other government agencies.

The motivation and morale of the KMC staff is low. Some are working very hard where as some are drawing salaries just by sending their authority letter. Jobs and responsibilities are not allocated properly.

There is no system of evaluating performance with a view to distinguish a performer from a non-performer. As a result the system of reward and punishment hardly exists. There are still many divisional chiefs who are either temporary or on contract, 90 per cent of its employees are de-motivated with the present working style, environment and conditions. There are no career development opportunities for the line staff. Very few of the employees see a desirable future in the KMC.

Volunteers, consultant and youths working in co-ordination with KMC are not satisfied with it's function, there is no proper co-ordination between them and the KMC staff . The staff views that any project level activities should be undertaken under the umbrella of the KMC and with the involvement of KMC line staff and departmental chiefs.

II. Financial Resources

The KMC severely lacks financial resources to execute its plans and programmes. Although it made a budget of more than 100 million rupee, it faces difficulties in covering the expenses of administration and other core activities from its own resources. The dependency on foreign or governmental assistance is increasing. There is no broad level support from the people to raise funds for the KMC. It also fails to keep its administrative and overhead costs under control. It allocates a budget to

the ward member without any proper ward level members' programmes.

There is no proper financial information system providing facts on various resources in the city. Revenue collection is not effective due to the lack of information about the taxpayers. It needs to make proper plans to bring the city dwellers in the tax bracket in the near future. The public is not motivated to pay tax in the present unclear provisions of the government. In fact it has to revamp whole system of financial resource mobilisation with new policies and programmes. If the present system prevails, it will be very difficult to work in the future to meet the budget requirement. In addition, unless and until KMC is not be financially independent it will be difficult for it to emerge as a local government.

There are records of financial irregularities, the Audit Committee is not formed and Accounts are not audited on time. The KMC administration is basically concerned with spending rather than planning, budgeting, maintaining proper books of accounts and auditing. In many cases the CEO endorses activities which are not inconsistent with the current rules and regulation. Neither the Line Ministry is concerned to establish a minimum economic disciplinary measure to check any sort of illegal financial operation nor the KMC to develop and follow financial disciplinary rules. There are instances of attempting to give false impression of the real state of affairs by the line ministry and other responsible authorities to convince the donor agencies, otherwise. In other words, initiatives are directed just to satisfy donor agencies instead of the current reality.

III. Material Resources

KMC lacks basic material infrastructure such as land fill sites, office buildings and vehicles. Besides, there are problems of basic construction materials, tools and equipment. It needs at least 125 container for maintaining the flow of refuse collection. In fact with the current material infrastructure it is difficult to work smoothly. Employees are asking for office transportation. due to the lack of vehicle facilities it is difficult to supervise, monitor and reinforce different functions of the Departments.

Organisation: It has a new organisation structure comprising of 12 Departments and 33 Sections. Functions of all Departments and Sections are also formulated and provided to each Department and Section. From a review of its new structure it seems that this is a vague structure. The number of departments

are so many that it exceeds the principal of public administration. Many stakeholders argue that Departments are not the requirement of KMC but rather the personal interest of the leaders and staff to make a huge organisation. According to them, these departments can be put together for the sake of efficient management of the KMC by keeping its functions as it is.

The work systems and procedures are still very traditional, rules and regulations are not clear, the values and norms of the organisation are not maintained. In fact there is no corporate management system to use the resources efficiently and effectively. Recently, under the technical assistance the ADB, institutional strengthening of the Kathmandu Metropolitan City is going on. It has stated its goal as "improving the capabilities of Kathmandu Metropolitan City for efficient, responsive and sustainable urban management in the Kathmandu Metropolitan area". Some experts and elected members have shown their interest in this project, many experts and staff harbour their doubts on the implementation of the reports given by this project. In fact, there are about 58 studies already undertaken in the KMC which are not properly reviewed and implemented.

The current management systems and functions of the KMC are very reactive in nature. Jobs are not properly distributed and authorities are at the centre. The CEO is seen issuing a litre of petrol and very few Departments Heads and staff have enough work to do furthermore, there is no co-ordination of work among the divisional chiefs.

Many studies have been undertaken in the past to strengthen its institution and improve KMC's organisation for the betterment of its citizen. However, due to the lack of proper implementation initiatives and M&E, recommendations of various expert committees were either neglected or not at all implemented. In the current situation it is difficult to internalise any change programme just by undertaking a study. Even for the implementation of the CDS there is need to make an appropriate institutional arrangement, otherwise the success of CDS is doubtful.

There is no mechanism of co-ordination, execution of plans and programmes to manage day to day activities.

In fact it has no up-to-date or a comprehensive city plan that brings together its mission, its specific objectives, its development programmes and its financing. There are always problems during the planning and decision making time.

There is no authorised and permanent unit for establishing relations with the other counterpart agencies, foreign donors, international agencies and so on. As a result many programmes undergoing in the city are not properly co-ordinated with the KMC. In addition, the absence of a proper networking mechanism in the KMC office makes it difficult to develop a operational relation with many foreign agencies, local NGOs and INGOs.

Without proper co-ordination with the government it is difficult to work closely with other government offices. There are many rules and regulations which overlap with the KMC's functions. There are some international projects undergoing and to some extent it is successful in sharing resources, information and expertise. It is working in the direction of increasing private, NGOs and INGO's participation in its activities to minimise its limitations and extend services to all of its wards.

KMC as an organisation lacks mechanism to encourage grass root participation, there is no two-way communication between KMC's authority and the general public on matters such as tax collection, refuse collection and other local level problems. The ward level electorate are not satisfied with how the departments in the KMC are working. The programme approach plans requires to carry out KMC's activities at the Ward Level and clarify one another's responsibilities. However, at this level some progress has been observed for the implementation social and developmental activities in the participation of the Tole Sudhar Committees and other users groups.

There is no professionalism in the management of the KMC. The CEO is appointed without considering his or her knowledge and skills on urban sector planning and development. Many stakeholders argue that, whoever appointed these officers were primarily concerned with the government's interests rather than KMC's interests. This is natural, because they have the opportunity to develop their careers in the ministry and not at the KMC. On the other hand, the line ministry itself has not realised the need for stability of KMC's executive management. In case of change in the line ministry, it directly impacts the tenure of the Executive Officer (EO). The present EO is the sixth one in the tenure of the current Mayor. This trend has always constrained the KMC to emerge as a professional organisational body.

There is a lack of effective information and communication. There is no Data base to manage KMC

effectively. Unless and until the KMC develops its own reliable data base it will be difficult for it to increase the operational effectiveness and efficiency of the departments. A brief introduction of departments and their respective issues are discussed below.

IV. Departments

a. Social Welfare Department

The main responsibilities include community social welfare through disaster management, community development, job promotion, education and sport. These functions are divided among three major sections. There are 10 employees working in the Department. Some of the major issues of the Department are the following:

- ❑ Lack of executive vision to run social welfare activities within the KMC framework.
- ❑ Team work is lacking. There is no work environment. Interdepartmental meetings are hardly organised. Executive management and Department Heads are less interested in running the departments in co-ordination.
- ❑ Lack of routine programmes due to financial problems in the KMC. If local INGOs do not support its programmes, it is difficult to run the department.
- ❑ There is no system of performance management and evaluation. The Department Head has no responsibility to evaluate and take control of subordinate employees.
- ❑ Although the Department has less table work, the KMC Executive Committee provides employees for table work. The Department needs employees to work in the field.
- ❑ Lack of motivation among the employees to work.

b. Administration Department

This is one of the crucial departments responsible for file maintenance for the personnel and human resource development in the KMC. Four main sections of the department include General Administration, Personnel and HRD, Ward Co-ordination and Vital Registration. Under this Department there are 65 employees. The main issues include:

- ❑ Although KMC is departmentalised and unitised there are no place to accommodate the different sections in the Department.
- ❑ The need for capacity improvement of the Department for implementing the given responsibilities.

- ❑ There is no system of performance management and evaluation.
- ❑ Lack of official transportation facility for the employees.
- ❑ The system of reward and punishment is needed urgently.
- ❑ Lack of career development opportunities for employees.
- ❑ Lack of incentives and motivation to work for employees.
- ❑ Department needs to strengthen its administrative functions and implementation capacity.
- ❑ There is a need to co-ordinate sectional works of the Department.

c. Public Works Department

The main functions of the Department includes: providing water supply services; planning and management of water supply and sewerage; construction and maintenance of municipal roads; providing electrical services and maintenance; and design, construction and co-ordination of ward and civil works of the KMC. In addition, it has to monitor and supervise responsibility of sectional works within the Department. Altogether there are 56 employees working in Water Supply and Sewerage, Road, Electrical, Maintenance and Ward and Civil works sections. The main issues of the Department includes:

- ❑ The need for vision to develop the Department as a system.
- ❑ Influences of de-stability on Departmental works.
- ❑ Instead of a direct implementing role, KMC only needs to monitor the works of the divisions.
- ❑ The need for developing the capacity to take more responsibility in the future.
- ❑ The need for encouraging people working in the Departments.
- ❑ The need for logistic facilities to impart its duties and responsibilities effectively.

d. Enforcement Department

The main responsibilities of the Department are: to supervise, control and monitor market areas, to regulate construction activities and regulate the security of the citizens. The department comprises of three main sections, namely, Market Management, Construction Regulation and Central Pool. It employs 112 security employees who are trained by the Nepal Police. The main departmental issues include:

- ❑ Unrealistic span of control between the number of commanders and the number of city police, under 42 commanders there are 72 security City Police.
- ❑ The need for appointing Mahila City Police.
- ❑ Lack of logistic facilities needed for city patrolling and other security matters.
- ❑ Lack of recognition by the government of Metropolis Police.
- ❑ The need for barrack system to widen security zone in the city.
- ❑ The need for clarifying Departmental Jurisdiction.

e. Finance Department

The Department basically works for day-to-day financial activities of the KMC with a view to record and maintain the books of accounts. It has to follow government Economic Rules and Regulations to maintain economic discipline of the organisation. The three main sections of the Department include: Store, Accounting and Budgeting and Audit Departments. It employs 92 people at different sections. The main issues related to the Department are the following:

- ❑ Lack of space for working at the present office.
- ❑ Lack of clear direction from the top executive management makes it difficult to work.
- ❑ The need to minimise unnecessary pressures of the executive management.
- ❑ The need for standardised financial work as per the rules and regulations of the HMG.

f. Public Health Department

The main objectives of the Department includes: to provide basic health service to the people, manage health care services at ward levels, increase public health awareness, co-ordinate health services and others. The two main sections in the Department are: Urban Health and Food and Drug. Altogether there are 62 employees in the Department. It runs 17 urban clinics and provides health service for about 50,000 citizens of different wards. The Department is, some how financially self sufficient to run its programmes

- ❑ The need for Public Health Officers as per the requirement.
- ❑ Lack of manpower to perform section wise.
- ❑ The need for improving public health quality at the ward level. A system of sustained training and development of the staff is imperative.

g. Law and Litigation Department

The main responsibility of this Department includes litigation activities, legal documentation and legal

counselling. The Department employs 24 employee in its three sections, namely, Litigation Section, Misil Section and Legal Counselling Section.

The main departmental issues include:

- ❑ The need for the supply of logistics- vehicle and computer.
- ❑ Training and development of employees.
- ❑ The need for minimising political pressure on legal and litigation matters.

h. Revenue Department

The department performs the main responsibilities of planning and collecting revenue with a view to mobilise financial resources for the KMC. It has two sections such as Review Planning and Monitoring and Tax and Fees Collection Sections. The main issues of the Department are the following:

- ❑ Space problem.
- ❑ KMC has no special vision to mobilise local revenue sources.
- ❑ Lack of information on potential sources of revenue.
- ❑ The need for developing Revenue Information System (RIS) for the implementation of revenue plans and policies.
- ❑ The need for assuring people about the uses of tax money.
- ❑ Lack of infrastructure for the sustained collection of revenue.

i. Information and Communication Department

This department is responsible for the collection and dissemination of information required for the day-to-day works of the KMC. The three main sections of the Department include: Media and FM Section, Information Section and GIS Section. The Department has 27 employees in its various sections. The main institutional issues of the Department are the following:

- ❑ The need for vehicle.
- ❑ The need for using Metro FM commercially for the generation of financial resources.
- ❑ The need for improving the watt capacity of FM.
- ❑ Inability of the Department to employ professionals.
- ❑ Lack of inter-departmental co-ordination.

j. Solid Waste and Environment Management Department

This is the largest Department employing 1,433 employees in its different sections. The main responsibilities of the Department include: management

of solid waste, protection and maintenance of urban environment and supporting works of environment management in the KMC. The Department has three main sections- Solid Waste Management Section, Urban Environment Section, and Mechanical Section. The main problems of the Department include:

- ❑ The need for vehicles for refuse collection.
- ❑ The need for a minimum of 125 containers for making the refuse collection system efficient.
- ❑ Lack of vehicles for monitoring the Departmental activities.
- ❑ No indication of a solution for the landfill site problem due to the lack of proper co-ordination between government and KMC.
- ❑ No proper plan and programme for the involvement of the private sector for the improvement of city's current environment.

k. Culture, Heritage and Tourism Department

The Department is responsible for making plans to preserve and maintain heritage sites with a view to make Kathmandu a culturally rich tourist city. The Department employs 7 employees. The main issues relating to the Department include:

- ❑ Lack of skilled and experienced manpower for the management of culture, heritage and tourism.
- ❑ The need for using heritage sites also for the collection of tax resources so that the maintenance costs of these sites can be recovered.
- ❑ The need for co-ordination of Department activities with the activities of Government Ministry, Department and local offices related to culture, heritage and tourism.

l. Urban Development Department

This department is responsible for the preparation of long and short term urban plans and programs for the KMC. It has three main sections: Urban Planning, Building Permit and Transportation Management, the Department employs 56 personnel. The following are the main institutional issues of the Department.

- ❑ The need for a full-fledged study of the urban development activities in the KMC.
- ❑ Lack of information for the preparation of long-term and short-term urban plans and programme.
- ❑ Lack of co-ordination of the activities at the Ministry level of the City Planning Department and the KMC's UDD for the formulation of plans and policies and implementation.

SWOT: Capacity

Strength:

- ❑ Both elected body and executives are interested to develop the city
- ❑ Expert services and studies are on going to increase capacity

Weaknesses:

- ❑ Increasing political distance from central to the Ward level
- ❑ A situation of politics first and development second
- ❑ Lack of sufficient skills and knowledge of employees and electoral for organisation management
- ❑ Low morale of employees
- ❑ Lack of material resources
- ❑ Problems of financial resources
- ❑ Lack of financial information to collect financial resources
- ❑ Increasing financial irregularities
- ❑ Vague organisation structure
- ❑ Reactive management functions and structure
- ❑ Lack of performance evaluation system
- ❑ No data base to manage organisation

Opportunities:

- ❑ Chances of co-ordination with government and non government agencies
- ❑ Many NGOs and Users' Committees are working in the ward level which can provide services to the ward people beyond the limitation of KMC and its ward committees.
- ❑ Larger number of population can be brought within the revenue brackets of KMC
- ❑ Increasing interest of private sector in the activities of city development

Threats

- ❑ Difficult to work in co-ordination with different government agencies
- ❑ Overlapping in the activities of KMC and other external agencies specially with the government in city development matters.
- ❑ Effect of government changes in the tenure of the CEO

3.5.3.3 KMC's Institutional Performance

Activities:

In many of its past activities, such as expansions of roads, overhead bridges and traffic islands in the city area the KMC ensures that its activities are in consistent with the peoples' feelings. However, due to increasing city population, traffic

and unplanned city development, it has to do a lot of exercises to convince people that its performance is directed toward making this city liveable in the future.

There are grievances from citizens on how promptly and honestly KMC acts to provide services in the city. In many cases, although it is simple to manage, KMC's current staff and authority are careless when delivering the services fairly, honestly and promptly.

Relevance:

In the last few years it has made some progress in realising the importance of conservation of heritage and culture of the city. However, there is less concentration in its plans and programmes to combat urban poverty, vulnerable groups, urban unemployment and public-private sector participation. Its activities are not relevant to attract the participation of INGOs and NGOs, city youths, and user groups. It has to ensure their participation with proper ward level programmes.

There are many INGOs and NGOs in the city which can support the execution of KMC's local level programmes. Specially it can execute, using the strength of such local institutions, some major programmes of public health and sanitation, environment, education, women and children health and adult literacy programmes. There are many INGOs who are interested in co-ordinating with the KMC in local problem areas. Similarly, private sectors are interested in participating major programmes such as transportation management, maintenance of water supply and sewerage systems, power supply, refuse collection and other activities.

Effectiveness:

The work processes and mechanisms of the KMC administration is not transparent so as to making elected and executive personnel accountable towards their works. Some initiatives are being taken for governing KMC with an institutional approach. However, in the lack of a clear cut mechanism of implementation, M&E and feed back systems, not much can be expected in the coming days.

Due to the lack of a performance standard it is difficult for the KMC to monitor and evaluate whether its plans are executed in consistence to its mission/objectives or not.

A number of donor assisted programmes are ongoing at the KMC. Many stakeholders argue that these

programmes are not so effective and fail to be properly executed due to the lack of proper involvement of line managers.

Once activities are completed there is no system to evaluate the impact of these activities in the quality of city life.

SWOT: Performance

Strength:

- ❑ Programmes and projects are ongoing for the organisational reform of the KMC
- ❑ All politicians and staff are motivated to work for the development of Kathmandu city
- ❑ Organisational basis for implementing its plans and programmes in different wards

Weaknesses:

- ❑ Lack of accountability of elected members and staff in many respect
- ❑ Lack of planning for involving different stakeholders in the process of city development
- ❑ Lack of a monitoring and evaluation system
- ❑ No mechanism to implement plans and programmes
- ❑ No workable relation between Mayor and Deputy Mayor in KMC

Opportunities:

- ❑ A number of NGOs and users groups are available to implement KMC's plans
- ❑ Donors are interested in participating in the city development activities

Threats

- ❑ Increasing population, traffic congestion and poor roads
- ❑ Increasing environmental problems
- ❑ Development and mobilisation of community
- ❑ Heritage conservation
- ❑ Housing and squatter settlements
- ❑ Difficulty in combating urban poverty, vulnerable groups, urban unemployment and public- private sector participation
- ❑ Difficult to replicate project findings that were developed outside the organisation of KMC

3.6 ARRANGMENT OF INSTITUTION IN THE CONTEXT OF CDS

3.6.1 Introduction

In the first stakeholders' Workshop vision of institutional development it has clearly identified KMC as the "capable organisation and manpower to manage the services, facilities and physical infrastructure of the city to the maximum satisfaction of the city dwellers". Similarly, the Workshop also identified some major issues which are also included under the headings of foundation, capacity and performance. Moreover, issues also include the personal views of the Mayor, Deputy Mayor, Ward Chairman and heads of department of KMC. These issues are very important for the purpose of implementation of CDS in the future. Unless and until KMC deals with these issues with proper strategies and action plans it will be difficult to implement CDS programme. Realising this fact, this chapter is divided into two main parts. The first part explores issues where as the second part presents issues to achieve the above mentioned institutional vision.

3.6.2 Foundation: Issues

Without a strong foundation it is difficult to establish an identity and define functions of the KMC. The Foundation comprises of three main components: mission and objective, legal base and constituency. The main issues identified after SWOT analysis are presented below:

Issues:

- 1) The need for clearcut vision of KMC.
- 2) The need for explicit objectives of KMC
- 3) The need for revision for in the provision of Acts and regulations.
- 4) The need for clarity on whether KMC is a local body or local government
- 5) The need for a longer term perspective of city development
- 6) The need for making Board, Committees, Advisory bodies very effective
- 7) The need for making the elected and administrative staff accountable at work

3.6.3 Capacity: Issues

Without being a capable organisation KMC cannot function in its constituency properly. The traditional

capacity is not enough to undertake CDS activities. Capacity includes financial, human and material resources. The main issues identified relating to KMC capacity are the following:

Issues:

- 1) The need for making Mayor powerful.
- 2) The need for minimising the political distance among the elected to plan and execute city development activities.
- 3) The need for enhancing the current knowledge and abilities of the administrative and elected personnel
- 4) The need for a detailed financial plan to manage sources and uses of funds
- 5) The need for establishment of management and financial information system
- 6) The need for controlling increasing financial irregularities
- 7) The need for using services of NGOs, local clubs and other user committees to enhance the capacity of KMC
- 8) The need for proper M&E and reporting system.
- 9) The need for making the organisation structure very effective
- 10) The need for involving private sector in the collection and mobilisation of financial resources
- 11) The need for reviewing acts, for example, relating to transportation, roads, water resource, sanitation, housing planning and local development ministries to increase the co-ordination of the KMC with other government bodies
- 12) The need to improve physical and material infrastructure of the KMC
- 13) The need for appointing a CEO for a fixed term
- 14) The need for establishing a data base system
- 15) The need for evaluating performance
- 16) The need for institutional arrangement to increase feeling of ownership in development works
- 17) The need for dissemination of knowledge and skills

3.6.4 Performance: Issues

Its foundation and capacity determine the performance of KMC. Only plans for the performance is a futile exercise without structuring a sound foundation and capacity. There are some issues relating to the KMC' issues, presented below:

Issues:

- 1) The need for making staff and elected body accountable

- 2) The need for involving line staff in the project management and implementation
- 3) The need for developing mechanism to contact the KMC's stakeholders
- 4) The need for involving local NGOs and users committees in the performance process from the centre to the grass root level
- 5) The need for support agency at the local level to train local NGOs and communities

3.6.5 Issue-Action Matrix:

Effects of issues need to be identified and strategies and action plans have to be outlined with a view to facilitate the implementation of CDS in the KMC institutional set up.

3.6.5.1 Foundation

The current institutional foundation needed to be revamped in the context of CDS. Measures are presented in the form of action plans to reach to the associated strategies. (See foundation: Issue-Action Matrix Table Annex: 1)

3.6.5.2 Capacity: Leadership, Resources and Organization

Presented in the following Matrix table are the main issues, effects, strategies and action plans for the improvement in the capacity of the KMC. (See Capacity Issue-Action Matrix Table Annex 2).

3.6.5.3 Performance

Performance of the KMC mainly depends on its foundation and capacity. Thus, without working on issues relating to foundation and capacity it is difficult to increase the present level of performance. In addition to the action plans described in the following matrix tables, performance improvement depends on the action plans shown in performance issue action matrix. (See Performance: Issue-Action Matrix Table Annex 3)

3.7 CDS MANAGEMENT AND INSTITUTIONAL STRENGTHENING COSTS

3.7.1 Introduction

Implementation of CDS in the KMC is a very challenging as well as risky task. Besides strategies for change and action plans, there are some important factors which effect its effective and efficient implementation.

3.7.2 CDS Steering Committee

The CDS will be implemented for the most part by the CPC of the KMC. The CPC will impart its responsibility through the Planning, M&E and Administrative Dept. of the KMC. It will have the overall responsibility for its co-ordination, and for this purpose a CDS Steering Committee has to be set up comprising of the Mayor and Deputy Mayor, the CEO, two chairmen of the Ward Committees, Chief of Planning, M&E and Administrative Division, two representatives from the local NGOs and users' committees and two experts. The Member of Secretary of the Steering Committee will be the chief of the Planning, M&E and Administrative Dept. For this purpose the current Administrative Department should be completely revamped. The Steering Committee will be responsible for the following activities:

- ❑ Integrating the activities of the different Departments and Ward committees by establishing a mechanism of co-ordination
- ❑ Solving any problem concerning CDS accounting, budgeting, and procurement procedures
- ❑ Forwarding requests for timely disbursement to the Bank
- ❑ Preparing and submission of progress report under the request of the Bank
- ❑ Overall co-ordination of project activities.

3.7.3 Financial and Human Resource Needs

The regular expenditure has to be made by the KMC. The CDS has to assist in institutional development, at least, in the following matters: (See Financial & Human Resource Needs Table)

Table 1: Financial & Human Resource Needs

PARTICULARS	REASONS	AMOUNT (NRS)
Payment of expert services	Socio-economic expert, Technicians, environmentalist services (5 experts for 4 years at the rate of Rs. 30,000 per month)	72,00,000
Management and financial information system	50 computers and other logistics (furniture, printers, CPU)	1,50,00,000
Training and management development	MIS, Corporate finance, leadership, general management and project management	15,00,000
Developing Monitoring and Evaluation System	10 computers, logistic, and training	10,00,000
Restructuring organisation structure	Strengthening Planning, Monitoring, Evaluation and Administrative Division. Recruitment of highly qualified staff to work on planning and M&E, purchase of 10 computers for monitoring and evaluation of different sectarian programmes under CDS.	20,00,000
Construction of building to accommodate all departments and divisions in a single building	Construction of 50 rooms building, surrounding wall and buying furniture	4,50,00,000
Office vehicles for staff	Two buses and 5 motor cycles	25,00,000
Seminar and workshop	Increase awareness, maintaining financial discipline, administer the CDS.	20,00,000
Total		6,90,00,000

3.7.4 Accounting and Audit

A separate CDS account, clearly indicating the various sources of receipts and expenditures by functional categories for their respective programme components, needs to be maintained by the Finance and Account Dept. The CDS account should be audited annually in accordance with HMG rules and regulations.

3.7.5 Risk Factors in Implementing CDS

During my field visit some risky practices were noticed in the KMC which, if it remains will make it difficult to implement CDS:

- 1 Decision making and problem solving practices are influenced by political motives. In such a situation if any mistakes or problems occur in the KMC and it has political implication, either it will be highlighted excessively keeping other

responsibilities idle or will remain hidden for the sake of political interest.

2. Status and levels in KMC administration is more important than the roles and responsibilities. There are conflicts in the organisation over the roles of the Ward Committee, administrative staff, advisory committees and other line administration staff.
3. There is need for a good relationship between the mayor and deputy mayor and members representing different parties to strengthen the KMC in the future. Similarly, if changes in the government effect the tenure of the secretary this will result in instability. In such circumstances it is risky to implement the CDS.
4. With the current capacity of the KMC it is difficult to develop new projects, planning or other exercises to implement the CDS. Implementation of CDS requires a socio-economist, an environment expert, a legal analyst and an independent auditor (who should be very independent from the Board) and strong leadership

in the administration who can lead and mediate with the government agency.

5. The government representative and the KMC representative have to sit together to clarify their roles. If, not there will always be tension between the government and the KMC in the implementation various services which currently belong to the government and which KMC sees as its responsibility.
6. Many stakeholders view that projects in the past in KMC were just "face saving" at the time of its economic crisis rather than a meaningful plan for the future. If this CDS is just used as a political agenda then there is a great risk in the success of this project.
7. To implement the CDS in the KMC requires some sort of "CDS Management Contract" within the system of the KMC. If CDS is implemented beyond its line function there is a risk that the project will not be a success.

3.7.6 CDS Can Be Implemented

In case risk factors are minimised, there are many reasons why this project can be implemented. These are the following:

1. CDS is a complete package of a project which is very important for a city like Kathmandu. The areas, which this project will address, are really important for the development of Kathmandu by making this city a fine place to live in as well as making it competitive.
2. From the very beginning of the CDS study, the KMC including its line staff, consultants and stakeholders are involved. All involved have suggested that this project will be very useful in the future.
3. The current leadership seems to be committed to this project.

3.7.7 Monitoring and Evaluation of CDS

The monitoring and evaluation system will assist to chart the progress of the CDS, the implementation to achieve its objectives, which will enable the concerned responsibility centre to take corrective action when deviations are detected by the system. Further it also

assists the concerned authority to assess the relevance, efficiency and effectiveness of the CDS, together with its impact on stakeholders. The Monitoring and Evaluation Section of the Planning Department will do evaluation of the CDS. The result of M&E will be directly provided to the CPC.

Monitoring is a continuous surveillance over the implementation of the programme to ensure that the input deliveries, work schedules, targeted outputs and other required actions are proceeding according to plan. It ensures continuous and effective implementation of programme and activities with sufficient information and feed back relating to the critical activities. It should be considered as a major part of the KMC information system needed for making decisions in relation to the CDS. A successful application of M&E depends on :

- Type of managerial decisions made at different levels of the KMC
- The necessary information required to make decisions
- The method of collecting information
- The availability of required information in a prescribed format
- Mechanism to relate the work progress with implementation schedules
- The system of identifying problems and resolving them
- Mechanism of co-ordination between functional units and the need for information to be shared
- Mechanism of co-ordination between M&E units and functional units

Evaluation is a systematic process which attempts to find, as objectively as possible, the relevance, effectiveness and impact of CDS activities in the context of CDS objectives. It is therefore, an evaluation of the CDS activities which is concerned with the analysis of the rational of the CDS objectives, implementation process and the emerging results, and assesses in light of the foregoing, the validity and relevance of project objectives and the project effectiveness and efficiency in achieving the intended results. One of the most effective evaluation methods is the Participatory Evaluation which involves the feedback of information and opinions from stakeholders and others to the office staff, during informal and formal meetings and discussions.

3.7.8 Training for Electoral and Staff

The implementation of the CDS is based on the knowledge and skill of the staff to understand and execute it. To some degree, the following training and seminar would be of great usefulness to enhance the ability of elected members and administrative staff to execute the CDS.

3.8 CONCLUSIONS

The history of decentralising the central government's authority and responsibilities in Nepal begun after the promulgation of The Constitution of the Kingdom of Nepal 1962. The first decentralisation act was enacted in 1982 based on the report by the Administrative Reform Commission chaired by Ranadhir Subba. Since then there has always been a problem in executing decentralisation policies due to the lack of institutional and human resource factors to plan, program and monitor developmental activity at the local level. After the restoration of democracy in 1990 three documents were prepared and

submitted to the concerned authority to institutionalise decentralise practice at the local bodies: The Eighth Plan, ARC and Report of the High Level Decentralisation Committee and LAG Act 1999. However, even after various efforts in the past, the implementation of the decentralisation policy is hindered by the inefficient and ineffective institution of local bodies.

From the above analysis it is clear that the most important dimensions of CDS implementation in the KMC perspective is to strengthen its foundation and capacity, to improve the current performance. In this respect, the most important part is the role of different individuals and institutions and their co-operation and co-ordination from the centre to the ward level. For the KMC particularly, it is important for it to know the purpose and means to get results from the CDS. It must have the right foundation and capacity to give its best performance. It needs to have a clear mission and solid legal base, to be part of the right constituency, and also have good leadership and adequate resources, if its activities are to have relevance and effectiveness.

S.N.	Training/Seminar	Participants
1.	Concept and practice of project management	For the chiefs of the departments and other subordinate staff
2.	Concept and practice of corporate management	
3.	Pre- CDS orientation Seminar	For the chief of the departments, ward committee members and other subordinate staff
4.	Project Planning, Monitoring and Evaluation	For the staff of planning and M&E department.
5.	Leadership Practices	For department heads, ward committee chairman
6.	Office Administration	For secretary level
7.	Institutional Strengthening	For elected and chief staff
8.	Capacity Enhancement of Local NGOs and users Committee	NGO and users committee.

Implementing CDS

Monitoring of CDS's ID activities depends on the observation and verification of the following indicators in three important institutional dimensions that have been followed in this study.

Foundation	
Formulation of clear objectives of the KMC	Before implementation of CDS
Communication of CDS objectives to the staff and electorate	Before implementation of CDS
Clarity of whether KMC is a local body or local government (To work in the capital city prospective	Before implementation of CDS
Initiation of formulation of periodic operational plan of the KMC	Within six months of CDS implementation
Reformation of Advisory body	Within three months of CDS implementation
Clarification of accountability of the elected and administrative staff	Prior to implementation of CDS

Capacity	
Increase interactions among rivalry political factions to support CDS implementation	Form politically mixed committees to implement CDS
Formation of a fair Vacancy Fulfilment Committee	Before implementation of CDS
Implement corporate accounting system	Before implementation of CDS
Establish management and financial information system	Within six months of the project CDS implementation
Recruitment of MIS experts	Within six month of CDS implementation
Formation of an independent Audit Committee	Before six months of CDS implementation
Restructuring of current organisation structure	Before implementation of CDS
Development of KMC-private sector committee	Before implementation of CDS
Construction of KMC building	Within a year of CDS implementation
Preparing performance contract with CEO	Before implementation of CDS
Development of DBS	After implementation of CDS
Introduction of performance evaluation system	Before implementation of CDS
Formation of CPC with the representation of line staff of KMC	Before implementation of CDS
Training for staff and electoral (Ref.7)	No.1,4,6 in the first six months of CDS No. 2,3,5,7,8 in the next six months of CDS No. 1,4,5 will be repeated in the next year of CDS

Performance

Making the staff and elected body accountable to the CDS	Prior to the CDS contract
Developing KMC mechanism to contact different stakeholders	Prior to the CDS contract
Making complete list of NGOs and their objectives operating in the KMC area	After 3 months of CDS implementation

Table 2: Insatitutional Development Issues and Implications

Foundation: Issue-Action Matrix

ISSUE	IMPLICATION
1) The need for clear cut vision of KMC	The current vision can not represent city dwellers' willingness to participate in the city development activities <input type="checkbox"/> it is difficult to develop follow-on planning and policies based on current vision
2) The need for explicit objectives of KMC	<input type="checkbox"/> Always in the state of confusion <input type="checkbox"/> Programmes and policies are not in consistence to the vision
3) The need for revision in the provision of Act and Regulations	<input type="checkbox"/> Difficult to work even at the level as the local body
4) The need for clarity on whether KMC is a local body or local government	<input type="checkbox"/> Ownership problem
5) The need for a longer term perspective of city development	<input type="checkbox"/> Difficult to work on different development activities <input type="checkbox"/> Only peace meal problem solving approach for the shorter term <input type="checkbox"/> Effect of instability due to changes in the government
6) The need for making Board, Committees, Advisory bodies very effective	<input type="checkbox"/> Difficult to work on time <input type="checkbox"/> No effective control mechanism <input type="checkbox"/> Increasing fiscal irregularities at work
7) The need for making the elected and administrative staff responsible at work	<input type="checkbox"/> Difficult to work as per plans and programmes <input type="checkbox"/> Difficult to make them accountable <input type="checkbox"/> Avoidance of responsibilities

Issue-Action Matrix

ISSUE	IMPLICATION
1) The need for making Mayor powerful in the sense that there should not be difficulty in formulating and implementing the real development works.	<input type="checkbox"/> Difficult to formulate and implement programmes and policies <input type="checkbox"/> Always Mayor has to select wrong way to bring city electoral in favour even just to pass programme and budget from the City Council
2) The need for m.nimising political differences among the elected and plan and execute city development activities	<input type="checkbox"/> Difficult to bargain with the government with such a divided attitude <input type="checkbox"/> Increasing politicisation in development works.
3) The need to enhance current knowledge and abilities of the administrative and elected personnel	<input type="checkbox"/> Delay in the implementation of improvement programmes <input type="checkbox"/> Difficult to bring a status quo
4) The need to balance sources and uses of funds	<input type="checkbox"/> Difficult to plan revenue and expenditure <input type="checkbox"/> Increasing uncertainty
5) The need for the establishment of a management and financial information system	<input type="checkbox"/> Difficult to make management plans <input type="checkbox"/> Difficult to know different sources of funds <input type="checkbox"/> Difficult to control and monitor financial activities
6) The need for controlling the increasing fiscal irregularities	<input type="checkbox"/> Degrading images of local development political units <input type="checkbox"/> Difficult to collect tax, charges, fees from the citizen

CITY DIAGNOSTIC REPORT

ISSUE	IMPLICATION
7) The need for using the services of NGOs, local clubs and other user committees to enhance the capacity of KMC	<input type="checkbox"/> Difficult to deliver services in the total constituency <input type="checkbox"/> It is difficult to share the fruit of democracy working only at the center
8) The need for proper M&E and reporting mechanism	<input type="checkbox"/> Very difficult to trace on what is happening and where <input type="checkbox"/> Difficult to find the status of different project works in the KMC <input type="checkbox"/> No coordination of activities <input type="checkbox"/> No feed back mechanism
9) The need for making the organisation structure very effective	<input type="checkbox"/> Difficult to manage task performance <input type="checkbox"/> Confusion among staff and elected members in the use of authority and power
10) The need for involving private sector in the collection and mobilisation of financial resources	<input type="checkbox"/> It is difficult to work alone specially to collect revenue <input type="checkbox"/> It is difficult to reach each segment of KMC without private sector participation
11) The need for reviewing acts to increase co-ordination of KMC with other government bodies	<input type="checkbox"/> State of confusion in executing development activities in city area
12) The need to improve physical and material infrastructure of the KMC	<input type="checkbox"/> Difficult to deliver KMC service <input type="checkbox"/> Difficult to maintain inter-departmental co-ordination
13) The need for appointing a CEO for a fixed tenure	<input type="checkbox"/> Difficult to maintain flow of work <input type="checkbox"/> Difficult to monitor and supervise KMC activities
14) The need for establishing and using data base system	<input type="checkbox"/> Difficult to co-ordinate and monitor activities within the department <input type="checkbox"/> Overlapping of activities among the departments
15) The need for performance evaluation system	<input type="checkbox"/> There is no difference between a performer and non performer <input type="checkbox"/> Difficult to feed back in terms of performers and non performers
16) The need for institutional arrangement to increase feeling of ownership in development works	<input type="checkbox"/> Difficult to develop ownership in the change programme <input type="checkbox"/> Difficult to set up a monitoring and evaluation system <input type="checkbox"/> Difficult to convince people
17) The need for dissemination of knowledge and skills acquired from various programs by electoral and staff	<input type="checkbox"/> No proper effect of on the current working practices <input type="checkbox"/> What electoral and staff learned while visiting other countries is no properly disseminated for the benefit of KMC.

Performance

ISSUE	IMPLICATION
1) The need for making staff and electoral body accountable	<input type="checkbox"/> Lack of commitment <input type="checkbox"/> Avoiding responsibilities
2) The need for involving line staff in the project management and implementation process	<input type="checkbox"/> Difficult to implement projects because of less feeling of ownership towards the project
3) The need for developing mechanism to contact with KMC's stakeholders	<input type="checkbox"/> Difficult to know the effectiveness of KMC plans and programmes
4) The need for involving local NGOs and user committees in the process to increase performance effectiveness of the KMC from centre to the grass root level	<input type="checkbox"/> Difficult to reach the KMC in each and every area
5) The need for using local support agencies to train local communities in the development works	<input type="checkbox"/> Difficult to implement KMC's programmes in the grass root level <input type="checkbox"/> Difficult to maintain the already performed activities

BIBLIOGRAPHY

Adhikari, D. R. (1999) *Public Sector Management In Nepal: Managerial and Human Resource Trends and Issues, Research paper*, Section Public Management, European Academy, Bolzano and Institute of Public Sector Mangement, Innsbruck

Administrative Reform Committee- 1992.

Blaikie, P., Cameron, J. and Seddon, David (1983) *Nepal In Crisis*. New Delhi: Bikas Publishing.

City Development Strategy, Kathmandu Metropolitan City/World Bank, First Stakeholders' Workshop, 25th August, 2000

City Development Strategy, Kathmandu Municipal Corporation, Inception Report, July 2000.

Institutional Strengthening of Kathmandu Metroplital City, ADB Technical Assistance 3185-NEP.Inception Report-Text, 1st November 1999.

Institutional Strengthening of Kathmandu Metroplital City, ADB Technical Assistance 3185-NEP, Draft Interim Report, 13th July 2000.

Local Self-Governance Act and Regulation- 1999.

Shah, R.K (1992) *Politics In Nepal*. Manohar Publishing.

The Constitution of the Kingdom of Nepal-1990.

URBAN TRANSPORT

Harihar Man Amatya
URBAN TRANSPORT SPECIALIST

LIST OF ABBREVIATIONS

CD	Community Development
CDS	City Development Strategy
CWIN	Child Workers in Nepal
DDC	District Development Committee
DH	Department Head
EC	European Community
FY	Fiscal Year
GIS	Geographic Information Section
GO	Government Organization
HH	Households
HMG/N	His Majesty's Government of Nepal
KMC	Kathmandu Metropolitan City
KVMP	Kathmandu Valley Mapping Program
KVRMP	Kathmandu Valley Earthquake Risk Management Project
INGO	International Non-government Organization
MIS	Management Information Center
MLD	Ministry of Local Development
MPLD	Ministry of Panchayat and Local Development
NA	Not Available
NSET	Nepal Society for Earthquake Technology
NGO	Non-government Organization
SWCC	Social Welfare Coordination Council
SWD	Social Welfare Department
SWOT	Strengths, Weaknesses, Opportunities and Threats
UNDP	United Nations Development Program
UNICEF	United Nations Children's Fund
VDC	Village Development Committee
WHO	World Health Organization
WOREC	Women's Rehabilitation Center

TABLE OF CONTENTS

List of Abbreviations	112
Table of Contents	113
List of Tables	114
4. URBAN TRANSPORT	115
4.1 Introduction	115
4.1.1 Background	115
4.1.2 Methodology	115
4.1.3 Existing Situation	115
4.2 Transportation System	116
4.2.1 Public Transport	116
4.2.2 The Impact in Transportation	118
4.2.3 Road Classification and Network	119
4.2.4 Transport Management	121
4.2.5 Traffic Management and Associated Problems	122
4.2.6 Road Safety and Environment	123
4.2.7 Institutions	124
4.3 Policy	125
4.3.1 Transport Policy	125
4.3.2 Traffic and Transport Management	125
4.3.3 Regulatory Measures	125
4.3.4 Transport Sector Investment	126
4.3.5 Financing from Private Sectors	127
4.4 Analysis and Improvement Measures	127
4.4.1 Management System	127
4.4.2 Existing Institutions and Role of KMC	128
4.4.3 Transport Policy	130
4.4.4 Transport Sector Investment	130
4.4.5 Private Sector Involvement	131
4.4.6 Stakeholders' Views	131
Annex: 1 Master Plan of Road Network	134
Annex: 2 Kathmandu Valley Urban Road Network	135
Annex: 3-1 Organization Chart of DOTM	136
Annex: 3-2 Functions, Duties and Rights of DOTM	137
Annex: 4 Organization Chart of Valley Traffic Police	139
Annex: 5 Organization Chart of Department of Roads	140
Annex: 6 Record of Accidents	141
Annex: 7 Organization Chart of KMC	143
Bibliography:	144

LIST OF TABLES

Table 1:	Year Wise Vehicle Population in Bagmati Zone
Table 2:	Road Network in Central Region, Bagmati Zone & Kathmandu Valley 1995
Table 3:	Road Network in Central Region, Bagmati Zone & Kathmandu Valley 1998
Table 4:	Budget Provision
Table 5:	Urban Transport - Issues and Implication

4.

Urban Transport

The current status of transport sector in Kathmandu Valley is quite alarming in the absence of well-organized system. The city is experiencing various problems in transport sector. The growth of vehicles and simultaneously lack of improvement of the existing facilities and traffic management have resulted in disorganized movement of traffic thereby increasing congestion, accidents and decrease in vehicle speeds affecting road capacity. At the same time, organizational deficiencies, enforcement of law and order contributed considerably to slackness in proper movement of vehicles and pedestrians. Also due to the financial constraints, desired quality and quantity of road net work system and introduction of different modes of transport could not be attained.

4.1 INTRODUCTION

4.1.1 Background

Recognizing the above facts at the request of Kathmandu Metropolitan City (KMC), the World Bank provided a technical assistance to KMC to prepare a Kathmandu City Development Strategy (KCDS). While designing the KCDS, initially a City Diagnosis Report had been prepared identifying the current and future trends of urban transport planning and development and the role of KMC. In this process, views of different individuals concerned with transport sector including those of major line agencies-Department of Roads, Department of Transport Management, DUDBC, Traffic Police, Kathmandu Metropolitan City and stakeholders were considered.

Weaknesses of all the line agencies involved in planning and implementation process were spelled out. Also financial situation relating to transport development was reviewed. Following this, based on the available data, informations and interviews, weak areas have been identified and measures to improve them have been proposed. A short and long-term strategy has been developed to improve the existing facilities and for planning the future development.

4.1.2 Methodology

This document is prepared for Kathmandu Metropolitan City. During the course of preparing this report available

documents were reviewed and analyzed and site visits were made, consultation were also made with team members of CDS Project. In addition, discussions were held with concerned officials of KMC, Department of Roads, Ministry of Physical Planning and Works, Department of Urban Development and Building Construction, Department of Transport Management and Traffic Police and with some professionals on transport sector. At the same time views expressed by the stakeholders were integrated. The results of analysis of existing data and discussions with the concerned groups have been incorporated in the report.

4.1.3 Existing Situation

Most of the existing city street system-a system designed without any concept of motor-vehicle movement -had been experiencing a series of short comings in road infrastructure development activities. These were further aggravated by growth in population, vehicular traffic and economic activities. In view of upward trend in all these areas and recognizing that there was a need to improve and upgrade urban infrastructure, in 1969, with the assistance of UN, the Physical Development Plan for Kathmandu Valley was prepared. The study recommended integrated plan for development including road transport by zoning for industrial, administrative, historical, housing, commercial areas, and considering unplanned urbanization growth, also recommended for development of new areas. Following this, with the assistance of Asian Development Bank, a study - Kathmandu Valley Urban Development Plans and

Programs (KVUDPP) was carried out in 1990. The Study, taking into account urbanization growth in 1996-2006 and possible future growth, proposed land use and other integrated plans and programs including development of road networks. The road development targeted for the relief of traffic generating from outside the city core and suggested for execution in two phases first, within the Kathmandu Metropolitan City (KMC) area and second, outside KMC. Another study - Kathmandu Valley Urban Road Development (KVURD) was undertaken in 1993 by Japan International Cooperation Agency (JICA). This study concentrated mainly on development of road networks including other related activities for execution in three phases: 1993-1997, 1997-2005 and 2005-2015.

Recognizing the deficiencies in areas related to traffic management, public transport and road development and the need for their improvement, the National Planning Commission under its Ninth Five-Year plan (1997-2002) plan stressed the need for institutional strengthening of Department of Transport Management (DOTM) and Department of Roads (DOR). The ninth plan also emphasized the need to study inter modal transport system. Even after the lapse of three successive years under the current ninth plan, desired progress could not be achieved in any of these areas due to lack of monitoring system and drives needed for effective functioning by the concerned agencies.

Although the Ninth Five-Year plan specified major improvement works in road sector networks, the programs were quite ambitious compared to available financial resources. The expenditure under the development budget figures in FY 2055/56 (1998-99) was about Rs. 4,800 million and Rs. 4,590 million is estimated in FY 2056/2057 (1999-2000), and in FY 2057/2058 (2000-2001) Rs. 5,520 million was proposed with 31.6 per cent grant and 30.5 per cent loan (average, 62 per cent of the total expenditure). Compared to these figures, allocation for Kathmandu Valley Urban road is in the range of Rs. 60.0 million, Rs. 64.0 million and Rs. 71.5 million in each respective FY.

4.2 TRANSPORTATION SYSTEM

Travel and transport within Kathmandu Valley is heavily dominated by walking for short trips and by vehicular transport for

longer distance travel, longer journeys being undertaken by motorized modes, bus, minibuses and tempos (three wheeler), etc., while goods transportation is mainly by trucks for long haul and short haul through vans and three wheelers.

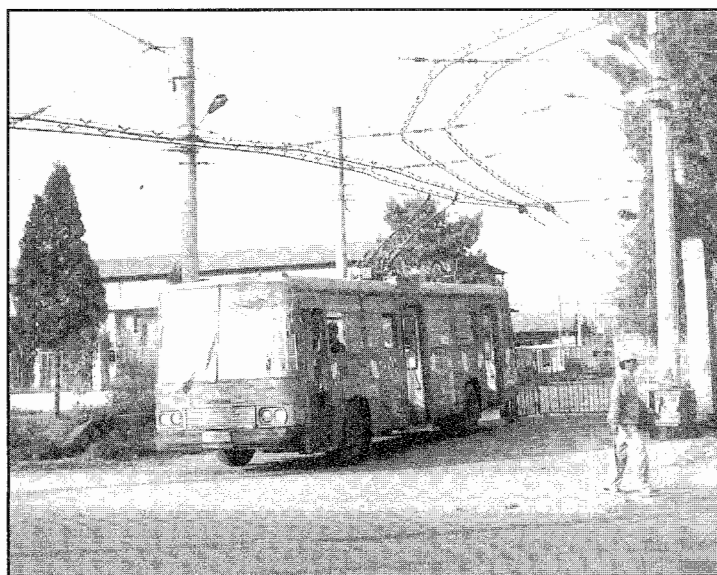
From the available data it is observed that about four per cent of the valley's population own vehicles and ten per cent motorcycles. It therefore, indicates that still larger proportion of population use other modes of transport. In the present situation, since electric trolley bus system provides a limited service, public transport admixture of bus, minibuses and tempo play a major role in the transport service. The present existing transport services and their future scope are briefly described below:

4.2.1 Public Transport

Public transport services within Kathmandu Valley are provided by about 7000 vehicles, a mixture of buses, trolleybuses, minibuses, taxis and tempos. The trolleybus service and some local bus services are provided by semi-governmental bodies: the remaining services are all provided by the private sector.

4.2.1.1 NTC Trolleybus

The Nepal Transport Corporation (NTC) provides a trolleybus service on a single route linking Kathmandu to Bhaktapur - a distance of 13 km. NTC owns a total fleet of 32 vehicles, of these only 18 of the buses are currently in operable condition due to cannibalization



Trolley Bus

of vehicles for spare parts. Recently a study is being undertaken to expand its network in ring road.

4.2.1.2 Sajha Yatayat

Sajha Yatayat (SY) is a government owned enterprises, currently responsible to the Ministry of Labour and Transport Management. Originally formed in 1962 as a transport cooperative, it was taken into government ownership in 1971 following years of unprofitable operation. In order to offset losses incurred on its urban bus operations, SY is running most of its current fleet of 35 buses on more lucrative inter-city routes. But high maintenance cost and lack of fund for replenishment plus high operation cost and inefficient management present a gloomy picture for sustainable growth in the future.



Rush Towards Mini Bus

4.2.1.3 Private Bus

A little over 1300 bus services operate within the Valley. "Valley Route Permits" are issued by the Department of Transport Management and allow operation on any road within the Valley. Bus owners and operators form themselves into individual Route Associations or Committees to control and administer the day-to-day operation of each route. These committees determine the number of vehicles operating on any, departure times. The DOTM has a liberal policy towards the granting of Route Permits within the Valley. Anyone with a mechanically sound vehicle, less than 10 years old, can obtain a Permit, but no consideration is given for passenger comfort. Nonetheless, considering the less transshipment and cheap fare compared to other modes of transport the demand exists for more private buses for operation within the valley, and specifically within the urban area.

operated mostly, in grossly overloaded conditions, with little concern for passenger safety. The vehicles type is however suited to most of the road and traffic conditions in Kathmandu. As with big buses, the DOTM does not restrict the number of Route Permits issued. Vehicle fitness and age are the only constraints. Like that of Private Bus, Associations or Committees formed by owners and operators administer and control individual routes.

4.2.1.5 Tempo

Tempos are three -wheeled vehicles. There are two broad types of tempo operating in Kathmandu: two-seat "for hire" tempos and 6-,8-,or 11- seat tempos with a small van body behind the drivers compartment. The two-seat tempos operate as taxis plying for hire and charging a rate based on distance. The multi-seat tempos operate on fixed routes, with fares per passenger, depending

4.2.1.4 Private Minibus

Minibuses provide the mainstay public transport services within the Valley. Currently over 1500 "Valley Route Permits" have been issued. The number of minibuses operating in the Valley has been increasing by around 1 per cent per annum in recent year. They are



Tempo Stop

upon distance: Tempos are also able to operate on narrow roads not served by bus or minibus. The number of Route Permits issued has increased from a little over 3800 in 1993 to over 4500 in 1999. The tempos are providing a frequent form of public transport. They do however contribute significantly to congestion along the more trafficked roads and might not be desirable for operation in primary route where fast traffic movement is essential.

4.2.1.6 Taxi

Taxis operate mostly on an individual "for hire" basis: the main exception to this being the shared taxis on southern Valley routes. Taxis are relatively expensive, compared with other public modes and, with the exception of shared use in rural areas, their use is restricted to the more affluent, the business community and tourists.

4.2.1.7 Long Distance Bus

Long distance bus services are operated from Kathmandu to most areas of the country. Most long distance services are provided by the private sector, although the government - owned SY does operate some services. Due to the distances involved and less hazard, some of the longer distance services operate at night. These night buses are faster than the day services, as there are fewer obstructions on the road (cattle or other agricultural activities) and no intermediate passengers. The night bus services require that vehicles used are Class A - less than five years old. They also must be fitted with 2 by 2 reclining seats and no standing

passengers are allowed. There are no such restrictions in the day bus and services may use older vehicles.

4.2.2 The Impact in Transportation

4.2.2.1 Population Growth

The population of Kathmandu Metropolitan City was 421,258 in 1991 registering the growth rate of 6 per cent between 1981-91. Although the growth rate is expected to diminish from 1991 to 2021 at the rate of 5.65, 3.22 and 3.18 in each decade, the total population is expected to reach 1,382,298 in 2021. While the growth trend in adjacent municipalities Bhaktapur and Kritipur will be in the order of 1.98 to 3.44 and 1.91 to 2.07 respectively^{1/}, the huge growth in urban population will put great pressure on infrastructure services.

Kathmandu being the capital city of the nation and having multifarious facilities and also providing employment opportunities, the influx of population is concentrated in core city areas. This is not expected to remain dormant. Unless industrial expansion and work opportunities are provided outside the Kathmandu Valley, rather than in the peripheral areas, further impact due to population growth and other activities will prevail in transport sector.

4.2.2.2 Vehicle Population

There are no records maintained of the numbers of vehicles operating within Kathmandu Valley. The total fleet operating in Bagmati Zone (effectively the Kathmandu Valley) from 1993 onward to 1999 is given in table 1. The growth in vehicle numbers and expected population growth of 3.2 per cent / annum over the next 20 years in the valley, will lead to a dramatic increase in traffic levels, which will demand improvement in existing infrastructure facilities and traffic management. Various methods such as "growth factor" technique and "gravity model" approach could be used to estimate future traffic, but with the present limitation, no specific study has been undertaken for network model analysis to predict the traffic growth rate and modal splits, modal shares, and trip characteristics, etc. However, considering that the growth rate will not remain dormant and also presuming that there will be no substantial



Table 1: Year Wise Vehicle Population in Bagmati Zone

Vehicle Type	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	2005	%
1. Bus	792	958	1045	1163	1298	1403	1964	6
2. Minibus	1352	1388	1430	1468	1500	1527	1610	1
3. Truck/Tanker	3343	3781	4113	4483	4759	4811	5100	1
4. Car/Jeep/Van	20748	22640	24248	27153	28915	30919	43286	6
5. Three wheeler automobile	3844	3844	3844	3844	3925	4262	5070	3
6. Two wheeler automobile	37774	43506	49299	58029	64142	71612	128900	11
7. Tractor	1623	1635	1670	1672	1672	1672	1672	-
8. Others	2561	2678	3012	3020	3278	3311	3210	1
Total	72,031	80,430	88,661	100,831	109,489	117,836	191,112	8
	(63%)	(61%)	(60%)	(59%)	(57%)	(50%)		
Total of all 14 Zones	114,346	130,955	148,351	171,559	190,672	235,236	-	

Source: DOTM

changes in the economic growth the estimated figure for 2005 has been projected as an indicative figure taking the average growth of past three years.

The latest trend indicates that the growth rate per annum compared to earlier years for cars remained more or less same, for trucks and buses decreased, while for motorcycles increased from 10.5% to 11.6%.

4.2.3 Road Classification and Network

4.2.3.1 Road Categories:

Road are classified into four Categories:

- National highway
- Feeder Roads
- District Roads
- Urban Roads

Highway and Feeder Roads

These are strategic networks directly linking to East-West Highway and to district headquarters. They also

connect Kathmandu Valley with the Eastern and Western part of the Country.

District Roads

District roads are the roads not defined as main highways or feeder roads. They serve as a primary link between districts.

Urban Roads

All roads within the urban area or municipality boundary. These roads provide access to abutting residential, business and industrial places.

4.2.3.2 Road Network

By 1990, the network in central region was 2715 km and in Bagmati Zone 1314 km, while that in the Kathmandu Valley accounted for 713 km. Development from 1995 till 1998 reached from 943 km to 1260 km (see tables 2 and 3). Of these, within Kathmandu, including 'access' function from 1990 to 1995 and to 1998 the road network increased from 440 km, to 528

Table 2: Road Network in Central Region, Bagmati Zone and Kathmandu Valley (July 1995) in km.

	National Highway	Feeder Road (Major)	Feeder Road (Minor)	District Road	Urban Road	Total
Kathmandu	21	17	43	174	273	528
Lalitpur	0	0	33	175	82	290
Bhaktapur	15	23	0	70	17	125
Kathmandu Valley	36	40	76	419	372	943
Bagmati Zone	222	255	77	789	394	1737
Central Region	717	441	115	1856	702	3831
Nepal	2831	1513	166	4799	1415	10724

Source: Department of Roads, Nepal Road Statistics of 1990, 1995 and 1998.

Table 3: Road Network in Central Region, Bagmati Zone and Kathmandu Valley (June 1998)- in km

	National Highway	Feeder Road (Major)	Feeder Road (Minor)	District Road	Urban Road	Total
Kathmandu	21	17	43	193	431	705
Lalitpur	0	0	33	175	175	383
Bhaktapur	15	23	0	128	6	172
Kathmandu Valley	36	40	76	496	612	1260
Bagmati Zone	224	264	77	1106	636	2307
Central Region	729	472	115	2775	1078	5169
Nepal	2905	1656	179	6615	1868	13223

Source: Department of Roads, Nepal Road Statistics of 1990, 1995 and 1998.

km and 705 km respectively, with the road network of about 430km in KMC.

4.2.3.3 DOR Categorized Road Within the Kathmandu City

For the purpose fixing priority for maintenance, DOR has categorized the Kathmandu City roads in four groups.

Category A: main access roads; roads of commercial importance or for VVIP movement.

Category B: important trafficked routes; and main commercial streets.

Category C: less trafficked roads.

Category D: less important small lanes, earth roads joining nearby small towns and villages.

According to DOR road statistics of 1998 there are approximately 430 km of roads - 53 km of Category A, 82 km of category B and 40 km of Category C and the remainder 255km of category D.

Major Urban Road

Most of the existing city street system- a system designed without any concept of motor-vehicle movement - had been experiencing serious shortcomings in the road infrastructure development activities. These were further aggravated by growth in population, vehicular traffic and economic activities. In view of upward trend in all these areas and recognizing that there was need to upgrade and improve urban infrastructure to mitigate the current and upcoming urban problems, at the request of the Government, mainly two comprehensive studies were carried out with the assistance of ADB and The Government of Japan in early 1990s. Recognizing the



Narrow City Road

need to cope with the future traffic demand, based on the studies carried out by JICA with the assistance of Government of Japan and by Halcrow Fox with the assistance of ADB, DOR- Central Regional Office prepared a preliminary report for improvement of road networks in three phases. But due to lack of the Government firm determination and possibly due to financial constraints, the improvement works had been stalled and the proposal remained as a document and was never legally formalized. (See map - Annex 1).

The proposals could be considered quite comprehensive and encompass various activities relating to road development works. But there had been a lapse of about 8 years since the plan was prepared. For the future planning updating of the findings of the study will be needed.

Core area Road Network

The existing core area road network within the urban area is poorly developed. The network is essentially radial linking to the Ring Road, which tends to



Narrow City Core Road

concentrate traffic onto the congested central area streets. With a few notable exceptions, of category A and B roads, others within the Ring Road are narrow low grade, and unsuited for major traffic flows. There is a clear need for some additional road links so as to form a strategic network linking the main sectors of the city. These roads would reduce the dependence upon the central area.

The road network within the Municipal area is illustrated on plan (Annex 2) focusing on Greater Kathmandu. Within the Ring Road there are ten radial roads, which converge to a central area one-way system around Ratna Park/Tundikhel. Road access within the historic core areas of Kathmandu is severely restricted by the form and density of the development and by the available width of the streets.

Access to the surrounding residential areas within the Ring Road is through a series of secondary roads, which are built to inadequate standards of both alignment and width. Access to individual plots within these areas is often tortuous and indirect. Substantial sections of the urban area have minimal, or no, vehicular access. There is very little room to widen the existing streets.

Since there is no room for further widening in the existing structure, it is suggested that a street/road inventory be prepared and investment plan for upgrading and maintenance be carried out according to the priority. At the same time, in order to provide

market facilities to the local people some concrete measures such as establishment of 'Haat Bazar' (Public Market) in nearby open land or fixing the timing for local hawkers in a designated area should be enforced. Traffic flow pattern should be studied and 'one way', 'two ways' or 'tidal flow' system should be introduced keeping in view local people's convenience, traffic demand and location of the streets. Similarly, study should also be carried out- for entry of particular type of vehicle, for transportation of goods and people and fixing the timing. With regard to Historical Zone old monuments and temples a separate system will have to be devised in coordination with agencies and local people concerned.

4.2.4 Transport Management

Currently there are mainly four institutions involved in the development of Kathmandu Valley transport networks and their management. These are:

- Department of Roads (DOR)
- Department of Transport Management (DOTM)
- Traffic Police (TP), and
- Municipalities.

Department of Transport Management (DOTM) is responsible for transport planning, management, policy formulation. DOTM is also responsible for coordination with international agencies relating to management and execution. (See Annex 3). In reality, its function is



Road Around Tundikhel

limited to activities relating to permitting route license, vehicle registration and transfer of vehicle ownership. While the rest of the works related to traffic are being undertaken by two different wings of Nepal Police under the Ministry of Home Affairs, traffic management is being looked after by Traffic Police and matters related to driver license are being taken care by a separate wing of Nepal Police. Although it is defined in the organizational set-up that Nepal Police is responsible only for matters related to traffic control, its current functions have been widened to embrace management aspects (*See Annex 4*). But desired quality of works could not be achieved due to lack of trained personnel in traffic engineering and management.

Although DOTM is responsible for the overall transport management, because of its weak organizational set-up, it has not been able to fulfill its role. Its whole structure needs to be reoriented and reframed to bring it to work in line with the delegated functions. The main reasons for non-functioning could be attributed to the agency's inability to oversee its deficiencies and to improve them. This has been noticed from the fact, that no efforts have been made towards improving the present state of affairs and the tendency is to continue the present practice. This is reflected from the expenditures of the last two fiscal years 2055/56 and 2056/57 and allocation of budget in this FY 2057/58, which correspond to Rs.21.8 million, Rs.27.4 million and Rs.31.1 million respectively. This is just adequate for the normal administrative and overhead expenses. The net result is complete vacuum in Transport Development and Management activities.

According to the new ministerial set-up, the Department of Roads has been merged with the Ministry of Physical Planning and Works (See annex 5). Nonetheless, its major functions remain the same as being exercised earlier except the Foreign Aid Division is expected to be under the direct jurisdiction of the Ministry. In general DOR is responsible for planning and design, construction, rehabilitation and maintenance of roads of all the road network. On the Planning and Design side, although some planning exercise is being conducted for major roads, valley roads invariably are being neglected. Because of resource constraints only minor works are being taken up from the Government's regular budget. Although some improvements of the existing road networks in the valley had been carried out with the assistance of ADB, World Bank and JICA, there are large areas still neglected. Considering the expenditure made in FY 2055/56 and 2056/57, and proposed budget for FY 2057/58 for Kathmandu Valley

City Roads, which are in the range of Rs.60.00 million, Rs.64.00 million, and Rs.71.5 million respectively, major improvement works are not envisaged.

In addition, lack of appropriate professional manpower in traffic engineering and deficiencies related to this aspect are being observed, which has led to little exercise in planning to improve the present traffic system. Lack of proper coordination between DOTM and TP has further aggravated the situation resulting in disorganized management in parking system, poor intersections and disorganized pedestrians movements including messy vehicle flow pattern. This has consequently affected reduction in road capacity, increase in accidents and increase in traffic jams and increased pollution.

Under the current Local Self-Governance Act 1999, Kathmandu Metropolitan City (KMC) has been vested with certain authority among others, activities related to construction and maintenance of road networks other than those currently under the jurisdiction of DOR. In the circumstances, there is little scope for KMC to play a major role in the transport sector. Given the diverse nature and requirements of the various elements in the city transport system it is essential that transport development and management responsibilities should be progressively placed with the main beneficiaries. With this approach urban road networks and their allied functions would become the responsibility of the Municipalities.

4.2.5 Traffic Management and Associated Problems

As with transport management, four institutions are involved in traffic management. DOR Planning Section is responsible for design and planning while TP for Traffic control and DOTM for overall responsibility of traffic management. In reality, TP is looking after, through DOTM delegated authority, overall management control including application of one way system, roadside parking management, installation of signs, operation of signals, management of traffic in intersections, issuance of drivers' permits, pollution control, etc. DOR on the other hand, is playing an advisory role with regard to traffic management, while KMC is looking after the parking management, street cleaning, and to a lesser degree intersection design. None of these institutions has a strong traffic engineering section, which has created chaotic situation in traffic management.

Peak period congestion is being experienced in the central area of Kathmandu. Much of the congestion results from conflicts between vehicles and pedestrians, from public transport vehicles loading and unloading on the street, encroachment of footpath by shopowners and road space by hawkers and debris, and poorly laid out junctions. In addition, inefficient traffic engineering science and laxity in enforcement of traffic rules and regulations have also contributed to the inefficient use of the available road space. These conditions will further deteriorate unless facilities are improved for the pedestrians and public transport, and improved traffic management techniques are adopted.

Vehicular access within the historic core areas of Kathmandu has been a major problem. Increase in vehicle ownership, and increased use of taxis and delivery vehicles, have further aggravated the conflicts between pedestrians and vehicles. Continued growth has led to conflicts and environmental pollution. These areas are predominantly pedestrian in scale and nature and movement of any big vehicular traffic should be restricted.

4.2.6 Road Safety and Environment

Lack of strong efficient functioning and coordinated efforts by the concerned agencies has resulted in adverse effects being experienced in road safety and pollution. The current situation related to these is given below:

4.2.6.1 Road Safety

Traffic Police has been keeping a record of road accidents since 1992. The accident record provided by the Traffic Police corresponds to 1999 (see annex 6). From the review, it reveals that several factors are involved in road accidents. These are mainly pedestrians' attitude, drivers' faulty actions, poor visibility, faulty conditions of vehicles and temporary hazard in roadway - although poor riding road surface and poorly designed crossings and parking systems have not been recorded, which could also be the causes. Combination of several or even one factor could contribute to any type of accident. Although various research works in different countries have identified the areas for improvement appropriate to their need, in our context, in view of the growth of road traffic and the number of injuries, deaths and casualties arising therefrom, it is unlikely that the problems of road safety could easily be mitigated without

serious and continuous study and intervention of proper measures including strict enforcement of law and order. Typical areas where improvements generally are needed include: improvement of black spots, vehicle testing / inspection for road worthiness, driver training, traffic education, publicity, traffic police enforcement, road safety measure, facilities for pedestrians, even considering restriction of vehicles in some roads.

4.2.6.2 Pollution

The main sources of pollution in Kathmandu Valley are: the brick kilns, Himal Cement Factory, vehicular pollution, domestic fuel and roadside rubbish and dust. Nepal Environmental and Scientific Services (NESS) has been measuring Kathmandu Valley's air pollution levels for the past ten years. The most recent monitoring results from NESS show that things are much worse than in 1993.² The conclusion is that Kathmandu Valley air quality is degrading. The pollution is exacerbated in winter by valley's bowl shaped topography, which creates severe temperature inversion trapping warm, polluted air surface beneath a blanket of colder air during the dry winter months. While dust is one of the main factors contributing to pollution, carbon monoxide and hydrocarbons equally are contributing to the increased pollution.

A study of vehicle emission conducted in 1996 has depicted a very disturbing picture of Kathmandu Valley with huge emission of carbon monoxide and hydrocarbons accumulating in the air. The increased trend of petroleum/diesel based vehicles mainly old buses and trucks and slow moving vehicles, dieselrun tempos and motorcycles are the major causes of air pollution. Observations in Kathmandu Valley, specially in dry season have indicated very high roadside air pollution dominated by particles and odour to a large extent emitted by highly smoking vehicles of all types. Total Suspended Particles (TSP), Particulate Matter less than 10um (PM10) and Sulphur Dioxide (SO₂) measured by Kathmandu Valley Vehicle Emission Central Project in major traffic sites of Kathmandu revealed that concentration of TSP, PM10 & SO₂ were well above the WHO guidelines³. Air pollution is not only considered a health hazard but also helps cause damage to monuments and the ecosystem. Although major steps to control the pollution from other sources are not yet visible there has been a thrust towards the use of pollution free vehicles through emission control system, promoting the operation of pollution free electric tempos

2. Ref: The article of Mr. Kunda Dixit published in Nepal Times of 28 June - 6 July 2000.

3. Ref: Pre-feasibility study by CEMAT Consultants (P) Ltd. for extending trolley bus services within Kathmandu Valley dated June 1999.

and LPG-run vehicles. But considering that buses and trucks play a dominant role in transport system other alternative measures such as use of improved gasoline quality, regular engine check-up, and also use of electricity and LPG run vehicles etc. need to be explored. Recently, an Urban Environment Improvement Project under the ADB-PPTA program is underway, with the project expected to be completed by October 2001.

It should be also noted that, it is not only the vehicle condition that creates pollution. Disorganized traffic, road geometry, and riding quality equally contribute to pollution. It is therefore necessary to also review these aspects while corrective measures are considered.

4.2.7 Institutions

These are four levels of institutional involvement in the planned development of the valley and within each level there are institutions with direct and indirect involvement as shown below:

Ministerial Level

- A. Ministry of Housing and Physical Planning - currently reorganized as Ministry of Physical Planning and Works (MPPW) effective 6 Baisak 2057 (18 April 2000).
- B. Ministry of Local Development.
- C. Ministry of Works and Transport- reorganized as Ministry of Labour and Transport Management while activities related to works have been transferred to MPPW.
- D. Ministry of Finance.
- E. Ministry of Home Affairs.

Line Agencies (Other Departments Within Ministry)

- A₁ Department of Urban Development & Building Construction.
- A₂ Department of Roads
- C₁ Department of Transport Management
- E₁ Nepal Police

Government Authorities

1. Kathmandu Valley Town Development Committee. (being reorganized as Commission)
2. Town Development Committee.

District & Municipal Authorities

1. District Development Committee
2. Municipalities (Including Kathmandu Metropolitan City)

In addition, there are three Town Development Implementation Committees in Kathmandu Valley. Kathmandu Town Development Implementation Committee is one of them, which is the main planning regulatory body for Kathmandu City. In addition Municipal Authorities are not running effectively because of conflicting responsibilities, KMC as such has suffered from limited authority to act without HMG Ministry and agency support and approval. It therefore, seems appropriate, for the effective functioning of an institution that instead of having various tiers in the Government authorities there shall be one agency to formulate the guidelines and to oversee the work in line with these, while the execution and implementation are left to the concerned line agencies with clear delineation of functions and authority.

Currently, there are five major ministries and 13 associated line agencies including three departments involved in planning, governing and providing services in Kathmandu Valley. Because of differing priorities as well as conflict of jurisdiction and authority, the agencies planning and execution are not well coordinated. The municipalities, through the Local Self-Governance Act 1999, could prepare and implement urban development activities other than those related to transport development. At the same time, the Act has specified that KMC will be responsible for construction and maintenance of roads other than those under the jurisdiction of HMG. Despite this, KMC is implementing some road improvement activities, but due to overlapping of responsibilities between different line agencies, none of the agencies have been able to implement the development activities in an effective and planned manner.

KMC is not a body instituted through the constitution. It is a body, framed under the Executive authority of the Government with functions and duties defined by the Act, under which KMC does not own any urban roads except those constructed through its own resources. Currently, 12 departments headed by the Mayor have been established to look after various functions (see annex 7). Under the present structure, urban transportation comes within the jurisdiction of two departments viz. Public Works - mainly concerned with the construction and maintenance and Urban Development responsible for traffic management. Because of the facts described in section 4.2.4, activities related to transport sector are limited. It is therefore necessary that Local Self Governance Act 1999 and

Transport Management Act 1992 be revised, defining the KMC's role in transport sector.

4.3 POLICY

4.3.1 Transport Policy

The Ninth Five -Year Plan (1997-2002) has specified the objectives and policies with regard to development of urban transport system. These are:

- ❑ To initiate the concept of multi-modal transport network so as to have minimum transport cost for import and export.
- ❑ To carry out suitable road classification in order to construct, maintain and operate transport structures and services in a sustainable and reliable manner and to implement suitable institutional management/structure by identifying institutional jurisdiction structure and autonomy
- ❑ In roads with high traffic density minimum service standard for transportation will be decided and participation of road users in repair and maintenance of roads will be increased through the introduction of toll tax.
- ❑ Sectoral responsibility and accountability need to be clarified to develop integrated transport system and institutional autonomy.
- ❑ Construction works of new roads in urban areas will be undertaken after preparing manual and making provision in act and rules.

With regard to traffic and transport system it has recommended that.

- ❑ 20 years transport management master plan will be formulated after detailed study and accordingly programs will be formulated and implemented.
- ❑ Special arrangement will be made for the prevention of road accidents and for ensuring roads and transport safety.
- ❑ Suitable programs will be conducted for the use and development of pollution free vehicles. Polluting vehicles will be gradually discouraged.

4.3.2 Traffic and Transport Management

Considering the problems related to traffic and transport management it is suggested to strengthen the existing institutions, with improvement in their physical facilities.

With regard to traffic and transport study and implementation, it is recommended to consolidate traffic and transport management throughout the country including Kathmandu Valley and other urban areas. A detailed study will be carried out and a 20 years transport management master plan for road transport and accordingly short-term plan will be formulated and implemented. In addition, a master plan for the construction of infrastructure of urban transport will be formulated. In such a master plan, the role of municipalities in construction, maintenance and repair of urban roads, construction of roads to be improved under urban development program, footpath, bicycle lane, bus stop, parking lot, subway, fly over, over-bridge, and the development of public transportation system reducing environmental pollution will be included. Remedial measures for problems of passengers transport entrepreneur, transport worker and pedestrians will be undertaken. For this purpose, bus route and passenger movements study, goods transportation study will be undertaken.

4.3.3 Regulatory Measures

The Department of Transport Management under Ministry of Works and Transport is also responsible for traffic and transport management, vehicle emission pollution control, road accident prevention and control, issue of driver license, vehicle inspection and so on. Various problems were identified during the discussions with concerned officials of the Department. Some major ones are listed below:

- ❑ The Traffic Transport Management Act 1992 empowers DOTM to carry out its responsibilities stated above. But weak organization and lack of financial as well as human resources have hindered the implementation of the Act.
- ❑ A strong 'cartel' operates in the transport sector, which has been the major obstacle to the smooth functioning of the system. This cartelling system is very effective in making any government policy ineffective.
- ❑ The transport associations and organizations are highly biased towards their own interests.

Similarly in accordance with the Local Self Governance Act, KMC's functions have been delineated. It has also spelled out, the procedures for planning, programming and execution of development activities. Its duties are

defined. But, the Act does not provide the legal authority to function on the road sector currently under the jurisdiction of the Government. As a result, its role under the present situation, in this sector is very limited.

4.3.4 Transport Sector Investment

The construction and development of main road network in the country was largely dependent upon foreign aid and assistance. Most sections of the strategic network were built and subsequently maintained with the involvement of bi-lateral or multi-lateral agencies. Funding had been either in term of direct grant, grant-aid or soft-loans. An analysis of the road sector budget for the current fiscal year (FY 2057/58) has provided an overall view of the anticipated expenditures divided into Regular and Development and the level of donor involvement is presented in table '4' which illustrates the main headings and division of funding sources. The break down of the development budget shows 33 per cent grants, 28 percent loan and the remaining 39 per

cent HMG/N resources. For the Kathmandu Valley City Roads, out of the anticipated expenditures of Rs. 71.5 million, Rs 21.5 million is provided through HMG/N resources and Rs. 50.0million from loan (which is 70 per cent of the total). It reflects that major development works depend mostly on donor agency's assistance. While looking at the KMC's current revenue and expenditure breakdown prepared by Ministry of Local Department, in February 2000 there is very little room for further investment in transport development activities. However, with delegated authority under Local Self Governance Act 1999, some additional revenue could be expected. Unless detailed exercise is carried out it is difficult to forecast the amount that could be allocated for development works.

Recently DOR has proposed 'establishment of a self-sustaining fund for road maintenance' as a policy option envisioning a self - sustaining system ensuring adequate fund to keep the maintenance process continuously ongoing in a planned manner. The Nepal Roads Board (NRB) Act, which is still in draft form, is to create a

Table 4: Budget Provision (Rs. in '000)

Activity	Actual	Revised	Proposed			
	Expenses 055/56 (1998/99)	Estimated 056/57 (1999/00)	057/58 (2000/01)			
	Total	Total	Total	HMG	Grant	Loan
ROAD TRANSPORT						
Regular						
Overhead expenses of Dept Div.	114,841	128,408	153,375	153,375		
Road Maintenance	39,466	30,000	30,000	30,000		
Sub Total	154,307	158,408	183,375	183,375		
Development						
National Highway	413,552	457,033	985,570	293,270	436,500	255,800
Sub-Highway	642,311	802,701	13,52,720	527,620	504,500	320,600
Tourist Div Road (Paryatan Marga)	11,727	12,670	31,000	6,500	7500	17,000
Urban Road						
Kathmandu Valley Urban Road	59,997	64,000	71,500	21,500	50,000	-
Maintenance & Rehabilitation	31,84,708	22,89,246	18,47,520	659,820	544,900	642,800
Pulharu (Bridges)	322,533	6,08,726	697,400	386,700	136,600	174,100
Others Project	66,860	85,255	157,075	91,675	37,400	28,000
Other Transport	977	980	1,500	500	1000	-
Bisnumati Link Road	-	1,800	17,000	16,000	1,000	-
Other Development	-	-	175,770	87,860	27,633	60,277
Sub Total	48,11,063	45,87,366	53,37,055	20,91,445	17,47,033	14,98,577
TRANSPORTATION MANAGEMENT						
Regular	16,903	18,651	21,093	21,093	-	-
Development	4,926	8,742	10,000	6000	4,000	-
Sub Total	21,829	27,393	31,093	27,093	4,000	

Source: MOF

public-private management board. The Act provides cost sharing mechanism between NRB and KMC, according to which, of the total maintenance cost 35 percent will be borne by the Municipality and the remaining 65 percent by NRB.

For the purpose of financing by the NRB all the Districts and Urban Roads will be under the ownership of the local Government. However, the proposed NRB- Act does not spell out the ownership of KMC. Hence, there should be a Road Act, which should specify the KMC's road ownership for the purpose of financing by NRB. Unless this becomes effective, the fund created by NRB may not be effectively used for urban roads. Until such time, as the Road Act is amended and adequate revenues are generated from its own activities, the Government should provide necessary funds through its annual budgetary provisions.

4.3.5 Financing from Private Sectors

There are relatively few opportunities for the mobilization of private sector funds. Any investor will want to see that the project is potentially beneficial and that, there is a guarantee and contractual certainty. For road projects specially there are various risk factors, which tend to discourage private participation.

Major portion of required funds for maintenance will be made available from Nepal Road Board (NRB). Once enacted, this will bring some relief for allocation in maintenance fund, which in turn will help provide more funds for the construction works.

4.4 ANALYSIS AND IMPROVEMENT MEASURES

4.4.1 Management System

Roads are the dominant mode of transport in Kathmandu and their derivatives are complementary and mutually reinforcing to an increasing extent. From practical and transport cost considerations, roads will continue to carry the bulk of passenger and freight movements. However, it is important to note that the considerable cost of road transport infrastructure is at present, largely borne by the general public through fiscal taxes and is not therefore directly reflected in the costs to the road-user. This factor needs to be

addressed in order to promote a more efficient road system meeting the needs of the user.

It is important for the Government to review the role of the road system in the light of development needs and available capacity. To fully pursue this objective, the transport requirements without a road connection must also be assessed. It is also important that provisions be made to promote a greater direct contribution by the road-user towards the costs of providing and maintaining road infrastructure. For success, this increased contribution must be related to a guaranteed level of service from the roads. What is clear is that roads must no longer be considered in isolation. The focus of government should be on service delivery in relation to need and the most cost-effective means of providing the service should be applied. In many cases this will entail an integrated approach to the provision of transport services.

The demand of the urban areas and immediate environs is not only for transport infrastructure per se but, more importantly, for a high level of service to support and encourage an increase in economic activity and to enhance personal mobility in relative comfort and safety. These demands have to be met cost effectively and under conditions of rapidly expanding population growth.

As would be expected, traffic in Kathmandu is also increasing substantially and is accompanied by the associated problems of congestion and pollution. Although it is difficult to accurately determine the numbers and increase of vehicles a feel for the problem can be obtained from the increased trend. Special planning and control measures are urgently needed to reduce congestion and improve the urban environment.

Traffic planning and management in the urban areas are inseparable from land-use management. As little attention has been paid to the latter, it is not surprising that traffic planning and controls have received, at best, only superficial attention. Consideration now needs to be urgently given to progressively introduce both land-use planning and traffic management together with the attendant legal and regulatory controls.

The demand for transport services is greatest in the urban areas especially Kathmandu. This rapidly increasing demand is leading to serious problems of traffic congestion that can only get worse unless mitigating measures are now put in place. The main interdependent options for improving urban transport can be summarized as follows.

- ❑ Comprehensive land-use plans should be prepared and implemented for the main urban areas especially Kathmandu. As far as possible, the plans should progressively aim to separate zonal areas. Necessary controlling legislation should be passed.
- ❑ Transport Master Plans including medium to long-term traffic management measures should be drawn-up for Kathmandu and the principal urban centres. The Plans should include road development and improvements together with vehicle management and controls covering parking, one-way systems, loading and unloading operations, limitations on access.
- ❑ Comprehensive road safety measures should be drawn-up and implemented for the protection of all road-users. These measures should be backed by tighter vehicle controls and a programme of training and education on safety related issues for drivers and pedestrians alike. The driving test should relate strongly to this programme.
- ❑ Major improvements are needed in public transport in terms of reliability, comfort, safety and price. In this respect, there is scope for increased involvement of the private sector but government will need to maintain a reasonable degree of regulatory control in the medium-term. Optimum use of trolley bus services is possible where electric power is available at commercial rates. On this basis, there would appear to be opportunities for private sector expansion of the trolley bus service in Kathmandu.

The above requirements can only be fully addressed in the longer-term. However, a start needs to be made now to improve the rapidly deteriorating situation that exists by introducing measures on a smaller scale. These measures should cover the areas noted above and progressively lead to the introduction of major reforms in traffic management, public transport and road safety.

In order to initiate these reform measures, responsibilities must be clearly defined and delegated by government. However, at present, there are several government institutions concerned with road transport and transport management. Apart from the main government body, MPPW/DOR, there is the Department of Transport Management (DOTM), the Traffic Police, and the Municipality. These institutions have important roles in traffic management and road safety but with overlapping and often conflicting responsibilities.

An urgent need now exists for government to clarify and reallocate responsibilities to avoid conflict and to promote accountability. This in turn will require enabling legislation where control needs to be enforced. The concerned institutions should initially identify the main issues. The Municipalities should be fully responsible with support from the other agencies on demand for transport provision, transport management, and the level of transport service offered in the urban areas.

Roads in the urban areas not only serve as access for vehicles and pedestrians but also form a conduit for the location of public utilities- sewerage, telecommunications, water and electricity. This dual function produces a conflict of interests between:

- ❑ the requirements of the utilities to extend, improve and maintain their services that are installed in the road corridor, and
- ❑ The responsibility of DOR and the Municipalities to provide and maintain a responsible level of road access at all times.

The position is exacerbated by the number of agencies involved and the resulting difficulty in effecting the necessary planning, co-ordination, management and quality control by these agencies.

4.4.2 Existing Institutions and Role of KMC

DOTM is responsible for Public Transport Development Plan. Lacking capacity in planning, no study has been carried out in transport system and its allied functions in a scientific manner. As a result, deficiency in planned implementation of its related activities has been noted. Similar situation has also been observed in management side. It is therefore, felt that there is an urgent need to review its organizational structure and improve it according to the need.

Since various agencies are involved in the planning and execution process and responsibilities are parceled out and are delegated to other agencies as the occasion arises, the transport sector has experienced unplanned, less coordinated efforts. Since DOR, TP and DOTM functions extend nation-wide their organizational structure should be examined and improved on a wider scale. With regard to KMC, in view of the Government's

policy that the Local Government should be strengthened to look after local affairs, KMC's role in the transport sector should be widened with adequate provision through amendments in the current Local Self Governance Act - 1999. While doing so, all prevailing Acts related to transport sectors should be reviewed. Determination on functions of each agency should be neatly defined so that clear accountability for functioning could be addressed.

A general view of major activities in the transport sector that KMC would be subsequently involved in is highlighted below:

Planning and Design

- ❑ Preparation of road inventory and conducting studies of traffic volume, parking, speed, origin and destination of trips, and determine road/street and transportation means to meet public demand capacity, keeping in view each road network functions.
- ❑ Determining present and future needs for terminal facilities, and establishing priorities for such facilities and their installation.
- ❑ Coordinating transportation improvement programs with other concerned agencies.
- ❑ Determining the need for improvement and expansion of road network.
- ❑ Establish standards for the design and construction of infrastructure and transportation facilities.
- ❑ Prepare detailed engineering drawings and specifications.
- ❑ Determination of location, type, and specifications of traffic-control devices, their installation and operational system.
- ❑ Determination of prohibition of curb parking, standing, and stopping.
- ❑ Establishment of parking regulations, one-way streets, through streets, stop intersections, and any other practices or procedures deemed necessary.
- ❑ Enforcement of above two programs.

Construction and Maintenance

- ❑ Construction and maintenance of all road network including foot path and other transportation facilities
- ❑ Supervision of construction of new facilities

- ❑ Establish, operate and maintain transportation equipment, workshop including street maintenance machinery.

The above functions can be carried out in two ways: one, using services of the consultants for most of the planning and design works, while most of those related to construction and management could be carried out through contracts. Alternatively, these could be executed using KMC's own workforce but this will need a huge organization and numerous working facilities. Alternative measures also need to be examined for effective implementation.

For effective program implementation a coordinating committee is suggested made up of Mayor/ Deputy Mayor, all the ward chairmen, head of PWD, representatives of Traffic Police, DOTM, DOR and representatives of local residents. It is proposed that a regular meeting be held monthly and special meetings whenever needed. The objective of establishing such a committee is to coordinate all PWD activities and disseminate information and gather unified views for increased efficiency and synchronous efforts with full cooperation of all agencies concerned. Such arrangement will help provide opportunity to line agencies and local communities to participate in the city development plans and programs.

Since the foregoing task would take time, it is proposed that as an interim measure, KMC undertake the following actions.

- ❑ Organize periodic traffic counts to identify flow patterns, improve traffic bottlenecks and install required signs and signals at appropriate places in coordination with Traffic Police and DOR.
- ❑ Undertake traffic control and enforcement of regulations by Traffic Police and Metropolitan City Police (Nagar Rakchhyak) in coordination with DOTM.

Absence of required study and programs carried out on an adhoc basis have resulted in the chaotic state of affairs in transport management. It is therefore, desirable to carryout detailed study of the present organization structure vis-a-vis its functions and improve it according to the needs for effective working environment. As an interim measure to fill up the man power and resource gap qualified professional personnel could be hired on

contract basis or a consulting firm could be engaged. Alternatively they could be brought on secondment from other department or ministries.

4.4.3 Transport Policy

There is a significant gap between the investment being made in the transport sector and the benefits delivered by the sector. In fact, the potential benefits of the sector as a whole are not being fully realized. Four major weaknesses have been identified in transport sector development that contribute significantly to this problem.

They are summarized below in terms of the roads sub-sector since roads are the principal transport mode, however, the weaknesses apply in some degree to all sub-sectors.

- ❑ Lack of relationship between development and investment - with careful planning, investment in a single road can open up a whole region for development due to the potential influence area of the road. However, the road does not necessarily bring development in itself. For development to take place, complementary investments are normally required in other infrastructure such as community development and support through extension services, health centres, etc. This essential balance of interrelated investments has not generally taken place due to weak and fragmented planning.
- ❑ The provision of roads on a supply rather than a demand basis- this is principally the result of political commitments and ad-hoc expenditure on road construction. The supply driven road network has not only increased the burden of maintenance expenditure but has also contributed significantly to depressing the capacity of government and private sector organisations.
- ❑ Loss in serviceability - the unsystematic and wasteful road management practices carried out over the years have caused a considerable loss in road serviceability. This has resulted in an increased need for costly rehabilitation and reconstruction and a loss of the capital investment made in the road. Due to the loss in serviceability, the roads have impacted adversely upon the road-users. Road safety standards have gone down, while vehicle operating costs (the significant proportion of total transportation costs on high trafficked roads) have increased considerably. The generally low level of service provided by the road system has increased

the total cost of transport and overshadowed the derived demand.

- ❑ Ad-hoc planning and management - the road system is characterized by a unique combination of various factors. It is therefore, clear that a special approach to road planning and management system is needed. This has not, unfortunately, been the case in the past and there is now an urgent need for a broad-based strategy for road system management. Roads should no longer be treated in isolation; the focus must be on service delivery in relation to need and this approach should be supported by integrated and coordinated transport planning.

A new policy is needed for the future development of transport infrastructure and the delivery of transport services. The problems with the existing approach have been broadly identified and these provide the basis for defining a medium to long-term goal for achieving improvement in the transport sector.

Six interrelated objectives have been identified that are intended to guide transport sector policy formulation and implementation towards achieving the End Goal.

- ❑ Decentralize Road Network Administration.
- ❑ Increase Implementation Capacity.
- ❑ Maximise the Benefits from Available Resources.
- ❑ Provide Transport Services Related to Need.
- ❑ Obtain a Greater Direct Contribution to Road Costs from the Users.
- ❑ Give Due Consideration to Environmental Aspects.

All the objectives are mutually supportive and all are equally important for achieving the End Goal.

4.4.4 Transport Sector Investment

The breakdown of transport sector development indicates that roads have received the largest share while expenditure on other modes is comparatively negligible. But, in fact, it is fair to say that roads sub-sector funding has been characterized by fragmented financing, weak implementation and inefficient use. These funding characteristics largely derive from political expediency and a lack of coordinated planning at the national level. When these funding characteristics are taken together with the special characteristic of the road system, it is not surprising that the relatively larger investment in roads has produced poor returns.

From the breakdown of the roads sub-sector allocations for the past three years two important points can be derived as follows.

- ❑ Routine maintenance should take priority over all other maintenance activities, however, the budget for routine maintenance has been steadily declining. Over the same period, the total road length under maintenance has increased by 33%. This indicates a shortfall in spending on essential maintenance and hence, a serious loss in asset value.
- ❑ Although the development funding has increased by 6% considering the average inflation over that period of about 8.5% funding has reduced in real terms.

Domestic resource mobilization remains at a low level and multi-lateral and bi-lateral donor aid continues to provide upwards of 60% of funds. The donors therefore have a major role in development projects.

Clearly, changes in the funding of the transport sector are required. If better returns are to be realised from the country's scarce resources, three interdependent steps are suggested.

- ❑ Firstly, funding must be more closely related to the capacity to use the funds effectively and efficiently.
- ❑ Secondly, allocations should be made more transparent and should be determined on a "needs" basis to promote not only financial monitoring but, equally, network level performance monitoring.
- ❑ And thirdly, local government and private sector capacity needs to be increased.

4.4.5 Private Sector Involvement

There appears scope for private sector involvement in road infrastructure investment and management using the BOT and other processes. However, it must be stressed that the BOT process is not an easy route for the government to take and it will place heavy demands on the bureaucracy. Such a program should therefore start modestly with one or two small schemes. These can then be used to test the market and build up the necessary capacity in government and the private sector for implementing the process. More ambitious schemes can follow as implementation capacity in both the government and the private sector is developed.

There is a wide range of legislative, regulatory, fiscal and similar support that the government will be required to provide for the BOT process. A high-level review of the present legal and constitutional requirements that may affect the process should therefore be undertaken. New statutes will have to be passed and these need to be identified, the legal processes instituted, and the standing rules and regulations within government amended accordingly. The following issues are of particular concern in this regard.

- ❑ Enabling legislation and regulatory authority for the road, which is a national asset, to be built and operated by the private sector.
- ❑ Special legislation to authorize and control the application of road tolls by the private sector.
- ❑ Legislation to acquire land for the project by eminent domain.
- ❑ Fiscal authority for the conversion of local currency earning into foreign exchange in case of foreign investors and the application of special taxation regimes.

An equally important aspect is also to explore the possibility of local banks' participation. The Government should encourage private banks and institutions to participate in the funding process. In the present context, international-financing institutions are funding approximately 60 to 70 per cent of the total cost of the development works. If arrangements could be made for co-financing by local banks through lending process major cost sharing will be available for local cost financing from local banks and hence, help to a certain degree for financing development. However, the international donor agencies should play a lead role, so there will be less chance for default by the recipient.

4.4.6 Stakeholders' Views

A stakeholder meeting was held on 25 August 2000 at Kathmandu. In the meeting the Transportation Group identified various deficiencies in the current transportation system. These are highlighted below:

Traffic Management

- ❑ Encroachment of footpath by shop-owners and road space by hawkers and lack of arrangement of timing and space for running their business.

CITY DIAGNOSTIC REPORT

- ❑ Inadequate provision of space area for stopping for different type of vehicles.
- ❑ Reduction of road capacity due to road side parking.
- ❑ Lack of parking areas for long route plying vehicles and their encroachment within city area, and
- ❑ Lack of public transportation management.
- ❑ Inadequate bus laybys to prevent haphazard stopping on the road.
- ❑ Lack of adequate road crossing facilities for the pedestrians.
- ❑ Non-widening of roads in available space, and
- ❑ Deficiency in street lighting in pedestrian crossings and intersections.

Infrastructure Development

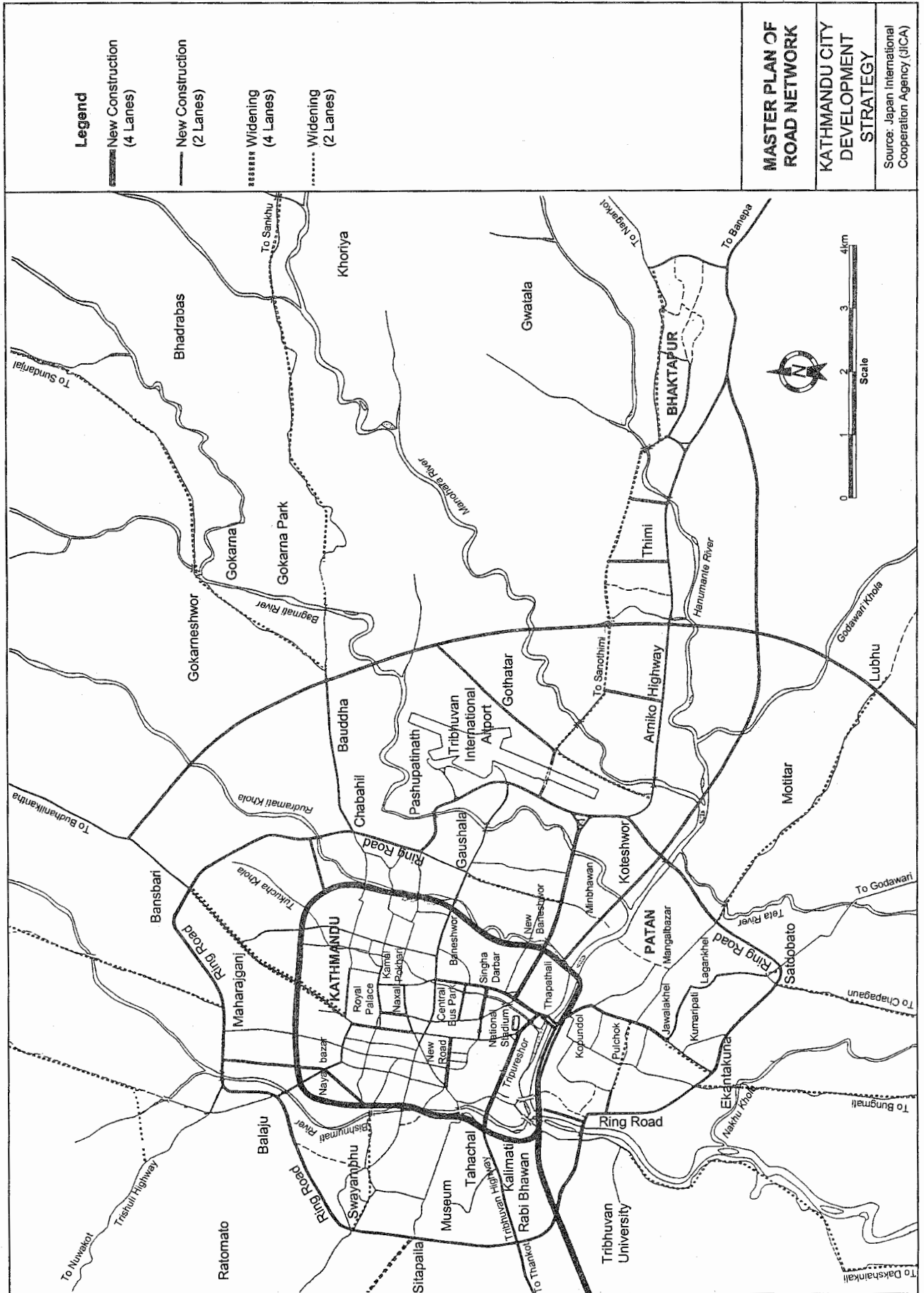
- ❑ Lessening of existing capacity due to non widening of bottleneck roads
- ❑ Non improvement of road junctions
- ❑ Lack of coordination in maintenance program
- ❑ Inadequacy of footpaths and their maintenance.
- ❑ Lack of diversion in high traffic density roads.

Coordination

- ❑ Lack of coordination in construction and maintenance between line agencies such as NEA, Telecommunication and Water Supply Corporation.

Table 5: Urban Transport - Issues and Implications

ISSUES	IMPLICATIONS	ACTORS
1. Road Development		
<ul style="list-style-type: none"> <input type="checkbox"/> Shortage of short and long-term planning and programming <input type="checkbox"/> Lack of development strategy <input type="checkbox"/> Inadequate infrastructure facilities 	<ul style="list-style-type: none"> <input type="checkbox"/> Poor urban transport management <input type="checkbox"/> Ad hoc transport rules and regulations <input type="checkbox"/> Increasing traffic congestion 	DOR/KMC
2. Public Transport		
<ul style="list-style-type: none"> <input type="checkbox"/> Lack of public transportation management 	<ul style="list-style-type: none"> <input type="checkbox"/> Poor public transport service to users 	DOTM/KMC/ Private transport operators
3. Traffic Management		
<ul style="list-style-type: none"> <input type="checkbox"/> Reduction of road capacity due to road side parking <input type="checkbox"/> Inadequate provision of space for stopping for different types of vehicles <input type="checkbox"/> Encroachment of footpath by shop owners and road space by hawkers <input type="checkbox"/> Lack of parking areas for long route plying vehicles and their encroachment within city area <input type="checkbox"/> Inadequacy of footpaths and their maintenance <input type="checkbox"/> Lack of adequate road crossing facilities for pedestrians <input type="checkbox"/> Lack of enforcement of traffic rules and regulations 	<ul style="list-style-type: none"> <input type="checkbox"/> Increasing traffic congestion <input type="checkbox"/> Difficulty for vehicles to make short stopovers <input type="checkbox"/> Reduction of road and footpath capacity <input type="checkbox"/> Difficulty for long route commuters to reach the buspark <input type="checkbox"/> Pedestrians forced to use roads <input type="checkbox"/> Pedestrians face difficulty in crossing busy streets <input type="checkbox"/> Haphazard traffic movements 	KMC/TP/DOTM
4. Institution		
<ul style="list-style-type: none"> <input type="checkbox"/> Lack of proper coordination between line agencies <input type="checkbox"/> Overlapping of functions <input type="checkbox"/> Conflict of jurisdiction and authority <input type="checkbox"/> Lack of professional manpower <input type="checkbox"/> Absence of strong institution and its management capability 	<ul style="list-style-type: none"> <input type="checkbox"/> Uncoordinated and poor traffic management <input type="checkbox"/> Difficulty in apportioning clear responsibility of different sectors of urban transport 	KMC/MOLD/DOTM/ DOR/TP
5. Finance		
<ul style="list-style-type: none"> <input type="checkbox"/> Unplanned investment <input type="checkbox"/> Financial constraints for development works 	<ul style="list-style-type: none"> <input type="checkbox"/> Lack of new development works to improve transportation in the city 	KMC/DOR/Private Banks/Private investors

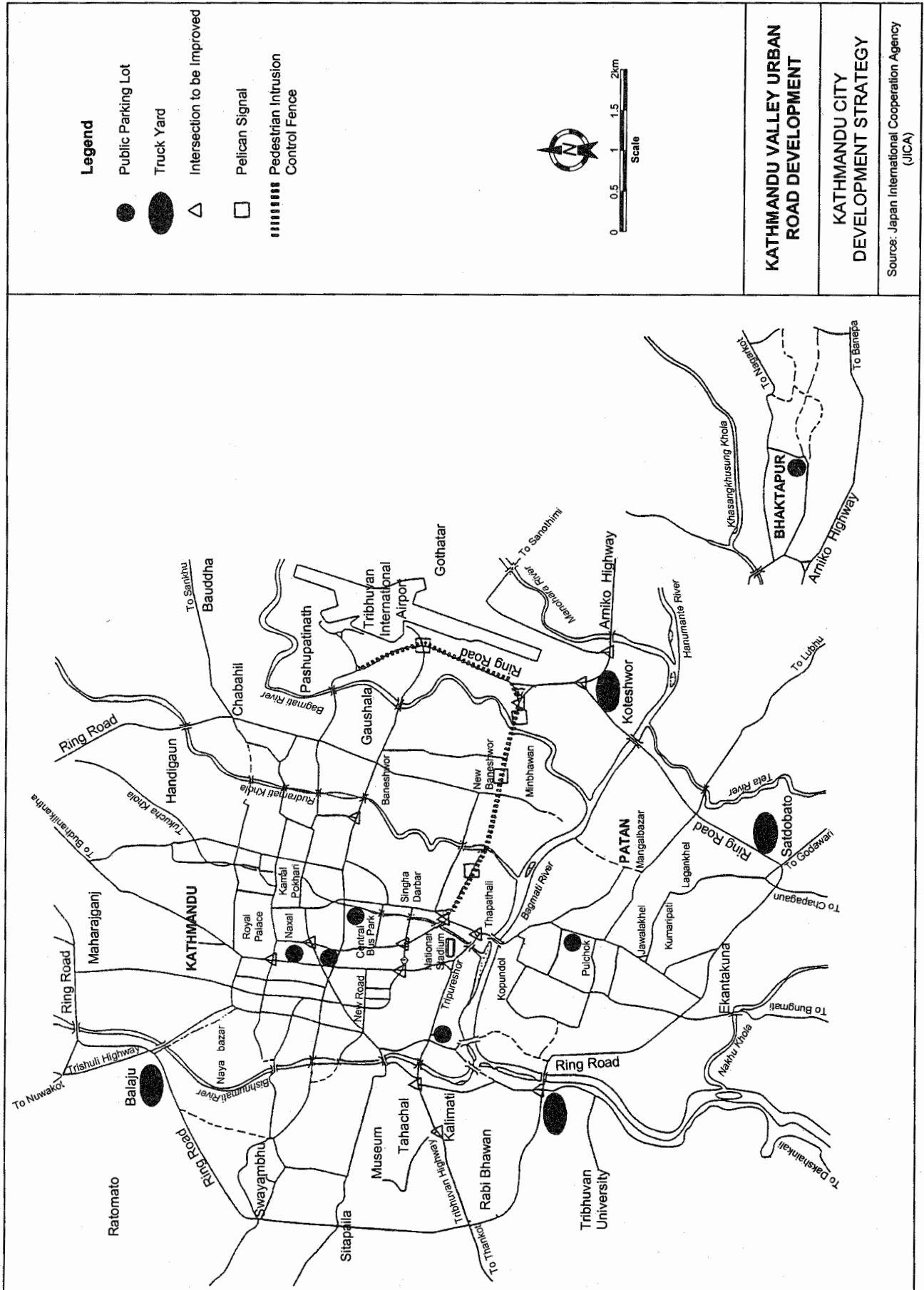


MASTER PLAN OF ROAD NETWORK

KATHMANDU CITY DEVELOPMENT STRATEGY

Source: Japan International Cooperation Agency (JICA)

ANNEX: 2



Legend

- Public Parking Lot
- Truck Yard
- △ Intersection to be Improved
- Pelican Signal
- ▬▬▬▬▬ Pedestrian Intrusion Control Fence



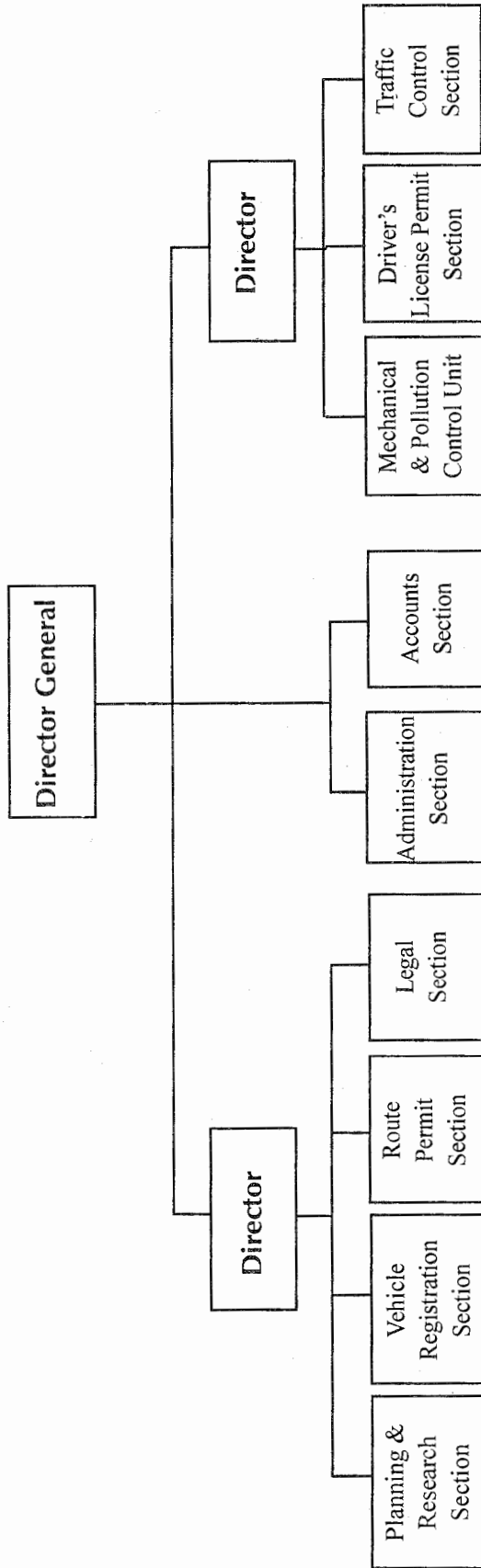
KATHMANDU VALLEY URBAN ROAD DEVELOPMENT

KATHMANDU CITY DEVELOPMENT STRATEGY

Source: Japan International Cooperation Agency (JICA)

ANNEX: 3-1

Organization Chart of Department of Transport Management



Mechanical Empty -1
 Pollution Control Specialist -1
 DSP -1
 Inspector -1
 (Required Traffic Police on deputation from Nepal Police)

NOTE: Unofficial Translation**Department of Transport Management (DOTM)****Function, Duties and Rights**

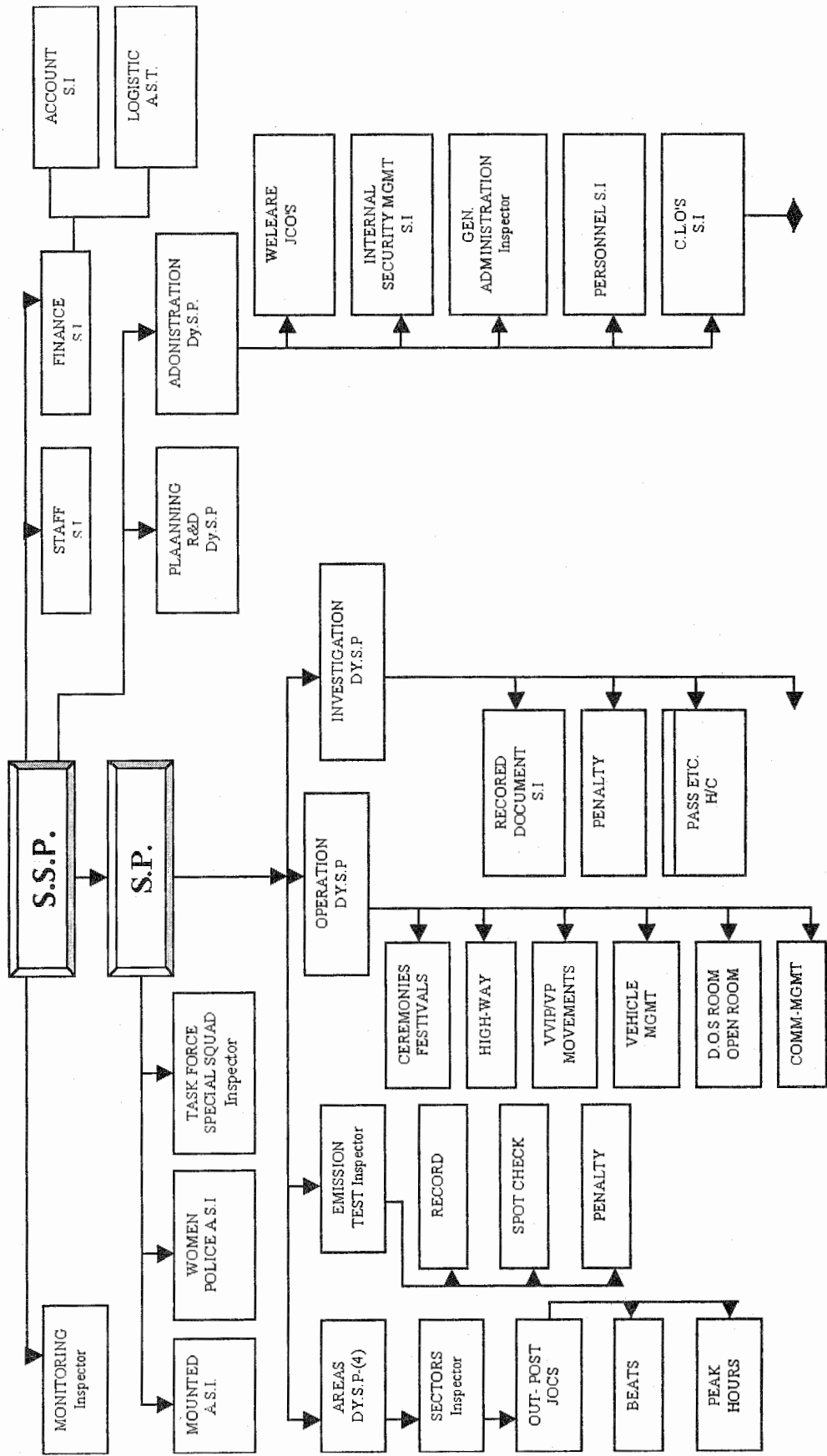
1. For getting the transport service operated in an organized and effective way by conducting or getting conducted the study and research on its financial and technical aspect, to decide on the required policy concerning it.
2. To give necessary guidance to the individual, firm, company or institution related to transport service for good management and development of transport.
3. To give guidance to the individual, firm company or institution related to transport service for the transport of goods, as per the priority fixed for goods transport as per requirement.
4. To decide on the required route for the operation of transport service with due attention to passenger pressure and to fix the fares of public transport plying on these routes.
5. To manage to install traffic signs in public places as per international convention.
6. To decide on speed, load and commuter number of vehicles
7. To prepare and decide on the necessary standards for inspection of mechanical condition and feature of vehicles.
8. To fix the subjects and system of examination of drivers.
9. To take any other necessary action for strengthening of transport service.
10. Traffic and transportation planning management and strengthening.
11. Prevention and control of road accidents and implementation of accident rescue system
12. Countrywide comprehensive traffic and transportation study and implementation
13. Vehicle emission pollution control and monitoring and fixing of pollution standards.
14. Implementation of transport security system.
15. Time-to-time interaction among transport owners, entrepreneurs, workers and users and conduction of workshops.
16. Issuance of driver and conductor license.
17. Vehicle inspection and condition monitoring and issuance of road worthiness certificate.
18. Implementation of vehicle registration system and issuance of blue-book.
19. Implementation of road safety audit.
20. Installation of road signs and markings.
21. Installation, operation and maintenance of traffic signals.
22. Improvement of intersections including grade separation.
23. Design and construction of subways and fly over.
24. Computerized traffic control system implementation.
25. Coordination with Customs authorities and Nepal Police.
26. International transport operation and management.
27. Planning of electric transportation system
28. Adoption of principles of 3-Es and 3-Cs of traffic engineering (3Es - Engineering, Education and Enforcements; 3Cs-coordination, cooperation and courtesy).
29. Posting speed and weight limits of vehicles
30. Deciding on-street and off-street parking lots and bus stops.
31. Giving permission for excavation of pavements and footpaths.
32. Issuance of license for operation of driver training centre, vehicle body building factory and automobile workshop
33. Appointment of transport inspector punishment (by HMG)
 - a. For Violation of purpose of vehicle mentioned during registration, driving license, and exceeding limit of commuter number and goods weight Rs. 500-Rs. 2000.
 - b. For
 - (i) operating vehicles without registration
 - (ii) operating vehicles registered in a foreign country without permission,
 - (iii) changing colour, seating capacity, appearance, engine or chasis without permission,

- (iv) operating public transport service without permission,
- (v) operating public transport service without registration
- (vi) collecting the transport fare exceeding that fixed by DOTM
- (vii) interrupting the traffic
- (viii) incurring losses for the vehicle and passenger involved in accidents - Rs. 1000- Rs. 5000.
- c. For operating driver training center, vehicle body building factory or automobile workshop without permission- Rs 2000 to -Rs. 10,000.
- d. For violating other provisions of the Act or Rules or issued order - Rs. 200 to Rs. 1000.
- e. For hijacking the vehicle and passengers
 - (i) Fine up to Rs. 25,000
 - (ii) Imprisonment up to 5 Years or
 - (iii) Both (i) and (ii)
- f. For manhandling driver, conductor, security men, other vehicle staff or commuter, obstructing traffic, damaging vehicle or incurring losses to vehicle or people and goods, carried by the vehicle
 - (i) Fine of Rs. 1000 or
 - (ii) Imprisonment up to one year or
 - (iii) Both (i) and (ii).

References

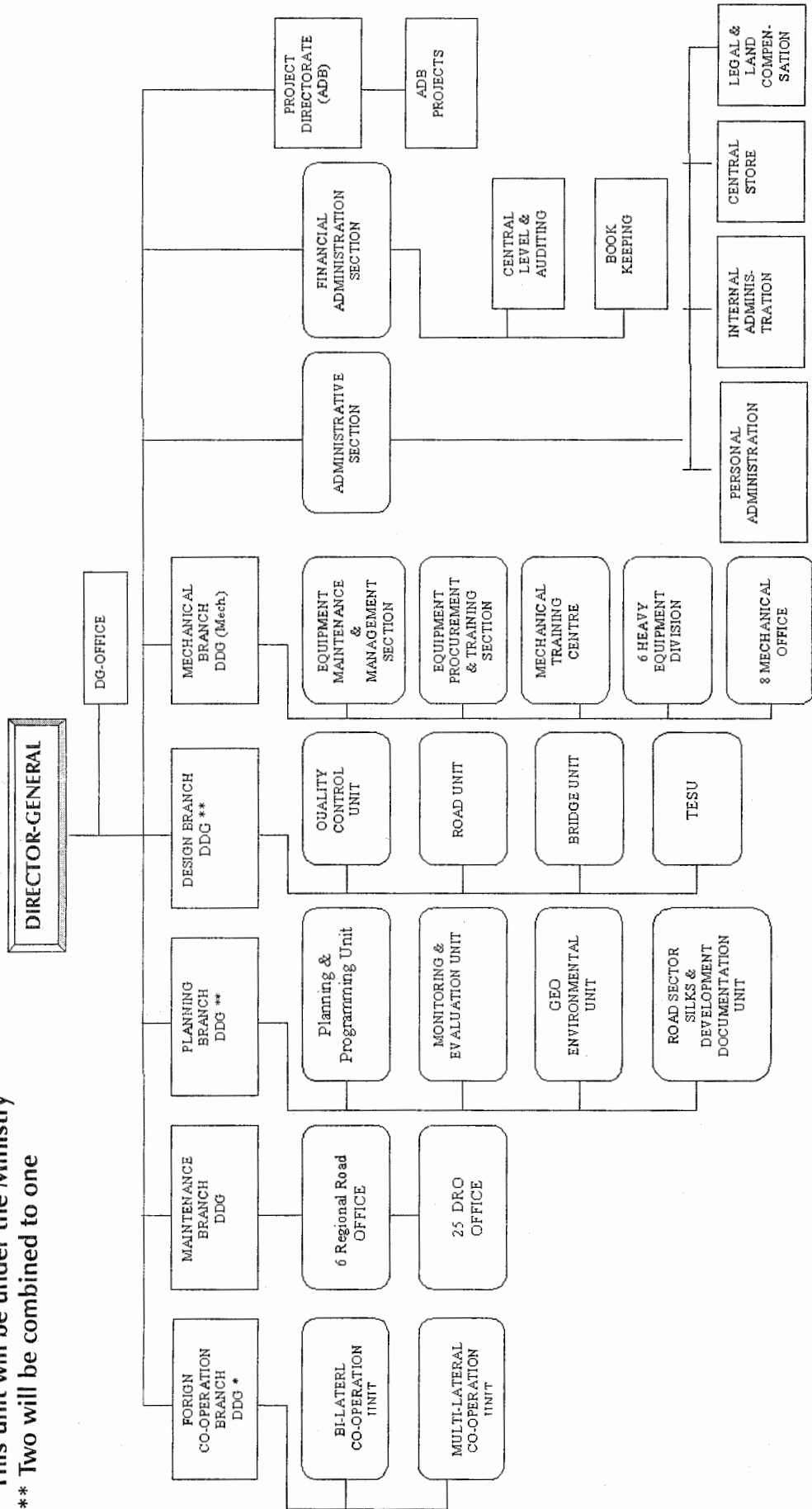
1. Traffic and Transport Management Act - 1992
2. Traffic and Transport Management Rules - 1997
3. The Ninth Plan (1997-2002)

Valley Traffic Police Organization



DEPARTMENT OF ROADS
(Organization Chart)

Proposed Organization
 * This unit will be under the Ministry
 ** Two will be combined to one



Accident Record Table: 1

All Accidents
Kathmandu, Lalitpur, Bhaktapur
(in Percentage)

Collision Type	Fatal	Serious	Minor	Damage	Total
HeadO	10	12	5	0	8
RearE	11	5	6	0	3
90deg	1	2	3	0	3
Side	1	2	2	0	2
OverT	6	5	7	0	6
Obj1	2	<1	1	0	1
Obj2	3	2	1	0	2
ParkV	1	1	1	0	1
Ped'n	62	64	70	0	67
Animl	1	0	<1	0	<1
Other	11	4	4	0	4
Total	100	100	100	0	100

67% of accidents involve pedestrian.

Accident Record Table: 2

All Accidents
Kathmandu, Lalitpur, Bhaktapur
(in Percentage)

Driver Error	Fatal	Serious	Minor	Damage	Total
None	22	25	38	0	32
Care	52	23	29	0	34
Fast	19	36	23	0	
Close	4	1	1	0	1
Signal	0	1	<1	0	<1
O Take	2	6	3	0	4
Turn	0	1	2	0	2
Sleep	1	6	1	0	2
Other	1	2	3	0	2
Total	100	100	100	0	100

In 32% of the casualties drivers are not responsible.

Driver error: careless driving 30% and fast driving 26% cause 56% accident casualties.

Accident Record Table: 3

All Accidents
Kathmandu, Lalitpur, Bhaktapur
(in Percentage)

Casualty Class	Fatal	Serious	Minor	Damage	Total
Ped'n	29	34	38	0	36
Cycle	6	7	00	0	10
Riksh	<1	<1	<1	0	<1
Mcyol	18	23	22	0	22
AutoR	3	7	11	0	9
Car	5	8	6	0	6
PickU	1	<1	<1	0	1
Mibus	3	7	4	0	5
Bus	25	10	5	0	8
Truck	8	3	2	0	3
Other	1	2	<1	0	1
Total	100	100	100	0	100

The maximum casualties are of pedestrian (36%) followed by motorcycle riders (22%) and cyclists (10%)

Accident Record Table: 4

All Accidents
Kathmandu, Lalitpur, Bhaktapur
(in Percentage)

Vehicle Owner	Fatal	Serious	Minor	Damage	Total
Govt	0	2	1	0	1
Corp	<1	1	1	0	1
Diplo	1	<1	<1	0	<1
Private	39	49	55	0	51
Public	60	47	43	0	47
Police	0	0	<1	0	<1
Army	0	0	<1	0	<1
Total	100	100	100	0	100

Accident Record Table: 4

All Accidents
Kathmandu, Lalitpur, Bhaktapur
(in Percentage)

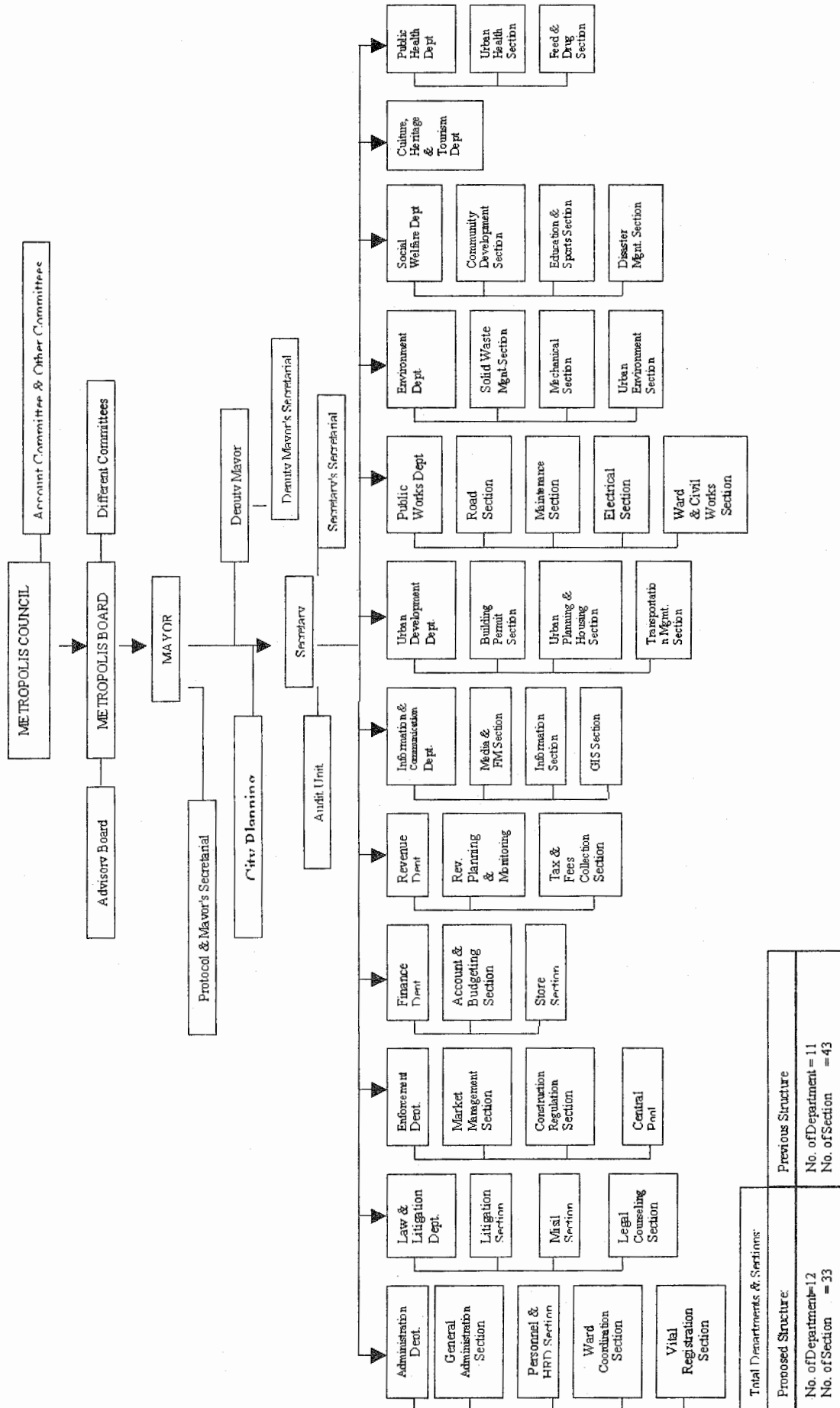
Time (HRS)	Fatal	Serious	Minor	Damage	Total
00/01	3	2	2	0	2
02/03	2	2	2	0	2
04/05	4	5	2	0	3
06/07	9	7	6	0	6
08/09	16	12	9	0	10
10/11	5	10	11	0	10
12/13	8	9	12	0	11
14/15	7	11	13	0	12
16/17	20	13	15	0	15
18/19	12	11	14	0	13
20/21	9	11	10	0	11
22/23	5	7	5	0	5
Total	100	100	100	0	100

35% accident casualties occur during dark hours.

Source: Kathmandu Valley Traffic Police.

KATHMANDU METROPOLITAN CITY OFFICE

ANNEX: 7



Total Departments & Sections	
Proposed Structure:	Previous Structure
No. of Departments = 12	No. of Departments = 11
No. of Sections = 33	No. of Sections = 43

Note: * Transportation Mgmt. Section Under Urban Development comprises 1 AE & 3 JEs
 * Road Section under PWD consists of 1 AE, and JEs and 1 P.O.

BIBLIOGRAPHY:

1. DOR/JICA. The Study of Kathmandu Valley Road Development; (March 1993)
2. HMG/DHUD/ADB. Kathmandu Valley Urban Development Plans and Programmes; September 1991
3. DOR. Development of Kathmandu Valley Transportation System;
4. Traffic Management Plan for the Improvement of Road Around Tuidikhel DOR/ RACHANA Consulting Engineers March 1997.
5. Nepal Road Board, Administrative By Laws and Procedures and Proposed NRB Act; September 1999.
6. Pre-feasibility Study for Extending Trolley Bus Services Within Kathmandu Valley - CEMAT Consultants; June 1999.
7. Hand Book for Highway Engineers - Harger and Bonney
8. Highway Engineering Hand Book - Woods, Berry and Goetz.
9. Research on Road Safety - Road Research Laboratory; 1963.
10. DOR/AID-WB Priority Investment Plan; February 1997- Wilbur Smith Associates and SMEC Int. (Ltd.)
11. Documentation in Urban Transportation - VIII, IRF World Meeting; 1977.
12. Various Acts and Laws Related to DOTM; 1992, 1997.
13. Towards Safer Roads in Developing Countries - Transport and Road Research Laboratory; 1991.
14. Diagnosis and Design User's Manual - J.B. Raintree; 1987.
15. A Collective Approach for Local Resource Mobilization - Ministry of Local Development and UDLE; February 2000.
16. A Study of Mass Transit System in Kathmandu Valley - Integrated Forum (P.) Ltd.
17. National Transport Policy - Nepal Engineering Consultancy Services Centre Ltd. in association with Centre for Economic Development and Administration; July 1998.
18. An Overview - Rural Transport Sub- sector in Nepal - IT Nepal; June 1998.
19. The Ninth Five-Year Plan (1997-2002) of HMG/N.
20. Local Self Governance Act, 1999.

HOUSING AND SQUATTER SETTLEMENTS

Jun Hada
HOUSING SPECIALIST

LIST OF ABBREVIATIONS

ADB	Asian Development Bank
CBO	Community Based Organization
CDR	City Diagnostic Report
DHUD	Department of Housing and Urban Development
DPW	Department of Public Works
FAR	Floor Area Ratio
INGO	International Non-government Organization
IUCN	The World Conservation Union
KVTDC	Kathmandu Valley Town Development Committee
KVTDIC	Kathmandu Valley Town Development Implementation Committee
KVMP	Kathmandu Valley Mapping Programme
LSG	Local Self-Governance
MLD	Ministry of Local Development
MIP	Municipal Infrastructure Improvement Project
MPPW	Ministry of Physical Planning and Works
NGO	Non-Government Organization
SWOT	Strengths, Weaknesses, Opportunities and Threats
TUGI	The Urban Governance Initiative
UDD	Urban Development Department
UDLE	Urban Development Through Local Efforts
UNCHS	United Nations Center for Human Settlements

TABLE OF CONTENTS

List of Abbreviations	146
Table of Contents	147
List of Tables & Figures	148
5. HOUSING AND SQUATTER SETTLEMENTS	149
5.1 Introduction	149
5.1.1 Background	149
5.1.2 Housing and Human Settlements: A Historic Perspective in Kathmandu	149
5.1.3 Spatial and Demographic Growth of Kathmandu City	150
5.1.4 Urban Poverty and Emerging Housing Problems	150
5.2 CDS and Its Objectives	151
5.2.1 CDS and its Objectives in Relation to Housing	151
5.2.2 Stakeholders Analysis, Participation and Their Concerns	151
5.3 The Context	152
5.3.1 Housing Markets: Initiatives in Housing Delivery Systems in Kathmandu	152
5.3.2 Housing Stock and Deficit in Kathmandu	155
5.3.3 Dwelling Types and Tenure Structures	156
5.3.4 Housing Affordability	156
5.3.5 Housing Finance	157
5.3.6 Plans and Policy Framework in Housing Development	158
5.3.7 Institutional and Legislative Framework in Housing	161
5.3.8 Housing Construction Technology	162
5.3.9 Housing Conditions (Physical and Environmental)	162
5.4 SWOT Analysis of Existing Housing Situation	163
5.4.1 Assessing Strengths and Weaknesses in Housing Development in KMC	163
5.4.2 Assessing Opportunities and Threats in Housing Development	163
5.4.3 Summary of Issues in Housing, Slums and Squatter Settlements	164
5.4.4 Goal and Vision for KMC	164
5.5 Strategic Framework for Housing Development	165
5.5.1 Slum and Squatters Action Plan	165
Annex 1: Stakeholder Identification and Analysis for Housing, Slums and Squatter Settlements	168
Annex 2: Issues and Concerns Raised During First Stakeholders Meeting	170
Annex 3: Photographs of Squatter Settlements	172
Annex 4: Squatter Settlements on Public Land in KMC	176
Map 1: Land Development Sites in Kathmandu Valley	177
Map 2: Location of Squatter Settlements in KMC	178
Bibliography	179

LIST OF TABLES & FIGURE

- Table 1:** Income Distribution of Households in KMC
Table 2: Income Distribution of Households in KMC
Table 3: Growth of Squatter Settlements in Kathmandu
Table 4: Building Permits for Residential Purpose in KMC
Table 5: Housing Affordability Analysis, 1990
Table 6: Housing Affordability Analysis, 2000
Table 7: Institutions Involved in Land and Housing Development at Various Levels
Table 8: Slum and Squatter Action Plan
Table 9 : Housing Development and Management of Slums/Squatter Settlements in KMC - Issues & Implications

LIST OF FIGURE

- Chart 1:** Growth of Population in Kathmandu

5. Housing and Squatter Settlements

Housing, for a large number of people in the world is the most valuable asset and a significant commodity of expenditure, representing some 15 to 20 percent of household expenditures. The acquisition of adequate housing is a basic necessity for all in order to achieve good health, welfare and good quality of life. An inadequate dwelling, absences of water and sewerage facilities contribute to poor health. For some, it is also a place for income generating activities and a location for venturing into a world of entrepreneurship. Moreover, it is spatially fixed, making its location relative to jobs, transport networks and public services. Therefore, achieving adequate shelter has multi-dimensional benefits including social, economic as well as environmental benefits.

5.1 INTRODUCTION

5.1.1 Background

Large proportion of urban population in developing countries today are still facing enormous problems finding adequate housing with secured tenure, adequate infrastructures and services at a suitable location. This is not an exception for growing metropolitan city of Kathmandu with its current rate of urbanization.

5.1.2 Housing and Human Settlements in Kathmandu: A Historic Perspective

The history of Kathmandu town is as old as urbanization of the valley itself, which seems to have started about two thousand years ago, during the proto-historic Kirata rule (Tiwari, S.R., CDR, 2000). The earliest settlements within the present area of Kathmandu are supposed to have been established in the area of Pashupatinath to the northeast of Kathmandu. Settlements were later established on the tars between Bagmati and Vishnumati Rivers, northeast of their confluence. The settlements seem to have expanded because of their importance as trade centers or due to the efforts of individual rulers during those periods of time.

The small Kirata Settlements of Kathmandu core area such as Yambi (current Indrachowk), Jama (current

Jamal) and Lanjagvala (current Lagan) were on the crossroads of the network of trading highways that passed through the area. The Bhimsenthan-Kamalaxi route is still extant along the same alignment in silent testimony to this day. Alongside of Kathmandu core, to its east, another settlement called Andipringga, now called Handigaon, was annexed and extended by the Lichchavis to make their capital city. Deopatan on the Western bank of Bagmati River was developed as an early Lichchavi religious town. The Lichchavi period also saw the additional settlement of Daxinakoli-Grama on the South west of Kathmandu historic city core along the riverside at the banks of Bishnumati River. Gunakamdeva, who is said to have restructured the city into one settlement, called Kantipura, after placing doctrinal Goddesses (Shakti-cult) around the general conglomerate of settlements. The City had about 18,000 houses during the period of 11th century. The landmark temple, Kashthamandapa was already in place and it is after this temple that the city has been named. (Tiwari, S.R., CDR, 2000)

The stages of growth and development of settlements and houses in the city can further be defined as Mallas, the Shahs and the Rana period. Ever since Malla period, diverse castes and ethnic groups primarily Newars were concentrated in various areas of the city, either in specific sectors or in radial clusters centered from the city core. Lower castes and untouchables (Chyame, Kasain, Pode) were on the edge of the communities, particularly towards the two rivers. The communities of these scheduled castes still exist along Vishnumati River corridor.

After the Gorkha conquest of the Valley, the Shahs took over the city and brought about more physical changes with construction of large houses and new palaces influenced by Muslim and Rajasthani architecture. The construction of numerous palaces within large compounds were key factors in the expansion of the greater city area leading to subsequent growth of housing for employees around these compounds. Groups of various ethnic castes other than Newars continued to migrate in the city. Construction of houses extended towards North, Northeast and East of Kathmandu with road networks linking palaces and city core. Thus accessed, land previously agricultural, opened up sites for new developments, both for commercial and residential purpose.

5.1.3 Spatial and Demographic Growth of Kathmandu City

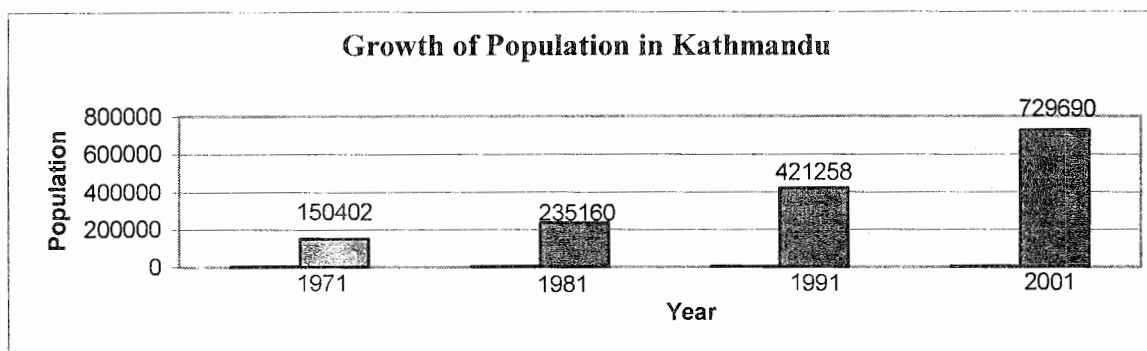
Kathmandu Municipality was declared as a metropolitan city according to the Municipality Act of 1995 and is divided into 35 wards of which the old city core encompasses 12 wards. Much of the municipality falls within the area bounded by Bagmati River and the Ring Road with some expansions along arterial roads at Balaju, Bansbari, Boudha and Kalanki. Covering an area

of 5076.6 hectares, it is expected to have a population of 729,690¹ with a growth rate of 5.65 percent in year 2001. The city has experienced a remarkable growth in its population over the past few decades. The city's population makes it a largest urban center representing 20 percent of nation's overall urban population. It is a tremendous pressure on the capital city to house 20 percent of the nation's urban population given its limited urban land and infrastructures.

5.1.4 Urban Poverty and Emerging Housing Problems

Poverty is a result of a long historical process of marginalizing groups, of social inequality based on a position in the production system. Institutional factors like family background, sex, ethnicity and geographical variations affect inequality. The concept of poverty is associated with many social indicators along with income distribution and consumption patterns. Urban poverty could be defined as population living in poverty where people are deprived of basic facilities such as water, sanitation, education, and health etc. in urban areas. An attempt is made to study the magnitude of urban poverty in Kathmandu.

Chart 1: Growth of Population in Kathmandu



Source: Jibgar, 1997 and KVTDC, 2000.

¹ An estimated population in Draft Kathmandu Valley Development Plan 2000; Kathmandu Valley Town Development Committee, July 2000.

Table 1: Income Distribution of Households of Kathmandu

Income Quintile	Monthly Average HH Income	Mean Consumption income (Rs/capita per annum)	% of Kathmandu population	Estimated income range
1	1,114	2,571	0	< 3300
2	1,686	3,893	0.2	3300 - 4500
3	2,228	5,142	3.3	4500 - 6200
4	3,097	7,147	6.7	6200 - 8500
5	6,605	15,243	89.8	> 8500

Source: WaterAid, Lumantri and NEWAH, 2000.

According to the latest study on water supply and sanitation situation of urban poor, about 10.2 % of metropolitan

Table 2: Income Distribution of Households of Kathmandu City

IncomeHH Quintile Group	Income per month in NRs.	% of HH
1	< 3999	7
2	4000 - 5999	17
3	6000 - 7999	17
4	8000 - 9999	15
5	10000 - 11999	17
6	>12000	27

Source: City Data Book, 2000

population is considered poor provided that poverty threshold is Rs. 9,000 per capita per annum. In addition, if a household income of Rs. 4000 per month is taken as poverty threshold, then only 7 % of total population is poor as per Table 2. Therefore, it could be concluded from both the figures that urban poor population constitutes not more than 10 % of Kathmandu Metropolitan city's population. This means there are approximately 72,969 people living in poverty in Kathmandu and it could be assumed that housing conditions of these people are also poor.

The conditions of many dwelling units constructed over a period of time in Kathmandu city have been dilapidated and they are in the process of deterioration without adequate maintenance. On the other hand increasing commercialization of prime urban land has reduced affordable residential spaces and increased congestion without adequate floor space for living resulting into formation of slums within the city. At the same time, continued in-migration of low-income people from peripheral and rural areas in Kathmandu in search of jobs, reduction of cheaper rental accommodations within the reach of their job stations, increasing land values and costs of building materials, lack of effective land use plan and regulation have contributed to the growth in illegal encroachment of public unattended land and buildings and the development of unplanned squatter settlements².

5.2 CDS AND ITS OBJECTIVES

5.2.1 CDS and Its Objectives in Relation to Housing

The City Development Strategy is being prepared to assist KMC in creating a vision to guide Kathmandu city's future actions. The main objective of preparing

the City Development Strategy for KMC is to assist in improving KMC's livability, competitiveness, bankability, governance and management capacities by jointly working with various national and local level stakeholders, bilateral and multi-lateral development partners, in order to utilize the city's limited resources efficiently through a participatory process. It is intended to provide an overall framework within which KMC will synchronize and rationalize various future programmes in a strategic and coherent manner.

The incorporation of strategic framework for the development of housing markets including housing finances in KMC is one of the major focuses within the overall framework of CDS. The city at present lacks specific policies and programmes for the underprivileged and marginal sector of the society and especially for the growing slums and squatter settlements in various locations of the city. One of the objectives of CDS is to develop specific action plans addressing slums and squatter settlements in Kathmandu based on participatory interactions among multiple stakeholders, identification of the existing issues, constraints and opportunities.

Therefore, strategic approach to city housing, slum and squatter improvement calls for an integration of two main clusters of tasks: I) establishing a priority agenda of what housing development issues are and how they will be tackled in the present urban setting of Kathmandu, and II) identifying and selecting key initiatives and do-able actions.

5.2.2 Stakeholders Analysis, Participation and Their Concerns

Since stakeholders' participation and ownership are the key elements of the CDS process, it is important that key stakeholders in housing and urban poor sector are identified prior to their participation. The list of stakeholders identified and stakeholders' analysis is attached in the Annex 1. The stakeholders' participation plan included the Stakeholders' Workshop, Interviews and Focus Groups Discussions. The experts in housing were consulted, their views and concerns were incorporated in the study. The key stakeholders participated in the First Stakeholders' Workshop and brought about the issues related to housing, slums and squatter settlements and prioritized them. Similarly focus groups discussions was held with representatives of urban poor (squatter groups) and Lumanti (NGO working with squatters) to spell out the issues, constraints

² Squatter settlements are inhabited sites, often close to areas of employment in city centers, to which households have no legal titles.

and other potentials for improving the living and housing conditions of the poor. The issues identified and concerns of stakeholders, during the Stakeholders' Workshop are attached in the Annex 2.

5.3 THE CONTEXT

5.3.1 Housing Markets: Initiatives in Housing Delivery Systems in Kathmandu

Markets for the most part, govern housing production. People need shelter and are thus willing to invest their labor and savings in housing. Private individual owner builders and brokers largely dominate housing markets in Kathmandu. These markets are neither efficient nor equitable, as they do not completely satisfy all housing needs. However, it is seen that housing suppliers in both formal and informal sectors are producing a variety of housing types at all levels of affordability, from rented slums and squatters to apartments, often taking advantage of lax enforcement of regulations in the process. This section studies how formal government and private sectors as well as informal private sectors have contributed to city's growing housing needs.

5.3.1.1 Government Initiatives

Institutional Housing System is one of the housing delivery systems by government sector. Housing for government employees, students' hostels, police quarters, army barracks were prior investments by government in housing and it is still valid today that major investments in housing by government sector only caters to the government employees. During the past two decades, a number of initiatives were undertaken by government sector to address the housing needs with in Kathmandu.

As an executing agency of government, Kathmandu Valley Town Development Committee initiated Sites-and Services, Guided Land Development and Land Pooling projects in Kathmandu. Land development sites undertaken by the government is shown in Map 1. These initiatives included Kuleswor and Dallu Housing projects within the municipality and the projects were meant to benefit middle and lower income employees of government. For the first time, a six unit apartment housing is also being made by the government in Sainbu as a pilot project. Most of the housing projects implemented so far have not been successfully replicated

due to delays in land acquisition of privately owned parcels coupled with costs of increasing land prices and various other reasons. A review by UDLE (Land Development Projects in Nepal, 1998) pointed out numerous issues related to land development exercises undertaken by the government. The issues identified are:

- ❑ Lack of institutional seriousness, management capabilities and constraints of adequate human resources
- ❑ Lack of technical know-how and well worked out plans for project execution
- ❑ Lack of reviewing and monitoring process to evaluate the ongoing projects
- ❑ Fragmented land ownership and dual ownership creating problems in land assembly
- ❑ Absentee land owners and outdated cadastral records and maps
- ❑ Financial constraints owing to low compensation for land owners and lack of effective community participation in the process of land acquisition
- ❑ Lack of effective co-ordination with other line agencies for timely provision of infrastructures.

Therefore, all these are the major constraints in effective and timely implementation of land developments projects executed by public sector.

5.3.1.2 Formal Private Sector Initiatives

Individual private owner builders have, largely contributed for housing supply in Kathmandu. It is the owner builder who acquires a plot of land, organizes and manages the construction of house and is expanded incrementally over a period of time as both family and income grows. Therefore, Private Owner Occupied Housing System is predominant in Kathmandu. Rental Housing Sub-system, on the other hand serves about 30-35 % of total municipal population (Regulating Growth, IUCN, 1995 and Thapa, K., 1994). Approximately 40 % of urban households living in rental accommodations are relatively poor and facilitated with lower service levels compared to owner occupied housing (Rabenau, B. von. 1990).

Private owner builders, for additional source of income, produce majority of rental housing units in Kathmandu. Based on the study of 24 cases conducted by Lumanti in 1997, it was found that 40 % of the total income of owners was derived from the rent. About 95 % of

families with an average size of 4.8, rented single rooms with an average size of 120 square feet. This indicates a serious overcrowding occupancy. The families pay approximately 30 % of their total income on rents, and hence they need to find cheaper rental units or share a smaller space. There is an increasing demand for cheaper two room rental units according to the study. Individualistic approach in the supply of rental units by owner builders thought has a potential, it may not fulfill the increasing demand of rental housing unless formal private sector plays a vital role in bulk supply of rental units within the city.

There is also a need for cheaper rental accommodation especially for working women and female students in the city. Chronicles often report overcrowding boarding rooms in universities. "Mero Bas", a short-term boarding type rental accommodation for destitute women operated with some subsidy by Lumanti has become a solution for poor transient women having small tasks in the capital city.

There exists a substantial rental market in slums³ of Kathmandu. Most slums comprise of permanent structures/houses, originally of good old quality built by private individuals, which became dilapidated and over-crowded over a period of time. The houses are not maintained regularly, although they have their own legal titles and deeds. The conditions of these houses vary depending upon whether they are owner occupied or rental accommodations. If they are owner occupied, they have some basic services and infrastructures in place and are reasonably repaired whereas houses with rental accommodations normally lack basic infrastructures and services with poor sanitary conditions and are poorly maintained or repaired.

Most of the slums are located in the inner city area with poor access. In fact, the houses in these slums are the ones ignored during urban renewal process due to reasons of poor accessibility, disputes over land titles, owners' inability to afford for renewal etc. Some old houses in newar settlements like Sawal Bahal, Lagan, Tebahal, Hyumat, Chikanmugal, Guchcha Tole, Indrachowk, Yatkha, Makhan Tole, Mahabouddha, Ganabahal, Yangal, Handigaon, could be categorized as slums as reflected by their physical and environmental conditions. It is estimated that there are about 50 slums in Kathmandu metropolitan city with a population of 40,000 (Masako Tanaka, 1997). Most of them houses primarily migrated labours, petty trade workers or street vendors.

Housing sector has never been realized as a potential economic sector until recently with few of the initiatives undertaken by private Real Estate Companies. They have developed land for housing during early 90s which included land subdivisions with basic services such as road network, water supply main, electricity poles, drainage and sewer lines (e.g. Tokyo Bazaar in Gongabu promoted by Kumar Lama Real State Company). Some private sector agencies also built apartments and condominium units to be sold over a period of time at Baluawatar, Chabel and Sanepa areas of Kathmandu valley. However, the high selling cost of units, lack of clear policies and acts for promoting attractive schemes to pull buyers and failure to understand homeowners' preferences made companies keep their units vacant or unsold for sometime until recently when the real estate value slumped.

Currently, the ongoing Kathmandu Residency Project of Ansal Chaudhary Developers is making a move towards establishing sustainable real estate industry. The units to be transferred for buyers over a period of three years after having paid the cost of unit in an installment basis is actually an attractive scheme to buyers as well as it is a mean to generate resources for builders to construct units for a period of construction. The record shows complete selling of all units, and proves that peoples' preferences have also changed over a period of time. Though catering to the middle and upper middle-income sections of urban population, this project will contribute to the supply of readymade housing to only a small section of Kathmandu's population, who are actually not in need of housing but rather have invested as an opportunity for future. The result of the project is yet to be seen.

5.3.1.3 Informal Private Sector Initiative in Housing Supply

In Kathmandu city and the peripheral areas, the gap in housing supply is partially filled by informal private sector through brokers. Land brokers and buyers are two key players mainly responsible for opening up new land for housing (role merely limited to subdividing land) and sometimes bringing about services to the area such as water supply, road, surface drainage and electricity.

In the report of Halcrow Fox, 1991, it is stated that the informal sector opened up more than 1270 hectares of land for residential purpose in Kathmandu and Lalitpur

3. Slums as defined in *The Water Supply and Sanitation Situation of the Urban Poor in the Kathmandu Valley*, July, 2000. Slum is a term used to describe old dwellings, which through overcrowding, neglect, and breakdown of supporting services have deteriorated to insanitary and unsafe conditions. It generally denotes the physical conditions of housing regardless of the type of dwelling tenure.

Table 3: Growth in Squatter Settlements in Kathmandu

Year	No of Settlements	No. of Households	Population	Remarks
1985	17	-	2,134	
1988	24	348	3,665	
1990	19	859	4,295	
1992	33	1,271	6,355	
1996	47	1,783	8,927	
1998	49	2,021	10,323	
2000	61	2,031	11,862	Includes settlements of adjacent VDCs

Sources: Joshi and Bjoness; 1987, Concerned Citizens Group, Kathmandu Squatter Site Survey; 1990, Flatheim and Sljogrestad; 1993, Kishore Thapa; 1994, Tanaka; 1997, and Lumanti; 2000.

Municipalities between years 1971 to 1981. However, broker's inability to legally assemble parcels of land and to have control over ownership is the major constraint in the informal housing supply process. Due to inadequate financial backing in the absence of formal housing finance mechanisms, and without knowledge of proper planning, they are forced to supply land parcels in an inefficient manner. More often, land plots are supplied to buyers any time at buyers' preference with poorly serviced roads and access. This informal land development process is actually manifested by inadequate and weak planning guidelines, regulations, highly complicated and lengthy land registration procedures and weaknesses of formal land and housing delivery mechanisms.

Squatter Housing Sub-system is also one of the implications of inadequate planning guidelines. It is the process of unauthorized occupancy of land and buildings. Many a time, a strong political backing is always providing support to start up squatter settlements

and ensure their continued existence. Like in other cities of developing countries, Kathmandu has recently been experiencing the problems of growth in slums and squatter settlements. A study conducted in 1997 showed that 9000 people were staying in 47 squatter settlements in public lands. Location of some squatter settlements is shown in Map 2. In addition there were 3000 people squatting in old, dilapidated public buildings such as temples, satta (resting places) built by religious trusts (Tanaka, 1997). The number of squatters has almost tripled in ten years and it represents only 2.9 percent of the total population of the city. The annual growth rate of squatters in the city is 12-13 % which seems to be alarming.

Out of 11,862 the majority of people living in informal squatter settlements on public lands reside along riversides. Another study by Kishore Thapa in 1994 indicated that about 40 percent of squatters resided in public buildings (sattals, patis and temples) and 60 percent lived in public land, which translates to about 7,908 people who are currently living in old patis and sattals around the city. Therefore, the estimated number of squatters in the city is approximately 19,770 inclusive of those living in public buildings and land. The number is close to the figure of 65 communities quoted by Lumanti/Water Aid/Newah study⁴.

The housing conditions of majority of squatter settlements are very poor. More than 80 percent of houses in the squatter settlements are owned by dwellers and only 12 percent are



rented out. The built-up areas of houses range from 120 square feet to as large as 1200 square feet. The building structures are normally temporary made of bamboos and mud walls, plastic and thatch roofs in newly emerged settlements. As settlements grow older, the structures are more consolidated with permanent constructions of walls and roofs (bricks and concrete, metal sheets). This has been possible because of the Laissez Faire policy of the government.

In terms of services, all households have access to some form of water supply whether they are sources from Water Supply Corporation, community stand posts, bore or tube wells or community storage tanks.



Typical Settlement along Riverside

However, the quality of water for drinking purpose may be questionable. The level of water supply services available to the households is related to the age of settlements. The levels of services in older settlements are comparatively higher. Less than 25 percent of households have safe sanitation provisions except for few settlements where voluntary groups or NGOs have launched interventions and awareness programmes. The awareness programmes have not been successful in some settlement due to threats of insecurity. More

than 75 % of squatter households rely on poor community toilets, poorly built pit latrines or open defecation.

5.3.2 Housing Stock and Deficit in Kathmandu

There were about 53,311 houses or housing units in Kathmandu city during the year 1991 which accommodated 80,246 households (IUCN, 1995).⁵ It was also stated in the report that 30 % of the total houses were being rented and 70 % of them were more than 30 years old. When closely analyzed, it can be observed that a

deficit of about 10,942 housing units existed even then. Based on the record of building permits issued for residential purposes every year, it can be estimated that there will be 80,398 houses or housing units in Kathmandu city in the year 2001, with 27,087 new units being added during 1991-2001, assuming that about 80% of the buildings are constructed after the issuance of building permits. Average building permits issued per year is 2500. It is assumed that during the years 1992-93 total number of building permits issued were 2500 per year. Town Development Committee used

to issue building permits before the year 1992. The permit was closed for a year in 1994.

In the year 2001, the need for housing units for a population size of 729,690 would be 137,677. Assuming 30 percent of the houses are being rented, 24,119 additional units would be rented with total of owner occupied and rented housing units of 104,517. This will result a deficit of 33,160 housing units by the year 2001. This shortage compared to other mega-cities of Asia is very small in absolute numbers

Table 4: Building Permits for Residential Uses in Kathmandu City

Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	Total
Building Permits Issued	-	2500*	2500*	-	5107	4203	3230	2715	2060	2272	2500*	27,087

Source: Urban Development Department, KMC, number with * is assumed.

but lack of appropriate housing programmes in the future would intensify the problem.

5.3.3 Dwelling Types and Tenure Structures

Housing types in Kathmandu is more or less dealt in the above section. Under the various housing delivery systems, there are different types of dwelling units including single-family type, multiple family dwelling units, apartments and temporary dwelling units, hostels and other accommodations. About 31.8 % of total dwelling units account for single family, 50.2 % accounts for medium density multiple family units whereas 18 % are apartments in Kathmandu (Cities Data Book, 2000).

At present, there is an absence of actual quantitative data regarding tenure structure of Kathmandu households. Ongoing KVMP would be a source of information in future as it is currently involved in house numbering and addressing system. The prevalent tenure structures in Kathmandu in formal and informal private sector housing delivery systems include;

Owned: Households with a clear title deed or ownership of the house and land they occupy, which roughly accounts for 56.6 %.

Rental: Households paying rent to landlord who is the legal owner of the dwelling unit. This accounts for approximately 35 % in Kathmandu.

Rent-free: Households occupying housing formally owned by someone else and who do not pay rent, accounts for 3.4 % in Kathmandu (Cities Data Book, 2000).

Squatters: Households occupying unauthorized land and buildings, which account for 2.9 % in Kathmandu and among them 12 % are paying rents.

Others: Boarding houses, hostels, and others account for 2.1 % (Cities Data Book, 2000).

5.3.4 Housing Affordability

Housing affordability is guided by various factors. They are household incomes, households' ability to pay for housing, supply of serviced land plots, availability of building materials, housing construction technology etc. The house price to income ratio is 10.6⁶ for the city of Kathmandu. This means house price is ten times the annual income of household in average. This also indicates the ineffectiveness of housing markets operated in the city. The housing affordability by households⁷ of various income groups is further discussed below.

5.3.4.1 Cost of Land Development and Housing

Issues in Housing Development by Rabenau in 1990 analyzed that the cost of serviced plot with shelter in a conventional sites and services scheme is NRs. 613,336, as shown in Table 5, which requires a down payment of NRs. 122,667 plus monthly payments of NRs, 7,499

under the terms of loan. To be able to afford loan and the down payment, a household must have an income of NRs. 30,000 per month. It is also stated in the report that Kathmandu's household income at 90th percentile was estimated at Rs. 7,499 per month in 1990. Therefore, the income required to afford housing is 4 times higher than 90th percentile.

Analysis of some land and housing development projects in and around Kathmandu Municipality over the past years



Temporary Flood Protection along Squatter Settlement

Table 5: Housing Affordability Analysis, 1990 for Conventional Sites, Services and Shelter Project

Particulars	Standards	Cost in Nrs.	Unit	Remarks
Land	127	442,936.00	m ²	@ Rs. 1,000,000 per Ropani (509 m ²)
Infrastructures	Minimum basic	65,400.00		Rs. 527 per net m ²
•	Roads and drainage			of land.
•	Water			
•	Electricity			
•	Solid Waste			
•	Sewer			
Shelter	35	105,000.00	m ²	@ Rs. 3,000 per m ²
Total		613,336.00		

Source: Issues in Housing Development, 1990.

Table 6: Housing Affordability, 2000

Particulars	Standards	Cost in Nrs.	Unit	Remarks
Land	80	625,000.00	m ²	@ Rs. 4,000,000 per Ropani (509 m ²)
Infrastructures	Minimum basic	96,000.00		Rs. 1,200 per net
•	Roads and drainage			m ² of land.
•	Water			
•	Electricity			
•	Solid Waste			
•	Sewer			
Shelter	35	210,000.00	m ²	@ Rs. 6,000 per m ²
Total		931,000.00		

also points out some facts about costs of land and shelter.

Galfutar Housing Project (Sites and Services) initiated and executed by government provided serviced (road, electricity and drainage, water partially) land supply at subsidized rate cost⁸ Rs. 250,000 per plot of size 127 m² during early 90s. Cost of semi-serviced (road, drainage, electricity, communication) land plot of size 127 m² in Kuleswor Housing Project was Rs. 4000,000, which is similar to the cost of a serviced plot in Gongabu Land Pooling during mid 90s. These land development experiences showed that cost of serviced land is 2.5 times the cost of raw land.

In present context, a 35-m² house in 80-m² plot costs Rs. 931,000.00 within Kathmandu metropolis. Land cost alone constitutes 78 % of the total cost. In such a case, a household will have to pay monthly installment of Rs. 9000.00 provided the loan at interest rate of 16 % to be paid over a period of ten years. This means a household should have at least a monthly income of Rs. 36,000 so that 25 % of income i.e. Rs. 9000.00 would be paid for housing. This indicates that majority except for a small segment of the top 27 % of households (See Table 2)

cannot afford a decent quality housing in Kathmandu unless significant roles would be played by private and public sectors including individual households, housing finance institutions and builders in housing sector.

5.3.5 Housing Finance

Self-financing mechanism is the predominant form of housing finance in Kathmandu. They are mostly based on sources of family savings in the forms of cash or convertible assets. Therefore this is intrinsically tied to the process of owner-builder housing supply in Kathmandu. Other than that, one of the most common forms of formal housing finance mechanism is the loan for bank employees at concessionary rates. This is prevalent in both government as well as private banks. Before the year 1991, Employees' Provident Fund was also one of the major sources of housing finance for regular government employees. The amount of loan that is borrowed in both the cases is however very small and that contributes only a fraction of housing costs. Women's cooperative society also provides small loans to its members for house construction¹¹

5.3.5.1 Formal Housing Finance Institutions

Nepal Housing Development Finance Company, a semi-private financial institution is a potential institution for providing housing credits for owner-builders and housing producers. Mobilization of various resources for housing as a financial intermediary, self-implementation of housing projects or shares in such programs and making loans available to individuals or organization for the purpose of housing are its major objectives.

Establishing and expanding land and housing development companies, carrying out consultancy services in housing sectors, targeting lower-income beneficiaries and providing soft loans of small amounts for middle term with an NGO as collaborators in beneficiary selection are their long-term visions, which till date have not been tried out. On the other hand, the company has started providing loans for other purposes than land and housing development. The loans so far made available by the company were limited to NRs. 500,000 with an interest rate of 20 percent in a short payback period of five years for the purpose of house construction, maintenance and expansion. The mortgage to credit ratio is 50 percent.

Similarly, Nepal Housing and Merchant Finance Company Limited founded in 1995, the only private company dealing in the housing sector, has a vision of providing wider range of loan amounts in long-term repayment periods for all income groups. Though the maximum individual loan is limited to 3 million within a payback period of 15 years, the higher percentages of loans were being issued at amounts of 3 to 5 hundred thousand with a payback period of five years. The rates of interests differ with the amount of loans and the collateral needed is 33 percent of the total borrowed amount. Generally land is used as collateral for acquiring loans for construction of houses. For smooth repayment, it has a policy that the borrower's income should be three times that of the monthly installment of repayments. In spite of having a wider vision of long-term loans, they are not yet in operation. The loans are only accessible to middle and higher middle-income sections of people in the city.

The current scenario of housing finances whether public or private sector indicates that housing finance is still out of reach of the majority of people from the lower-income brackets. Specifically, the urban poor from slums and squatter settlements without secured tenure and secured jobs are simply excluded from access to any of these formal housing finance systems.

5.3.5.2 Informal Savings and Credit Initiatives

During the group discussion with representatives of squatter settlements in 14th August 2000, it was known that the community groups had already mobilized about Rs. 1,800,000.00 from their monthly voluntary savings in 45 communities of low-income squatter settlements. Small amounts of loans were given to the group members on a rotational basis for house improvements and other emergency needs. This indicates a considerable strength in community savings in housing finance.

5.3.6 Plans and Policy Framework in Housing Development

Government of Nepal had no formal plans and programmes related to housing until its 6th Five Year Plan, which gave action to some land development programmes to provide housing provisions for civil servants although Kathmandu Valley Physical development Plan was adopted in 1976 in accordance with Town Plan Implementation Act 1973 with the formation of Kathmandu Valley Town Development Committee. The physical development plan also identified three residential areas for planned residential development. The 7th Five Year Plan (1986-91) stressed the action programmes about basic needs related to shelter, food and education. The "National Housing Survey" was conducted in 1991, which indicated the need of 25,00,000 new buildings to be constructed and about 732,000 old dwelling units to be upgraded in Nepal by the year 2006.

The 8th Five Year Plan (1992-96) stressed the need for development and supply of serviced residential plots, provision of dwelling units, development of building research, increase in housing development investments, training and technology transfers for promotion of local and low-cost construction materials and technology. Although, the 8th plan had recognized upgrading of existing dwelling units were more cost effective than building new dwelling units, no legal and policy initiatives were undertaken in this direction. It was at the end of 8th Plan that Ministry of Housing and Physical Planning came up with a concrete National Shelter Policy in collaboration with HABITAT/UNCHS in 1996.

5.3.6.1 National Shelter Policy, 1996

The National Shelter Policy stresses the importance of housing sector for its role in economic development, poverty alleviation and promotion of living standard of people. The basic concepts upon which the policies have been formulated are:

- ❑ Creation of favorable atmosphere as mentioned in the constitution of Nepal in 1990 in order to fulfill the need of dwelling units in the form of basic need of the entire people.
- ❑ Need to recognize the important role of dwelling units in poverty alleviation and economic development in addition to the role of improving living standard of the people.
- ❑ Shelter to be taken as an integral part of nation's economic productivity as an accumulated asset and capital.
- ❑ Based on the principle of financial self-reliance, the government should act as an enabler as well as a facilitator for the fulfillment of shelter targets and the private sector should play important roles in formal and informal sectors.

Under the above concept, the policies are:

Increasing the production of dwelling units and repair and maintenance of existing stock.

- ❑ Increasing the availability of dwelling units of proper and suitable value and increasing supply of serviced land plots.
- ❑ Increasing the necessary basic infrastructure services and facilities and expanding the same.
- ❑ Improvement in the use of building materials and construction technology.

Promote effective mobilization and allocation of financial resources.

- ❑ Mobilizing credit delivery mechanisms for land and housing to be floated at the formal and community levels on an experimental basis.
- ❑ Developing the process of cost recovery of public investments in land, physical infrastructures and other services.
- ❑ Increasing financial self-sufficiency of the shelter sector.

Organizational Improvements

- ❑ Clarification of the role of public and private sectors for implementing National Shelter Policy
- ❑ Making necessary institutional arrangements for planning, policy-making, implementation, training,

research and evaluation on sectors related to the development of dwelling units.

- ❑ Introducing appropriate and effective laws and regulations with amendments in the existing ones.
- ❑ Preparing database to make decision-making and monitoring process on shelter development simple and effective.

The implementation strategies for fulfillment of shelter policy are:

- ❑ The existing shelter construction and production process in the private sector, which relies primarily on the individual owner builder system, will be improved and strengthened as needed.
- ❑ In view of the limited means and resources available in the shelter sector, the government must play a facilitating role to make people capable of successfully implementing shelter policy.

5.3.6.2 9th Five Year Plan

The 9th five year plan has realized that government alone cannot fulfill the housing needs of people. Mutual participation of government and private sector is a must for development of housing sector. As per objectives of the 9th Plan, it has stressed to associate housing development with the overall economic development of the nation and to strengthen housing system through institutional development of integrated housing system. It also focuses on the development of dense residential areas in geographically appropriate locations.

To identify roles of women in housing (building and maintenance), promotion of cost effective and safe houses through flow of housing loans, formulation of building policies and regulations as well as its implementation by concerned institutions through Housing Act are other major strategies of 9th Plan. Management of unplanned settlements of urban areas, development of integrated action plans for provision of infrastructures as well as extending land pooling programs in appropriate locations of Kathmandu Valley to supply housing plots are also of major concern of the 9th Plan.

5.3.6.3 Nepal: National Plan of Action (Habitat II)

The shelter sector in the National Plan of Action, 1996 under the guiding principles of National Shelter Policies, seeks to adopt an enabling approach and encouragement of the private sector to take a leading role at both formal and informal levels. The enabling approach consists of

fiscal incentives, reallocation of resources in government sector, enhancing role of women in housing, review of existing legislation and co-ordination between various range of actors.

The objectives of the National Plan of Action for shelter are:

- ❑ To increase the supply of affordable serviced housing plots and dwelling units
- ❑ To create an improved legal and regulatory framework
- ❑ To promote mobilization and effective allocation of financial resources
- ❑ To improve the use of the building materials and construction technology
- ❑ To maintain and improve the existing housing stock and
- ❑ To improve the institutional framework for shelter sector

In order to fulfill these objectives, various activities and respective actors have been identified in the plan of action. The Housing Ministry has to perform enabling roles by sponsoring and promoting public private partnership for land and housing development programmes for low-income households. It also has to introduce new laws and regulations concerning building codes, apartments and housing cooperatives. So far, the government has only passed the Apartment Act, which came into practice recently. The building codes have to be developed. The building by-laws have to be revised and special regulations should be developed for Metropolitan cities. It is also stated that the government should promote shelter finance mechanisms, however, the plan fails to make specific provisions for providing fiscal incentives to private sector finance companies to promote shelter finance mechanisms to reach low-income households.

As for technology transfers, the National Plan of Action stresses government institutions to take lead roles in establishing building materials technology research and promotion centers at various levels, both for development of research and for information dissemination. The government should also provide tax incentives for the use of local materials and technology for building construction. It is also stated that the government should take appropriate initiatives for shelter sector planning and coordination as well as human resource development. Launching of home improvement schemes including upgradation of slum and squatter settlements is also considered as one of the activities for national and local governments. However, these schemes have not been implemented till date.

5.3.6.4 Plans and Policies Related to City Squatters

There are no clear-cut policies related to city squatters in Kathmandu. Although the National Plan of Action stated to upgrade and manage unplanned settlements, the detail plans have never been worked out. The Concept Plan for Bishnumati Corridor by Halcrow Fox and Associates, 1991 had proposed relocation of existing squatters along Bishnumati River bed affected by the proposed development of the Bishnumati Link road. The proposed relocation scheme included low-income housing project in another site nearby which should be supported by closely related programs such as long term housing loans, appropriate saving schemes, lending parameters specially targeting the poor or low income households to invest in income generating activities as well.

Another policy proposed was upgrading physical conditions including access roads, water supply and sanitation and solid wastes of existing settlements regardless of their absence of security over the land tenure. The demolition of some houses and eviction of squatters of a settlement at Kohiti had also taken place during the implementation of Municipal Infrastructure Improvement Project in 1997. The squatter settlements in some wards were given temporary security with house numbers by concerned ward committees and with the



Table 7: Institutions involved in land and housing development at various levels :

LEVELS	INSTITUTIONS	ROLES AND RESPONSIBILITIES
At Central Government Level	<ul style="list-style-type: none"> • Ministry of Physical Planning and Works, DHUD • Depts. of Land Survey and Land Registration • Line Agencies 	<ul style="list-style-type: none"> • Policy guidelines, action plans • Transfer of land titles, registration, cadastral maps, land holding records • Provision of services
At Local Level	<ul style="list-style-type: none"> • KMC (UDD) • KVTDC/KVTDIC • Private Investors • Financial Institutions • NGO/INGOs 	<ul style="list-style-type: none"> • Implement Land development programmes, building permits, regulations, framing bye laws, • Implement Land development programmes, building regulations, by-laws • Land/Housing Development Programmes • Short term loans with mortgage • Lobbying for housing rights/ improvement of physical environment of slums and squatters • Raising awareness among local people

wards' recommendations they had been able to acquire other physical infrastructure services like electricity and water. Moreover, squatter policies in cities are merely *ad hoc* than concrete.

5.3.7 Institutional and Legislative Framework in Housing

The current institutional framework for land and housing development in Kathmandu is rather fragmented and uncoordinated. There are several government institutions, private institutions and line agencies working without proper coordination in the housing sector thereby bringing in duplication and overlapping of roles and responsibilities. For instance, Kathmandu Valley Town Development Implementation Committee is executing Land development exercises in the city as well as KMC is also executing Land Pooling project within the municipality.

The Urban Development Department of KMC is a sole authority to plan, execute and implement land and housing development projects in Kathmandu city. Similarly, Public Works Department of KMC could be directly involved in infrastructure provisions under the broader guidelines of other central government line agencies. Till date, provision of infrastructures for housing is carried out by government

line agencies. Though, the Urban Development Department at present is executing Land Pooling exercise with financial and technical assistance from ADB, the department is not yet capable in terms of its own resources both technically and financially to plan and execute other similar programmes. Lack of adequate information base is also a major constraint.

On part of legislation, the devolution of powers and functions to municipalities as local self-governments is still unclear, as there exists many inconsistencies in the Local Self-Governance Act itself, which recently came into practice. However, framing and specifying of land use map of municipality area and its implementation, preparation of housing plan and its implementation, carrying out plans for provision of infrastructure services and their implementation, carrying out tasks for building permits within municipality area, framing of building bye-laws, maintenance of records of municipal population, houses and land, and protection of barren and public land are some explicit duties and functions of the municipality under LSG Act, of which some are overlapped with Kathmandu Valley Town Development Committee and some with Kathmandu Valley Town Development Implementation Committee.

On the other hand, the present regulation for land and housing development is inadequate. There are no special regulations on land development rights, land sub-

divisions and land uses. The housing standards are either too high for majority sections of households to afford in which case the owner builders are forced for non-compliance with local codes and standards. Moreover, lack of accountability and weak enforcements, poor mechanisms for monitoring and control on part of the responsible institutions are major causes for haphazard development of unplanned settlements in Kathmandu.

The Apartment Act 1997 has, nonetheless, given authority to municipalities and private sectors for investment in mass housing. The current land ceilings, building regulations and by-laws discourage them benefiting from the act due to various restrictive and inappropriate requirements that are uncongenial to investors such as limitations on land holdings, floor area ratios etc.

5.3.8 Housing Construction Technology

Housing construction is a low technology labor-intensive activity, which requires fairly less imports of raw materials. Use of domestically produced materials is one of the major advantages for the building material industries. In the same way, absorption of local skilled, semi skilled and unskilled laborers also contribute greatly to the labor market of the city. However, the housing construction technology in the capital city has not changed much except for few of the higher income group of households.

Additionally, there is inadequate research on affordable construction technology such as low-cost housing for poor households. There are no incentives for promotion of local low-cost building materials for housing construction such as incentives on building permit fees etc.

5.3.9 Housing Conditions (Physical and Environmental)

The physical and environmental condition of housing in Kathmandu is briefly overviewed in section 5.3.1.3 The physical condition of housing could be characterized in terms of typology of the housing construction technology. The traditional construction technology (mud-brick wall with tile roofing) has been replaced by cement mortar brick walls with concrete roofing with many additional rooms to be allocated for rental units. It could be said that majority of the owner occupied, owner built or purchased houses in Kathmandu are permanent or semi-permanent with brick cement mortar walls and concrete roofings. More than sixty percent of the houses in Kathmandu belong to this category. These houses are connected with, water supply lines from NWSC and electricity lines from NEA. Majority of these houses have connection to sewerage mains. About 43 % of Kathmandu households are connected to NWSC sewerage system (Cities Data Book, 2000) and others are served with septic tanks and soak pits.

The conditions of low -income rental housing is comparatively poor with poorer levels of services. Based on the study of 24 cases conducted by Lumanti in 1997, it is known that 95 % of families with average size 4.8, rented single rooms with an average size of 120 square feet, which indicates overcrowding occupancy. Only 87 % had piped drinking water supply and 36.2 persons share a toilet. It is indicated in the study that conflicts with owners on irregular rent increment and forceful evacuation are very common. Lack of cleanliness and lack of responsibility for maintenance are also major problems of rental housing. Aside from this, substantial rental housing units in

dilapidated old houses in Kathmandu also suffer from the same physical and environmental conditions of inadequate floor spaces, inadequate services, inadequate light and ventilation.

The physical conditions of squatter houses are also very poor. The built-up areas of houses range from 120 square feet to as large as 1200 square feet. The building structures are normally temporary made of bamboos and mud walls, plastic and thatch roofs in newly emerged settlements, which are very prone to natural and man-



A Typical Condition of Squatter House

made hazards. As settlements grow older, the structures are more consolidated with permanent constructions of walls and roofs (bricks and concrete, metal sheets).

Although all households in squatter settlements have access to some form of water supply whether they are sources from Water Supply Corporation, community stand posts, bore or tube wells or community storage tanks, majority of households served with tube and bore wells are

prone to water borne diseases because of leachates and contamination of ground water. Less than 25 percent of households have safer sanitation provisions in these settlements. Open defecation, shared toilets, pit latrines with unhygienic disposal of human wastes are common. The sanitary conditions are even worse because of kitchen garden activities such as unsafe keeping of livestock, (pigs, ducks and hens) for income generating activities by squatters.



Settlement affected by Open Sewer at Maharajgunj

However, lack of co-ordination within institutions and inability to internalize the projects and programmes are serious drawbacks and weaknesses due to which the programmes are difficult to sustain. Lack of adequate city specific information base regarding housing, lack of technical and financial capabilities and lack of appropriate laws and regulation are attributed to institutional weaknesses of KMC to undertake housing development and slum improvement programmes.

5.4 SWOT ANALYSIS OF EXISTING HOUSING SITUATION

Based on the above context, a SWOT analysis is conducted to identify what the strengths and weaknesses the city has in terms of housing. To formulate broader vision for housing development in the city, it is also imperative to recognize the potentials and opportunities that are existing in the city by taking advantage of which city's future housing situation could be envisaged.

5.4.1 Assessing Strengths and Weaknesses in Housing Development in KMC

Having a separate institutional setup, Urban Development Department within KMC, could be a strength of KMC in terms of planning, implementing and monitoring various urban development works including land and housing development, building controls and regulations. KMC being able to implement various donor-assisted projects including MIIP, TUGI, KVMP indicates increasing confidence and commitment of municipality over urban improvement initiatives.

While the new housing policy and acts made provisions for encouraging private sectors, there are multiple private and public institutions already working on areas of housing development in Kathmandu, although they operate limited programmes that do not cater to all economic sections of the city population. The private sector should be strengthened through improved incentives on taxes, building materials, improved regulations and standards. There is also strength in informal mechanisms of savings and lending for house improvements in low-income settlements that need little interventions and capacity building.

5.4.2 Assessing Opportunities and Threats in Housing Development

There is a huge potential for housing development to be seen as prioritized economic sector for there is growing demand for affordable housing in the city due to continued in-migration of people from various parts of the country. There is a potential of utilizing migrated labour forces into the construction technology from which the city can benefit. As there is a continuous threat of encroachment on marginal, unattended public lands by squatters in the absence of proper policies and weaker enforcements, there

is also potential for exploring public private ventures to prevent further developments of squatter settlements. Open, unused and vacant marginal lands under the jurisdiction of KMC could be protected and developed as low-income residential areas in partnership with private institutions.

Despite the absence of city specific policies and programmes for slums and squatters, the communities are highly organized and are gradually improving their conditions at their own costs, which shows their potential for mobilization into participatory home improvement programmes. Increasing pro-poor and supportive interventions of NGOs, CBOs and donor agencies also open avenues for the improvement of slums and squatter settlements in the city. There are also equal opportunities for existing finance companies and co-operatives to invest in housing development programmes in conducive environment, for which KMC could play a facilitating role.

5.4.3 Summary of Issues in Housing, Slums and Squatter Settlements

The diagnosis of current housing situation and its SWOT analysis reflects various issues pointed out below, which need to be seriously addressed. They also incorporate prioritized issues identified by stakeholders. They are:

5.4.3.1 Serviced Land Plots

- ❑ Cadastral records not updated according to land use change which makes land acquisition difficult for planned development of plots.
- ❑ Haphazard subdivision of land plots without adequate services.
- ❑ Housing plots becoming increasingly unaffordable and not catering to the demands of majority of urban poor population.
- ❑ Limited public sector land development programs which are not responding to the increasing demands of urban poor households

5.4.3.2 Institutions Legislation and Regulation

- ❑ Lack of institutional framework with clear-cut responsibility and accountability (urban development department, planning department within KMC)
- ❑ Duplication of roles with KVTDC (land development, monitoring activities)
- ❑ Lack of institutional support for public private partnership in land and housing sector
- ❑ Lack of adequate laws and regulations (no laws for housing cooperatives, building codes, building standards etc.)

- ❑ Norms and standards are not appropriate for equitable benefit of urban poor
- ❑ Weak enforcement of rules of law and regulations

5.4.3.3 Housing Construction Technology

- ❑ Lack of research, development and promotion of local low cost building and construction technology
- ❑ Lack of policies and fiscal incentives for promotion of low cost housing technology

5.4.3.4 Housing Finance

- ❑ Housing finance is inaccessible to majority of urban households especially the poor
- ❑ Housing is not seen as a priority sector of investment by financial institutions
- ❑ Inadequate housing finance cooperatives and lack of programmes to reach urban poor
- ❑ Lack of fiscal incentives for financial institutions to reach the urban poor sections

5.4.3.5 Slums and Squatter Settlements

- ❑ Existence of urban squatters due to unavailability of adequate and affordable housing and land plots as per economic status of citizens
- ❑ Squatting or unauthorized occupancy of land and buildings
- ❑ Absence of clear-cut policies on management of urban squatters
- ❑ Poor quality of housing units (slums) without adequate infrastructure services
- ❑ Lack of tenure security hindered the development processes in terms of social, physical, economic as well as human development of squatter settlement areas
- ❑ Lack of programs for upgrading slums and urban poor settlements

5.4.4 Goal and Vision for KMC

A well managed capital city with housing for all is a common vision for KMC agreed by stakeholders during the First Stakeholders' Meeting. Tackling the issues identified and prioritized, a strategic approach to realize this common vision for KMC on one hand consists of a series of recommendations for new housing markets to work in the city for the provision of affordable housing units, for improved housing finances that caters to all economic sections of population, and develop on the other hand, a series of do-able actions or breakthrough initiatives to upgrade existing slums and squatter settlements and preventing further growth of new shanties and slums.

5.5 STRATEGIC FRAMEWORK FOR HOUSING DEVELOPMENT

To enable housing sector to function well in the city, KMC could adopt various operational instruments that stimulate housing demand, facilitate the process of housing supply and help create overall institutional framework for managing housing sector, ensuring adequate access to housing for the urban poor. The issues and implications in housing are illustrated in Table 9. Refer CDS for details on recommended housing strategies.

5.5.1 Slum and Squatters Action Plan

A slum and squatter action plan is developed after a series of discussions and consultations with stakeholders. Identification of various activities and actors to be involved are listed below in Table 8.

Table 8: Slum/Squatter Action Plan

S.No.	ACTIVITIES	ACTORS INVOLVED
1.	Inventory of existing slums and squatter settlements, gather population, household and other socio-economic information.	KMC, NGOs, CBOs
2.	Classification of slums as per conditions and determination of the extent of upgradation required	KMC, Professionals, Researchers, NGOs
3.	Minimum regulation for rental housing as rental slums are predominant	KMC, house owners, tenants.
3.1	Provision of minimum basic services <ul style="list-style-type: none"> <input type="checkbox"/> Access <input type="checkbox"/> Water supply <input type="checkbox"/> Electricity <input type="checkbox"/> Toilets <input type="checkbox"/> Safe disposal of wastes 	
3.2	Structural conditions to ensure minimum safety factor for users/tenants	
3.3	Maintenance of building structure as well as other facilities regularly by users	
4.	Preparation of slum upgrading plans based on point 2 and implementation.	KMC, NGOs, Slum communities
5.	Classification of squatter settlements in terms of their location, extent of development and safety of site	KMC, Professionals/planners
6.	Identification of settlements or houses which need to be relocated to other sites due to development pressures, environmental hazards etc.	KMC, line agencies
7.	Settlements to be upgraded should be studied in detail of both physical and social characteristics.	KMC, NGOs, Researchers
8.	Prepare settlement improvement plans and programs which include <ul style="list-style-type: none"> <input type="checkbox"/> Regularization of plots if needed <input type="checkbox"/> Infrastructure layouts and extensions <input type="checkbox"/> House improvements/ construction of new structures 	KMC, NGOs, CBOs
9.	Mobilization of communities/households for participatory actions	KMC, NGOs, social workers
10.	Mobilization of financial and technical resources	KMC, Donor Agencies, NGOs, Professionals.
11.	Provision of tenure security on the basis of long term leasehold or collective ownership	KMC, NGOs, Legal experts, communities
12.	Low cost alternatives affordable to users (squatters) should be developed and implemented such as standard communal facilities (shared toilets, community taps and wash areas)	KMC, Professionals/planners, CBOs
13.	Prepare alternative plans such as land sharing ⁹ in commercially viable sites for example Ramhiti, Shankhamul and project feasibility to be	KMC, professionals and private consultants

⁹ Land sharing is an option for squatters carried out in Thailand where squatted land is shared between land owner and squatters. Part of land commercially viable is sold and developed into commercial use while squatters are re-housed in latter portion of land with densification as smaller plots of 20 sq mts in size are sold to each households. Cross subsidy is given through selling of commercial plots and long term payment period for plots of land.

Table 9: Housing Development and Management of Slums/Squatters in KMC - Issues and Implications

ISSUES	IMPLICATIONS	ACTORS
Serviced Land Plots		
1. Cadastral records not updated as per land use change and land use plan not being indicative.	<ul style="list-style-type: none"> ❑ Difficulty in land acquisition process for planned development of plots ❑ Difficulty in regulating building control and town development control. ❑ Investment potential not identify and inappropriate land valuation 	KMC (UDD) to take leading action in co-ordination with KVMP, Department of Survey, Department of Land Reform, KVTDC
2. Haphazard development of land without adequate or no infrastructure services and lack of machinisms to govern/regulate land subdivision.	<ul style="list-style-type: none"> ❑ Expensive service provisions, inefficient and incompatible land uses ❑ Overburdening pressure on limited infrastructure and unhealthy/unsanitary living condition 	MPPW/DUDBC, KMC (CPC,UDD), Professionals, consultants, Line agencies
3. Housing plots becoming increasingly unaffordable, limited public sector land development programs not catering to majority of urban middle and low-income households	<ul style="list-style-type: none"> ❑ Urban middle and low-income households are forced to live in low rental and shared accommodation without adequate services ❑ Increase in informal land development, encroachment of public land and buildings for unauthorized use. 	KMC taking lead to regulate Private builders/developers, DUDBC, KVTDC, MLD, Private developers, financiers, Line agencies
4. Shortage of dwelling units	Overcrowding and pressure in existing units	KMC taking lead to regulate Private builders/developers, MPPW/DUDBC, Line agencies, Financers, house owners
Institution and Legislation		
1. Inadequate institutional capacities, lack of clear-cut responsibilities and accountability	<ul style="list-style-type: none"> ❑ Functions of UDD are limited to issuance of building permits ❑ Difficulty in planning and implementing urban development works due to lack of financial and technical resources ❑ Some building constructions are not conforming to existing codes and standards due to lack of accountability 	KMC in assistance with training institutions, DUDBC, donor agencies
2. Lack of adequate laws and regulations (housing co-operatives), inappropriate codes and standards	<ul style="list-style-type: none"> ❑ Haphazard development ❑ Poor tax base ❑ Unaffordable to maintain standards for low-income families and therefore non-compliance with regulations ❑ Bureaucratic delays and hassles for private developers to undertake land and housing development activities 	KMC to play facilitating role, Department of Law, DUDBC, Department of land revenue and land survey, Private institutions, Professionals and specialists, Cooperatives finances, Communities
Housing Construction Technology		
1. Lack of research development for the promotion of low-cost technology for innovative infrastructures, innovative building construction and innovative housing processes.	Practice of costly construction technology whether or not it is required resulting to ineffective use of resources	KMC, DUDBC, RONAST, RECAST, IOE, Research Institutions, NGOs and Professionals, Private builders, Use of researches from Indian Institutions through scholars

ISSUES	IMPLICATIONS	ACTORS
Housing Finance 1. Limited formal housing finance institutions operating in the city and policies are unfavorable to majority of lower income families, majority of loans available are for other purposes than housing development.	<input type="checkbox"/> Urban poor families cannot borrow from formal institutions, informal credits are more expensive and capital sum if borrowed are insufficient for house construction for them.	KMC, Central Government (Ward committees), NGOs, Finance institutions, Donors, Communities, Households
Slums and Squatter Settlements		
1. Lack of infrastructure services and substandard rooms in rented slums in inner city areas	Health hazards to inhabitants, threats of fire, quakes and other hazards.	KMC, Department of Law, DHUD, Tenants, Owners
2. Growing squatters and continued unauthorized occupancy of public land and buildings due to absence of clear cut policies regarding urban squatters	<input type="checkbox"/> Threats of further encroachment to unused public land and buildings <input type="checkbox"/> Obstructions for development other programmes on those sites <input type="checkbox"/> Threats of eviction to squatters	KMC, MPPW, Ward committees, Squatter Communities, Private sector, Donors, Federation of Squatters, Department of Land Reform
3. Lack of tenure security due to illegal occupation	<input type="checkbox"/> Threats of eviction hindered physical and social development process in squatter settlements resulting into substandard houses, poor quality of infrastructure services <input type="checkbox"/> Lack of development programmes for upgradation of houses and services	KMC, Land Survey department, Squatter (CBOs), Communities, NGOs, Donors, Line agencies, DUDBC

ANNEX 1:

Stakeholder Identification and Analysis for Housing, Slums and Squatter Settlements

S.No.	STAKEHOLDERS	WHAT IS THEIR INTEREST IN CDS ?	WHAT DO THEY EXPECT FROM A CDS ?	WHAT MIGHT THEY BRING TO CDS ?
1.	Mayor, KMC	Ownership, involvement.	Common Vision, Strategic guidelines and job descriptions for KMC.	Commitment for implementation.
2.	KMC Department Head (Urban Development Department)	Ownership and involvement.	Strategic guidelines for KMC.	Access to information, commitment for implementation.
3.	Ward Chairs (KMC)	Ownership and involvement.	Strategic guidelines for KMC.	Concerns, issues, local level information, identification of activities, programmes.
4.	Bimal Rizal, Planner (KMC, UDD)	Ownership and involvement.	Strategic guidelines for KMC	Access to information.
5.	Kishore Thapa, Planner (KVMP)	Involvement to address city-housing issues.	Strategic guidelines for KMC, city specific data and information	Access to information, suggestions on CDS outcomes, professional inputs.
6.	P. S. Joshi (Co-ordinator, CDS)	Ownership and involvement.	Common Vision, Strategic guidelines and job descriptions for KMC.	Access to information, commitment for implementation.
7.	Prafulla Pradhan, Planner	Inclusion for housing for urban poor (slums/squatters) in CDS	Strategic guidelines for KMC, for other actors.	Professional inputs, suggestions on possible squatter strategies.
8.	Laxman G. Rajbhandari (Planner, UDLE)	Involvement to address planning and housing issues in CDS.	Strategic guidelines for KMC.	Access to information
9.	Iswor L. Joshi, Planner (UDLE)	Involvement to address planning and housing issues in CDS.	Strategic guidelines for KMC.	Suggestions on CDS outcomes.
10.	Ms. Sumitra Gurung (Chairperson, Lumanti)	Involvement to address slums, squatter housing, women's accommodation, rental-housing issues.	Strategic guidelines for KMC, solutions for urban poor housing issues, rental housing issues.	Access to information about housing delivery systems, women housing alternatives.

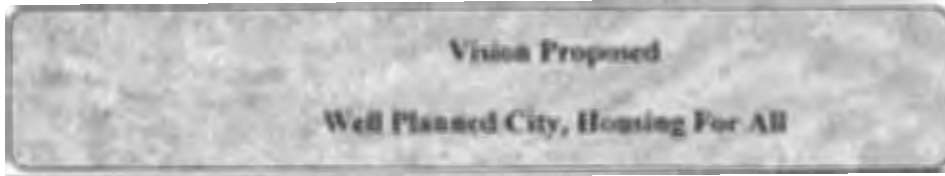
S.NO.	STAKEHOLDERS	INTERESTS	EXPECTATIONS	POTENTIALS
11.	Ms. Lajana Manandhar	Involvement to address slums, squatter housing issues, co-operation and partnership with KMC.	Strategies for urban poor and squatter settlements for their improvement.	Access to information about slum and squatter housing in KMC, interaction with squatters, site visits, initiating group discussions.
12.	Representatives of squatter settlements (15)	Bring squatter housing issues, issues of security of tenure.	Strategies for management of squatter settlements within KMC and action plans for their improvement.	Participation, information and co-operation.
13.	Real Estate/Private Builder (Kumar Lama/ Kathmandu residency) Sarju Shrestha	Involvement to address planning and housing issues in CDS.	Strategies for more private sector involvement in land developments.	Information about private land development projects.
14.	(Managing director, NH & MF)	Involvement to address Housing finance issues, problems of accessing loans for mass housing, lending housing loans for poor.	Strategic directions for KMC and private finance institutions for operating housing loans for poor, strategies for tax incentives.	Access to information about NH&MF operating strategies.
15.	Mr. Purna Kadarria	Involvement to address planning and housing issues in CDS.	Strategic guideline for KMC	Information

List of Representatives of Squatters in Focus Group Discussion Conducted on 14th August 2000

1. Indra Bahadur Gurung
2. Lakpa Lama
3. Bimala Tamang
4. Deepak Rai
5. Hukum Bahadur Lama
6. Balkrishna Pandey
7. Ganesh Rana
8. Shubha Bahadur Thapa
9. Dala bahadur Lama
10. Lal Bahadur karki

ANNEX 2:

Issues and Concerns Raised During First Stakeholders Meeting



Issues / Concerns/ Implications	Causes
1. Develop and strengthen financial institutions for housing and infrastructure development.	
2. Act on house rent system	
3. Control of illegal roadside encroachments and other encroachments on public lands.	
4. Availability of housing for various income groups	
5. Enforcement of building by-laws	<p>Impractical norms and standards, haphazard constructions.</p>
6. Unplanned development of houses	<p>Lack of physical development plan, poor enforcement of rules</p>
	<p>Lack of timely revision of plans and implementation</p>
	<p>Lack of co-ordination between agencies</p>
7. Mixed uses of land, need for land use categorization	<p>Unclear land use maps, land categorization is not as per urban use</p>

1. Development of squatters on public land and buildings

Absence of urban squatter policies, lack of affordable housing and land plots for urban poor

2. Urban squatters to be relocated outside valley

3. Permanency of tenure for squatters and unplanned settlements

Insecurity of tenure has hindered development process (human, social, physical, economic) in squatter settlements

10. Provision of security of land tenure for long staying squatters, KMC to assist in provision of services and housing rights

11. Solve squatters problem through stakeholders consensus

Need to integrate squatters to support informal economy of city

12. Management of squatters problems

Unmanaged squatters resulting to unhealthy living conditions

13. How to improve conditions of KMC squatters

14. KMC strategy to encompass management issues of squatters

15. Poor housing conditions

Lack of loan provision to construct economical housing facilities

ANNEX 3:
Photographs of Squatter Settlements



Squatter Houses at Ramhiti



Squatter Houses at Ramhiti



River Banking for Flood Protection in Squatter Settlement



River Banking for Flood Protection in Squatter Settlement



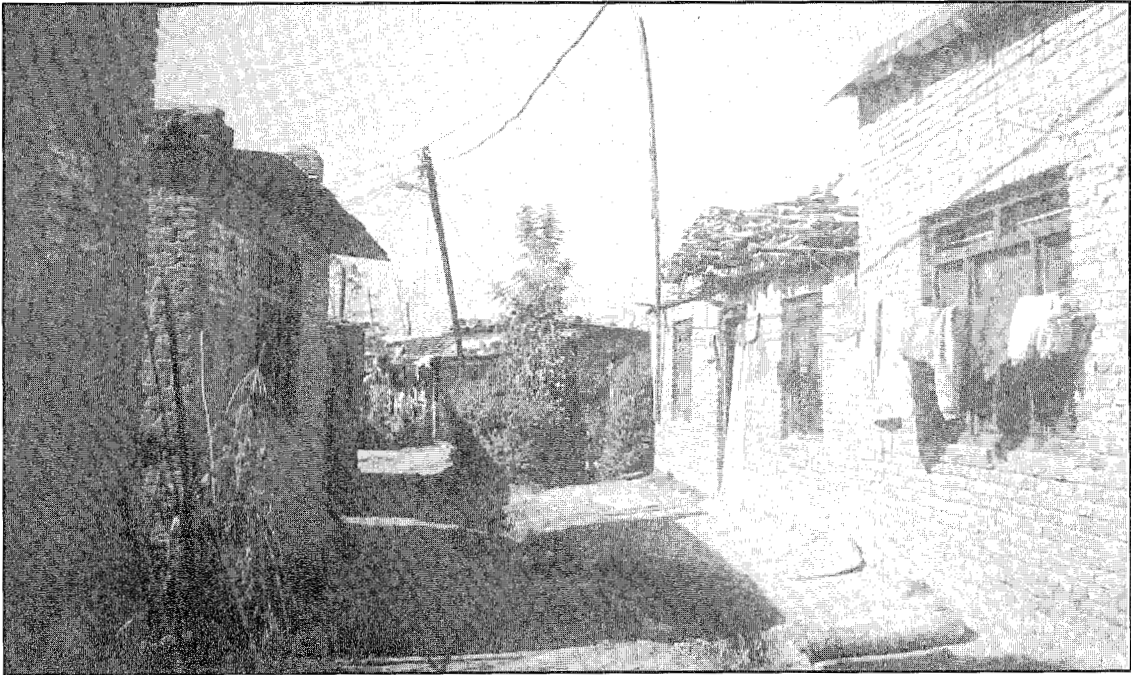
Informal Transactions of Land Taking Place



Squatting in Temple Squares



Community School at Ramhity



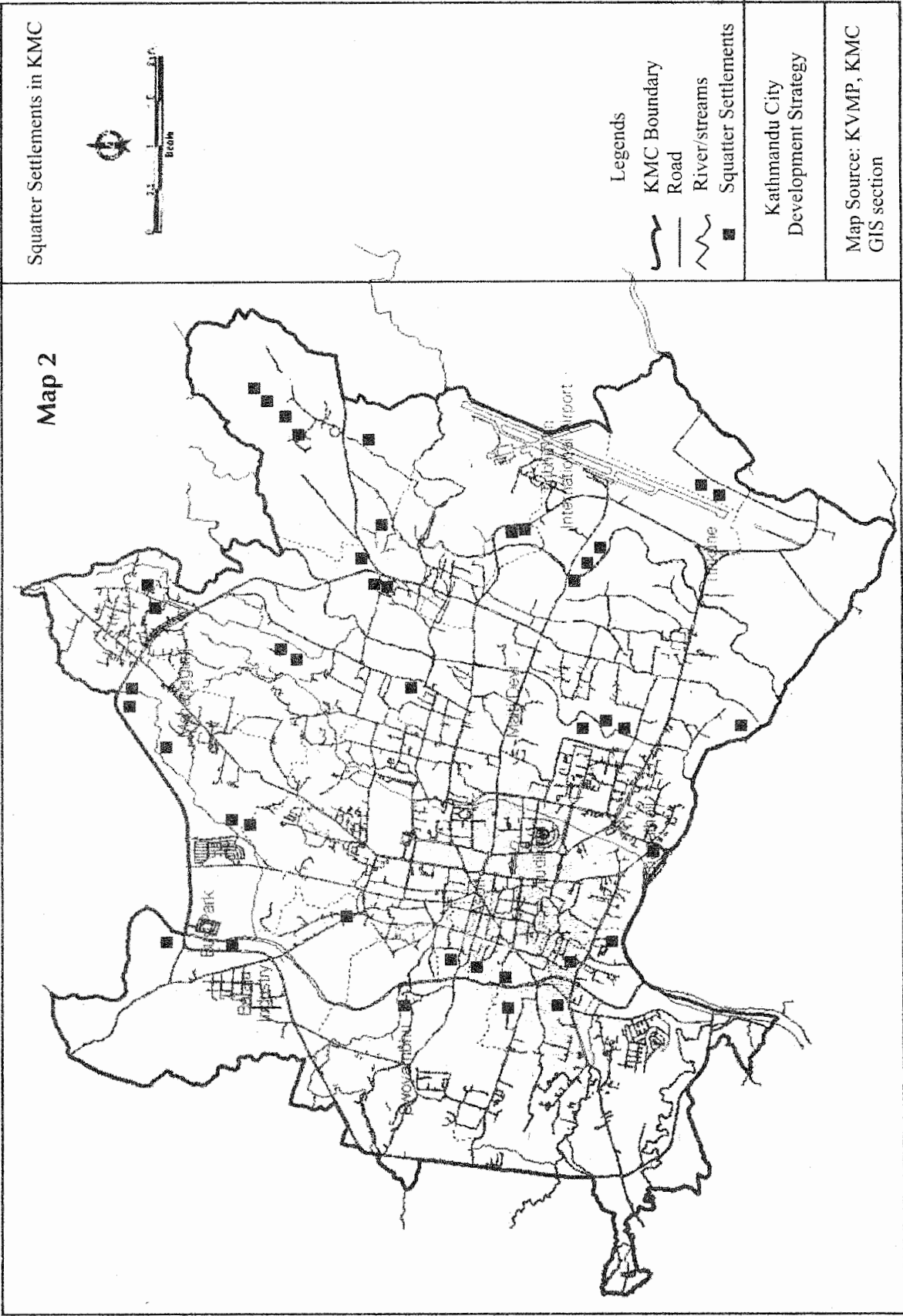
Access with Drain at Center Inside a Squatter Settlement

ANNEX 4:

Squatter Settlements in Public Land within Kathmandu Metropolitan City, July 2000

S.N.	Name of the Settlement	Ward no.	Yr. Settled	Population	No. of Households
1	Subigaon	6	1988	244	46
2	Ramhity	6	1971	1130	126
3	Mahankal	6	1978	70	14
4	Dhungan, Faika	1	1979	80	19
5	Pathibhara	4	1995	2000	187
6	Maiju Bahal	7	1981	135	27
7	Kumarigal	6	1993	65	13
8	Radhakrishna Chowk (Baunedhara)	3	1983	106	18
9	Mitrapark	7	1992	35	7
10	Bulbulae, Chabahil	7	1996	45	9
11	Kalopul, Chabahil	7	1994	30	6
12	Kalimati tole	8	1968	35	7
13	Tilganga	9	1981	95	19
14	Sinamangal, Pragatitol	9	1971	120	24
15	Chadani tole	9	1971	355	71
16	Gairi Gaon, Sinamangal	9	1996	105	21
17	Tilegada	9	1978	30	6
18	Shantibinayak Nagar	10	1988	180	36
19	Devinagar	10	1988	230	46
20	Palpakot jadibuti	35	1987	120	24
21	Nakati, Sinamangal	35	1992	65	13
22	Anamnagar	32	1994	80	16
23	Bishalnagar	4	1981	70	14
24	Chandole, Tunaldevi	4	1969	35	13
25	Khadipakha	3	1981	570	114
26	Dhumbarahi	4	1981	30	6
27	Ranidevi	29	1988	30	6
30	Dhikure, Tiligtar	3	1988	110	22
31	Ranibari, Samakhusi	3	1988	45	9
32	Samakhusi	29	1982	90	17
33	Sangam Tole, Samakhusi	29	1977	155	31
34	Kumaristhan	16	1993	390	74
35	Balaju	16	1976	625	125
36	Baipas	16	1986	180	38
37	Kuria Gaon	11	1981	65	13
38	Sorhakhutte	16	1982	30	6
39	Kalimati Dol	13	1982	330	56
40	Sanogaucharan	5	1981	30	6
41	Bhatbhateni	6	1994	55	11
42	Kalimatisthan	7	1975	95	19
43	Bansighat	11	1988	495	91
44	Hyumat	12	1993	220	44
45	Buddhajayanti Marg	16	1993	150	30
46	Siddhartha Vanasthali	8	1994	45	9
47	Tankeswor	14	1993	185	37
48	Swayambhu	14	1993	65	13
49	Dhaukhel	14	1981	200	40
50	Lazimpat Ranibari	29	1992	130	26
51	Lamatar, Gyaneswor			131	26
52	Pingasthan		1995	24	8
53	Dhumakhel	15	1971	216	39
54	Inaya Tole	19	1977	302	62
55	Ramghat	19	1980	164	32
56	Shankhamul	10	1971	545	96
	Total			11162	1888

Source: Lumanti, 2000



BIBLIOGRAPHY

1. Bjones and Joshi; Housing for Urban Poor, 1987.
2. Christian James; Housing Finance for Developing Countries, 1980.
3. DHUD, HMG-Nepal; National Plan of Action, 1996.
4. Dongol, Jun; Policy Measures for Upgrading Squatter Settlements in Kathmandu, Unpublished Thesis, 1998.
5. Flatheim and Skjorestad; Squatting of the Poor In Kathmandu - Survey and Strategies, 1992 and the Case Study of the Kohiti Squatter Settlement, 1993.
6. Halcrow Fox et al.; Kathmandu Valley Urban Development Plans and Programme: Concept Plan for Bishnumati Corridor, 1991.
7. Joshi, Jibgar; Housing and Urban Development in Nepal, 1991.
8. Joshi, Pradhan and Heinrichs; Report on Workshop of Housing and Urban Development Task Force for the 8th Plan, 1989.
9. Kathmandu Squatter Site Survey, 1990.
10. KMC; Cities Data Book, 2000.
11. Lumanti, WaterAid and Newah; The Water Supply and Sanitation Situation of the Urban Poor in the Kathmandu Valley, 2000.
12. Ministry of Law and Justice, HMG-Nepal; Local Self-Governance Act, 1999. URC - Lumanti; Legal Provisions on Housing Rights, 1999.
13. Ministry of Law and Justice, HMG-Nepal; Apartment Act, 1997.
14. MHPP/HMG-Nepal; National Shelter Policy, 1996.
15. Ministry of Public Works, Transport and Communication; The Physical Development Plan for the Kathmandu Valley, 1969.
16. Nepal: Urban Sector Strategy, Inception and Draft Report, 2000.
17. National Planning Commission/HMG-Nepal; The Ninth Plan, Human Settlements and Urban Development Section, 1996.
18. Nepal Housing Finance Company Limited; Annual Reports, 1995, 1996, 1997, 1998 and 1999.
19. Pradhan, P.M. S.; Squatting in Public Buildings, 19__.
20. Rabenau, B; Issues in Housing Development, UDLE, 1990.
21. Tanaka, Masako; Conditions of Low Income Settlements in Kathmandu: Action Research in Squatter Settlements, 1997.
22. Thapa, Kishore; Upgradation of Squatter Settlements in Kathmandu, Unpublished Thesis, 1994.
23. Thapa, Kishore; Existing Policies and Programmes on Land Development, 1995.
24. The World Bank; Housing: Enabling Markets to Work, A World Bank Policy Paper, 1993.
25. Urban Land Development in Nepal: A Review, 199_.

MUNICIPAL SERVICES

Sanjeev Bajracharya
MUNICIPAL ENGINEER

LIST OF ABBREVIATIONS

ADB	Asian Development Bank
BOD	Biological Oxygen Demand
CEDA	Center for Economic Development & Administration
DOR	Department Of Roads
EU	European Union
FNCCI	Federation Of Nepal Chamber Of Commerce and Industry.
INGO	International Non-Government Organization
IUCN	The World Conservation Union
JICA	Japan International Cooperation Agency
KMC	Kathmandu Municipal Corporation
KVDC	Kathmandu Valley Development Council
KVMP	Kathmandu Valley Mapping Program
KVUDPP	Kathmandu Valley Urban Development Plans & Programs
MDC	Municipality Development Council
MoF	Ministry of Finance
MPP&W	Ministry of Physical Planning and Works
MI	Ministry of Industry
MLD	Ministry of Local Development
MWR	Ministry of Water Resources
NEA	Nepal Electricity Authority
NGO	Non-Governmental Organization
NPC	National Planning Commission
NWSC	Nepal Water Supply Corporation
SEECON	Social, Environmental And Engineering Concern
SWMRMC	Solid Waste Management and Resource Mobilization Center
UDLE	Urban Development Through Local Efforts
WB	World Bank
WHO	World Health Organization

TABLE OF CONTENTS

List of abbreviations	182
Table of Contents	183
List of Tables	184
6. MUNICIPAL SERVICES	185
6.1 Existing situation	185
6.1.1 Municipal Institutional Capability	185
6.1.2 Existing City Profile	186
6.1.3 Staff Level In the Organization	186
6.1.4 Coordination With The Central Government	186
6.1.5 Urban Areas of The Kmc	186
6.1.6 Coordination With Agencies, INGO/NGO	187
6.1.7 Road Network	187
6.1.8 Network	187
6.1.9 Road Accessibility	187
6.1.10 Metropolitan Area Roads	187
6.1.11 Road Maintenance	189
6.1.12 Roads and Bridges	189
6.1.13 Traffic Conditions	190
6.1.14 Constraints with the Urban Area	190
6.1.15 Central Area Congestion	190
6.1.16 Kathmandu City Traffic	191
6.1.17 Institutional Constraints	191
6.1.18 Construction Capacity and Contractors Capabilities	191
6.2 Water Resources And Supply	192
6.2.1 Water Resources	192
6.2.2 Water Supplies	193
6.2.3 Drainage and Sewerage	195
6.2.4 Solid Waste Management	196
6.2.5 Electricity: Streetlight	199
6.2.6 Greening	200
6.3 Future Trends	202
6.3.1 Municipal Institutional Capability	202
6.3.2 Road Networks and Management	202
6.3.3 Water Resources and Supply	203
6.3.4 Drainage and Sewerage	203
6.3.5 Solid Waste Management	203
6.3.6 Electricity: Streetlight	204
6.3.7 City Greening	204
6.4 Gaps and Weakness	204
6.4.1 Institutional Capability	204
6.4.2 Road Network	204
6.4.3 Water Resource and Supply	205
6.4.4 Drainage and Sewerage	205
6.4.5 Solid Waste Management	205

6.4.6	Electricity: Streetlight	205
6.4.7	City Greening	205
6.5	Problems and Issues	205
6.5.1	Institutional Capability	205
6.5.2	Road Network	206
6.5.3	Water Resources and Supply	206
6.5.4	Drainage and Sewerage	206
6.5.5	Solid Waste Management	206
6.5.6	Electricity: Streetlight	207
6.5.7	City Greening	207
6.6	SWOT Analysis	208
6.6.1	Municipal Institutional Capability	208
6.6.2	Road Networking	209
6.6.3	Water Resources & Supply	210
6.6.4	Drainage and Sewerage	211
6.6.5	Solid Waste Management	212
6.6.6	Electricity: Streetlight	213
6.6.7	City Greening	214
	Bibliography	218

LIST OF TABLES

Table 1:	The KMC at a Glance
Table 2:	Operation of Service Sectors
Table 3:	Road Classification within KMC
Table 4:	Traffic Flow in the Major Roads of KMC
Table 5:	Average Monthly Discharge (m ³ /s) of Rivers in the Valley
Table 6:	Groundwater Extraction for Various Uses ('000/day)
Table 7:	Water Availability
Table 8:	Population Served by Piped Connection.
Table 9:	Consumer Survey, W/S
Table 10:	Industrial Water Use
Table 11:	Non Domestic Demand
Table 12:	Non NWSC Water Use
Table 13:	Wastage of Water
Table 14:	Efficiency of Sewerage
Table 15:	Electricity Sub-stations and Capacities
Table 16:	Municipal Services - Issue and Implications

6.

Municipal Services

The current trend of decentralization of central authority to the local authority has already started empowering the local authorities. Building the capacity of the local authorities and promoting good governance principles such as participation, transparency, accountability, rule of law, equity and efficiency are pre-requisites for city development.

6.1 EXISTING SITUATION

Current Status

Local Development, Physical Planning and Works, Population and Environment, Water Resources, Industry, Agriculture, Forestry, Education, Tourism, and Finance are the Ministries. More than fifteen sectoral Department and three District Development Committees are involved in governing, planning and managing Kathmandu Metropolitan City.

Besides the government authorities, civil societies, NGOs and some private companies are also involved in the process of developing Kathmandu Metropolitan City. They provide an opportunity to the citizens to be involved in the process of city development. In the past few years, the media, including print media and FM radio stations have been playing a vital role in raising public awareness.

Sectoral Status

This section deals with the present situation of the services provided by KMC in the following fields. The major relevant sectors are, the Municipal's institutional capability, road network and management, water resource and supply, drainage and sewerage, solid waste management, electricity, street lighting and the city's scenic beauty. It also explores the problems & issues faced by KMC at the moment.

Most of the Municipal services are inter-dependent and inter-linked. It is therefore not possible to have a good drainage system without good solid waste management. The key to successful management is the coordination and integration of the physical infrastructure, along with the social, financial and organizational resources. A

long-term vision for KMC has not yet been defined so it is difficult to suggest an organizational structure. The municipality needs to develop an effective and efficient operational procedure and adopt policies, which will address the urban problem. The legal framework should spell out an appropriate fiscal mechanism. The municipality must be consistent not only in its approach to set goals on blue print, but also on delivering basic services to the public. Evaluation of achievements should be undertaken frequently to see what has been achieved and also to determine how to overcome the emerging problems. The Stakeholders' active involvement is the key to promote and sustain developmental programs in Kathmandu Metropolitan City.

Kathmandu's sewer system for both storm water drainage and sewerage has been combined; Research shows that about 15 percent of the residents' sewerage are connected to the sewers. Many illegal sewerage connections into the storm water drains are common. So far, there is no municipal mechanism or department of Sewerage to tap these illegal occurrences. Although KMC has wastewater treatment plants located at Sundarighat and Balkumari these are not functional at the moment. As a result, waste from the drains and the sewers join the Bagmati River without any treatment. Recently, Kathmandu Metropolitan City (KMC) has constructed two small wastewater treatment plants based on environment friendly wetland technology. The Municipal sectoral services are described below in chronological order.

6.1.1 Municipal Institutional Capability

Department of Urban Development was created in 1993 within KMC to undertake the urban development activities. Following are the structures and activities related to urban development in KMC.

- ❑ Co-ordinate with Government, Non-Government Organizations and International Organization for the implementation of urban development activities within the Metropolitan City.
- ❑ Assist and co-ordinate with line agencies involved in the urban development activities, such as Nepal Electricity Authority, Water Supply and Sewerage, Roads, Public Health, Education, Tourism etc.
- ❑ Implement urban development plans and programs of KMC
- ❑ Issue completion certificate for the completed urban development Projects.
- ❑ Issue building permits in accordance with the building bylaws.
- ❑ Implement the numbering of houses in the Metropolitan City in a planned way
- ❑ Operation of long & medium distant buses through bus terminals.
- ❑ Operation of city buses in the Metropolitan City.
- ❑ Implement guided land development and land pooling schemes in the Metropolitan City.
- ❑ Management of parking corners in the Metropolitan City.

KMC is exploring the opportunity of cooperation in the international arena. This has helped KMC to share and exchange ideas and experiences on matters related to different aspects of urban management.

6.1.2 Existing City Profile

Table 1: The Kathmandu Metropolitan City at a Glance:

Administrative Area (kms):	50.8
Total city population (1991)	421258
Density (person/ha) (1991)	84
Infant mortality (per 1,000 population)	66.78
Average Income US\$	222
Hospital Beds per 1,000	4.93
Dust/Suspended Particles (ug/m3)	375
Water/Sewerage coverage	60
Electricity service coverage	100
Telephone service coverage	80

6.1.3 Staff Level In the Organization

Workload for the staff in all departments of the KMC is not consistent. Staff levels and positions in the department are unclear. Transfer of staff without the knowledge of his/her supervisor is a common phenomenon and staff placement is very haphazard. Job security for the staff is a perpetual issue. The department and sections have found it difficult to quantify the workload, as there is more staff than actually needed. There is no internal system ingrained

with proper evaluation of staff. Job description for each staff in the departments is not clear. Some departments have been established but they lack functional capacity. The possibility of merging departments and sections is very high considering their work nature and responsibility.

6.1.4 Coordination With The Central Government

There are four levels of organisations currently involved in the planning and management of the Kathmandu Metropolitan City, namely, Central Government Ministries, the Departments, Kathmandu Valley Town Development Committee, Chief District Officers offices (district office of central government and district development committees) and Kathmandu Metropolitan City.

Kathmandu Valley Development Council (KVDC) is an autonomous council comprising of locally elected representatives from three Municipal District Councils (MDC), supported by a technical officer who is responsible for strategic planning and management of the entire Valley. The municipalities and District Councils are each responsible for their presently defined areas. Both are autonomous locally elected organizations with their own technical staff who are responsible for planning and management, but under the guidance of the KVDC. The necessary technical staff for KVDC and the Municipalities are transferred from the central government or recruited independently.

6.1.5 Urban Areas of The KMC

Kathmandu Metropolitan City is connected to the rest of the country by the Tribhuvan Highway in the South - West via Naubise -Mugling and Naubise -Hetauda. Naubise is the entry point. The Arniko highway connects North -East to China, through Dhulikhel and it is the only inland route for Nepal-China trade. Basically Dhulikhel also caters to the tourists of the Kathmandu Metropolitan City. The northwest part of the Kathmandu, Bidur municipality (Trishuli) is also an important settlement for tourism. It is through this area that trekkers go to Ganesh Himal and other mountain areas.

Kathmandu Metropolitan City is highly developed in the infrastructure such as roads, communication, health, and

education in comparison to other municipalities in Nepal. The only international airport of Nepal is in Kathmandu. It is the hub of commerce, tourism, trade and government administration.

The drainage system often fails to function because the public in Kathmandu, throw their refuse into the drains and block them. The responsibility of the Department of Roads ends with the construction of drains for the main roads which creates a problem sometimes because the adjoining houses, which are below the level of the drains, do not get connected to them. Very often, it is not clear who is responsible for clearing and maintaining the man-made or natural drainage channels. Local people expect the municipality to do this job, but the municipality, usually does not have the financial resources for this work.

6.1.6 Coordination With Agencies, INGO / NGO

Different functions and responsibilities of the KMC departments/section and the Government agencies involved in the operation of the service sectors are shown in Table 2.

6.1.7 Road Network

There is approximately 705 km of vehicle roads within the Kathmandu District, as shown in Table 3. These data have been abstracted from the current Road Statistics, 1998 of DoR. It does not include minor local access roads within the urban areas. Only the National Highways, Feeder Roads, District Roads and Urban Roads within the district of Kathmandu are included.

6.1.8 Network

The Tribhuwan Rajmarg is a strategic national route, linking Kathmandu Valley from the west at Nagadhunga and connecting it to most parts of the country including India. The other major route out of the Valley is the Arniko Rajmarg, which joins the valley to the eastern part of Nepal, certain districts in the north and Kodari at the Tibet border.

Ring Road has been built around the urban areas of Kathmandu and Patan, connecting the radial routes and providing the opportunity for the traffic to by-pass the congested inner urban areas. The Ring Road approximately follows the line of the Municipal Boundary.

6.1.9 Road Accessibility

Kathmandu Metropolitan roads comprise of a series of radial roads converging to the core area. Most of the core areas are off limits to vehicular traffic during the day and most of the densely developed areas have a one way traffic system. Traffic volume is very high in the heart of Kathmandu Metropolitan area. A survey conducted for KVUDPP showed that in a 16-hour period more than 109,400 vehicles entered into central Kathmandu. The central area of KMC has a dense network of narrow roads whereas the peripheral region has fewer but comparatively wider roads.

6.1.10 Metropolitan Area Roads

There is approximately 274 km of motorable roads within Kathmandu Metropolitan City as shown in Table 3. These data have been abstracted from the current Road Statistics, Department of Roads (DoR). It does not include minor local access roads within the urban areas of Kathmandu.

Road access within the historic core areas of both Kathmandu and Patan is severely restricted by the density of the haphazard development of houses and by the narrow width of the streets.

Access to the surrounding residential areas around the Ring Road is through a series of secondary roads, which are built, generally, to inadequate standards in terms of both alignment and width. Access to individual plots within these areas is often winding and indirect and substantial sections of the urban area have minimal vehicular access. A detailed inventory of the road network within the Ring Road has identified a network of 140 km of motorable roads within this area- excluding roads that had a purely "access" function. DoR has classified roads into five surface categories and six width categories, defined as the number of lanes available to traffic in each direction. The surface categories adopted are as follows;

- Un-surfaced, poor condition, low speeds only
- Surfaced, not maintained, speed reduced by poor surface
- Graveled, moderate speed, except in local poor spots
- Asphalt surface, not maintained, moderate speed only
- Asphalt surface in good condition, high speed possible

Table 2: Operation of Service Sectors

S.N	Function	Responsible Department/Section of K MC	Functions of Other Government Agencies
1: Physical Development			
1.1	Preparation and execution of land use development plan.		Kathmandu Valley Town Development Committee.
1.2	Preparation and execution of housing plan		Kathmandu Town Planning implementation Committee
1.3	Planing, Design and construction of operations of water and drainage	Dept of public Works constructs some.	Nepal Water Supply Corporation (NWSC),HMG
1.4	Operations of water and drainage	Dept of Sanitation is taking responsibility for operations of KMC's investment only other are handled by NWSC.	
1.5	Maintenance of water and drainage	Dept of Public Works is taking responsibilities for maintenance of KMC's investments only. Others are handled by NWSC.	Nepal Water Supply Corporation (NWSC),HMG
1.6	Development of green areas, parks and recreation areas	Dept of KMC, Greenery section	Park Development Committee.
1.7	Construction and operation of public toilets.	Dept of Public Works is responsibilities for maintenance of KMC's investments only There is handled by NWSC.	Nepal Water Supply Corporation (NWSC), HMG.
1.8	Building control	Dept of Urban Development	Kathmandu Town Planning Implementation Committee.
1.9	Construction of community buildings	Dept of public Works, Building Section.	Building Dept of the Ministry of Housing and Physical Planning.
2: Water Resources and Sanitation			
2.1	Preservation and maintenance of water bodies.	PWD	Water and Sanitation Board. HMG.
2.2	Sanitation Programmes	PWD	Nepal Water Supply Corporation.
2.3	Solid Waste Disposal.	Solid West Department	SWMRMC/MLD
2.4	Generation and distribution of electricity.		Nepal Electricity Authority.
3: Works and Transport			
3.1	Construction and maintenance of municipal status roads	Dept of Public Works is responsible for earthen roads	Dept of Roads is responsible for black top roads.
3.2	Bus parks and parking areas	Dept of public Works is responsible for earthen roads	Dept of Roads is responsible for black top roads.
3.3	Registration and control of push carts and Rickshaw		Dept of Transport Management.
4. Miscellaneous			
4.1	Tree planting	Parks and Green Section	
4.2	Slaughter houses	Dept of Public Works	
4.3	Street lighting	Ward Committees/Dept of Public Works	

Table 3: Road Classification within Kathmandu Metropolitan City Km.

Classification	Pitch	Gravel	Earth	Total
National Highways	21	0	0	21
Feeder Roads (Major)	17	0	0	17
Feeder Roads (Minor)	39	3	1	43
Districts Roads	36	90	67	193
Urban Roads	332	67	32	431
Total	445	160	100	705

Source: Department of Roads 1998

Of the "width" categories, two were defined as per its lane capacity in each direction. According to the convention adopted, the 0.75 lane implies that vehicles must slow down to allow the oncoming traffic to pass, and the 0.50 lane implies that vehicles must stop to allow the oncoming traffic to pass.

6.1.11 Road Maintenance

Maintenance of roads within Kathmandu is generally the responsibility of the Department of Roads. However, the DoR has a number of conflicting priorities in regard to the allocation of resources. In particular, the DoR must provide emergency maintenance and repair to the strategic national road network.

Expenditure on road maintenance comes mostly from the Capital Works and Development Budget, with only a small proportion spent on covering potholes and doing patchwork. The DoR has categorized roads within the municipal area into four groups for maintenance; the higher categories receive priority treatment:

- ❑ *Category A:* main access roads with street lighting, road markings and signs; roads of ceremonial importance or for VVIP movements;
- ❑ *Category B:* important roads within the city; bus routes, main commercial streets;
- ❑ *Category C:* lesser roads, not necessarily asphalt, but provided with some maintenance; and

- ❑ *Category D:* all other roads, not normally maintained by the Municipality.

There are approximately 100 km of Category A road within the Valley; 110 km of Category B and 70 km of Category C roads and the remainder are Category D roads.

The mixture of fast and slow moving vehicles in the traffic stream and poor behavior of the drivers plays a crucial role. Moreover, the pedestrians' irregular walking habits, people dumping debris at the roadside, encroachment of road space by shop-owners, hawkers and haphazard parking have further made the situation worse. At the same time, ineffective enforcement of vehicle loading regulations has also resulted in excessive damage to the pavements, which contribute to the high maintenance cost.

6.1.12 Roads and Bridges

The Asian Development Bank (ADB) has resurfaced and resealed off approximately 117 km of roads within Kathmandu Valley, as part of the Second Road Improvement Project. The project includes five of the main radial roads within the Valley, sections of the Ring Road, and around 22 km of City Road within the Ring Road.

The World Bank / IDA has funded the reconstruction of four bridges within the Valley as part of the Flood Rehabilitation Project. The project includes the reconstruction of two bridges within the urban area of Rato Pull across the Dhobi Khola and Showa Bhagwati across the Bishunamati River, which were damaged or



collapsed during the earthquake of August 21st 1988, both these bridges have local importance.

The Japanese Government has arranged a grant for the reconstruction of six bridges with the possibility of more funding for future bridge sites. The replaced bridges within the urban area are three bridges across the Dhobi Khola and one on the Bishnumati. The remaining two are the bridges on the Sankhu Road, 9.4 km and 11.2 km from the Ring Road.

The bridges within the urban area are fully and properly integrated with the local road network and access routes. Replacement of the bridge at Dalu across the Bishnumati (presently used for foot and cycle traffic only) has led to an increase of traffic into the congested historic core of Kathmandu.

6.1.13 Traffic Conditions

The number of vehicles operating in the KMC will continue to increase at around 6 or 7 percent per annum and motor-cycles up to 14 percent. Overall traffic levels can be expected to continue to increase at 10 percent p.a., representing a doubling of the present volumes in less than 10 years. Public transport demand has increased at the rate of 10 per cent p.a. and will continue to grow,

as a result of population growth and the expansion of the urban areas.

6.1.14 Constraints With The Urban Area

The overall development strategy for the Kathmandu Metropolitan is visualized as such, that the additional population growth will be accommodated within the existing urban area and only limited expansion will be made onto the immediately adjacent land. The Ring Road has a 10-meter pavement width plus generous reserve along most of its length, and will have adequate capacity to accommodate future traffic volumes. Elsewhere, outside the Ring Road, new access roads will be required for longer-term service of the major areas of expansion. The alignment for these roads should be identified and safeguarded until development takes place.

6.1.15 Central Area Congestion

Moderate levels of peak period congestion are currently experienced in the central area of Kathmandu; traffic volumes can be expected to increase, resulting in deteriorating traffic conditions. Present congestion results from the conflicts between vehicles and pedestrians, or from public transport vehicles loading

Table 4: Traffic flow in the major roads of KMC

S.No	Routes	Bus	Minibus	Trolley	Safa Queue Tempo	Total
1	Kirtipur - Ratnapark	2533	7933	0	288	10754
2	Dakshinkali - Ratnapark	1420	2791	0	168	4379
3	Ratnapark - Baudha - Jorpati - Thali	7860	6748	0	378	14986
4	Ratnapark - Airport - Maharajgunj - Gongabu	4978	4274	0	189	9441
5	Ratnapark - Chabahil - Sundharijal	3816	3425	0	0	7241
6	Ratnapark - Purano Baneswor - Chabahil	8122	6973	0	528	15623
7	Ratnapark - Jorpati Sankhu	3516	2409	0	0	5925
8	Lagankhel - Ratnapark	10666	8450	0	1404	20520
9	Patandhoka - Ratnapark	12745	0	0	1350	14095
11	Narayanthan - Maharajgunj - Ratnapark	649	4397	0	624	5670
13	Bhaktapur - Koteswar - Ratnapark	20050	24849	0	18	44917
14	Bhaktapur - Koteswar - Tripureswar	4763	1410	11349	0	17522
15	Bhaktapur - Koteswar - Lagankhel	0	6915	0	24	6939
16	Bhaktapur - Puranobato - Ratnapark	19309	28388	0	0	47697
17	Thankot - Sahidgate	1379	6699	0	486	8564
18	Lagankhel - Koteswar - Gongabu	0	5598	0	0	5598
19	Ratnapark - Balaju	0	6258	0	1392	7650
	Total	89061	127517	11349	6849	234776

Note: Taxi and Electro bus are not included.

and unloading on the street. The poor lay out of controlled junctions also contributes to the inefficient use of the available road space.

6.1.16 Kathmandu City Traffic

There is a need of some additional new road links to be constructed within the urban area or expand the existing road lanes. Due to traffic congestion and flow, it is vital to form a strategic network linking the main sectors of the city. These linking roads will reduce the dependence upon the central area.

6.1.17 Institutional Constraints

In order to implement routine and periodic maintenance work in combination with the implementation of new road construction, a couple of institutional constraints will play an important role in the planning and implementation stage. The most important promulgation currently foreseen on the strategic road network are summarized as follows:

Financial Constraints: The financial constraint i.e. late approval of annual budgets and / or late transfer of budget money to the DoR Divisional offices will result in delayed implementation and incomplete work at the end of the financial year. It has been noted that during the past few years actual implementation of the annual programmes were sometimes 20-30 % short of the planned programmes. Factors other than delayed budget transfers also adversely affect the implementation of the actual scheduled works.

Staffing Capacity: with the increased maintenance activities combined with the extensive ongoing new construction and reconstruction works, there is a short-term shortage of staff, to plan, design, implement, supervise and administer road maintenance and construction works. The Department has commitments for some of

the major ongoing construction and upgrading projects i.e. reconstruction and other bilateral road maintenance and construction programmes. These programmes can consume and use staff and resources from other activities.

Especially for the planning, programming and implementation of routine and periodic maintenance activities, extensive manpower inputs are required for inspections and pavement survey work. Lots of time and effort goes into the administrative procedures to produce annual records of the road and pavement conditions before and after the maintenance works. With the gradual change from upgrading and reconstruction programmes to more routine and periodic works, the workload of the field staff will certainly increase in the coming years.

6.1.18 Construction Capacity and Contractors Capabilities

The contract business in Nepal for road construction and road maintenance is relatively new. The vast majority of bituminous paved roads in Nepal were only recently constructed (last 20 - 25 years), for this reason, there is no established contract business with experienced contract firms in Nepal. Contractors have no financial back up, project staff, and equipment. The contractors usually do not have permanent staff and the heavy equipment. There is a lack of road building equipment. The contractors use manual labour instead of the required mechanical inputs for site clearance, grading spreading and watering of sub-base, base-course and materialized



payment etc. Limited availability of road building equipment on rent from the Department of Roads often leads to delays in implementation and late completion of road. Contractors sometimes have to wait a long time to receive the rented equipment for a limited time from the Department.

6.2 WATER RESOURCES AND SUPPLY

6.2.1 Water Resources

Surface water is from river run off and floods. The main sources of water for the rivers are rainfall and the spring flow. The annual basic rainfall in the Kathmandu Valley is an average of 1,900 mm. The monsoon rainfall pattern, (80% occurs in between June and September) imposes natural limitation on the quantity of available surface water throughout the whole year. There are eleven water supply systems in the Kathmandu Valley: nine in Kathmandu & Lalitpur and two in Bhaktapur. The total storage capacity of these systems is 27.65 million liters the current supply is 105.3 mld in the wet season (surface water 88.3% and groundwater 11.7%) and 70.8 mld in the dry season, of which surface water contributes 65% of the total and the rest 35% is from the groundwater.

The drinking water supplied to Kathmandu is from Sundharijal Mahankalchour System, Balaju System, Saibhu System, Sundarighat System, Nakhu Khola Chapagaon System, Doodh Pokhari System, Lunkot System and Mahadev Khola Systems. The distribution network in the metropolitan is extremely complicated since it has been expanded without any plans to meet the increasing water demand and the expansion of the distribution area.

It appears that the average monthly discharge of Bagmati at Sundharijal and Nakhu River at Tika Bharav is similar. The average annual discharge at Sundharijal remains at 1,933 mm, which is about 67% of the total rainfall. It

appears that Sundharijal is a good source for surface water.

The water use from the Bagmati and its tributaries, particularly during the dry period, is extensive and unqualified and it makes it difficult to establish the relationship between rainfall and runoff. A reasonable quality of water is available in the metropolitan, particularly during the rainy season, which can be stored for winter use. During winter and spring months (October to June), there are not many run-offs in the valley rivers; a large quality of run-off during these months is the household sewerage and industrial effluents.

6.2.1.1 Groundwater

Based on the hydrological formation of various characteristics including river deposits and others, the Kathmandu Valley is divided into three groundwater zones: a) northern zone, b) central zone and c) southern groundwater zones.

Northern Groundwater Zone: The northern groundwater zones cover Bansbari, Dhobikhola, Gokarana, Manohara, Bhaktapur and some principal water supply wells of NWSC are situated in this area. In this zone, the upper deposits are composed of unconsolidated highly permeable materials. The coarse sediments are however inter-bedded with fine impermeable sediments at many places. The northern groundwater zone has a comparatively good recharging capacity.

Central Groundwater Zone: The central groundwater zone includes the core city area of Kathmandu Metropolitan and Lalitpur Municipalities. Impermeable stiff black clay, sometimes up to 200 m thick is found here along with lignite deposits. Subject to this layer there are unconsolidated coarse sediment deposits of low permeability. The recharging capacity is low due to stiff

Table 5: Average Monthly Discharge (m³/s) of Rivers in the Valley

	Bagmati Sundharijal	Bishnumati Budhanilkanth	Naku Tika Bharav	Bagmati Chobhar
Average	1.07	0.46	1.09	15.5
Absolute Maximum	8.82	1.92	35.98	254.4
Absolute Minimum	0.13	0.01	0.01	0.3

Source: Stranley International, cum/s = 86.4 million liter a day

Table 6: Groundwater Extraction for Various Uses ('000l/Day)

	Shallow	Deep	Total
Private(Industry/ hotels/embassies)	3,802	5,119	8,921
HMG/N Institutions	286	2,945	3,231
NWSC Wells	-	39,242	39,242
Others	286	583	869
Total	4,374	47,889	52,263

Source: Stanley International.

impermeable layer. The confined groundwater is probably non-chargeable and stagnant.

Southern Groundwater Zone: The southern groundwater zone is located in the geological line between Kirtipur, Godawari and the southern hills. Thick impermeable clay formation and low permeable elementary gravel is common here and the aquifer is not well developed.

6.2.1.2 Groundwater Recharge and Extraction

Groundwater recharging is generally poor in the overall scenario, however, only the northern aquifers are well located for recharge, which is higher in the monsoon season. There is about 52 million liters of water extracted per day of which 8.4% are from shallow wells and 91.6% from deep wells.

6.2.2 Water Supplies

The Metropolitan City water supply scenario depends on many factors such as population growth, per capita consumption, effect of high water tariff, yield from surface sources, implementation of Melamchi, Manohara and other small sources development works.

Table 7: Water Availability

Supply Condition	Available to % of NWSC Consumers		
		Wet season	Dry Season
Good	19%	6 - 24 hrs	4 - 24 hrs
Sufficient	15%	6 - 8 hrs	4 - 6 hrs
Poor	49%	3 - 4 hrs	1 - 2 hrs
No water	15%	0.5 - 1 hrs	0 - 0.5 hrs
No response	3%		

Source - Consumer Survey, SILT and DRTC, 1997

Table 8: Population Served by Piped Connection

Connections (July-Aug 1997)	Nos.	Persons/ Connection	Population
Metered/Non-metered			
Standposts	96,436	7.4	713,626
	1,275	146.6	186,150
Total			899,776

Source: Average of Binnie and JICA figures

Existing water supply from NWSC ground water supply is limited to an average of 15 mld, which can be increased to an average of 25 mld as a short-term solution. Additional supplies from the Saibhu system, Nallu Khola, Kwanglang, Kulindah and Matatirtha-Bosan Khola schemes have been taken.

6.2.2.1 Distribution System

Water is supplied to the Kathmandu Metropolitan urban areas and some rural areas of the valley from reservoirs. The supply is intermittent with most of the areas being supplied with drinking water for 2 to 3 hours in the morning and 1 to 2 hours in the evening, particularly in the wet season. In several areas it is often less than one hour a day and during the dry season water supply is reduced to even half an hour every alternative day. This is due to water management rather than water supply from the reservoirs.

The distribution network is extremely complicated, since it has been expanded without any plans to meet the increasing water demand and expansion of the distribution areas. The network consists of pipes, which are up to about one hundred years old. There is about 491 km of pipeline of sizes varying from 800 mm to 20mm in diameter. The condition of many of these pipes has deteriorated.

The leakage and wastage of water is one major problem for the distribution system. NWSC reported 40% water loss due to leakage and wastage. If the supply situation

Table 9: Consumer Survey, W/S

Fully Plumbed %			Yard Tap %			Standposts %		
1996	2000	2010	1996	2000	2010	1996	2000	2010
35	40	50	45	42	37	20	18	13
35	40	50	45	42	37	20	18	13
25			53			22		
25	27	50	53	55	37	22	18	13

Table 10: Industrial Water Use

Industries	No. of factories	Total no. of employees	Total Water Use (Mld)	NWSC Water Use (Mld)
Carpet Industries	1,670	182,500	11.00	1.65
Textile Industries	925	15,769	3.70	0.55
Cocoa Cola & Pepsi Cola			3.80	-
Wool spinning, Distillery and Breweries				0.40
Total			18.50	2.60

improves due to additional water supply, the leakage rate may rise to an even higher figure. There has been an acute shortage of water supply in the urban areas of Kathmandu City since the last decade. Several studies have been undertaken for improving the situation but only a few recommendations were implemented.

6.2.2.2 Current Supply Condition

Currently NWSC is serving about 1.0 million people through more than 100,000 private connections and 1,300 public standposts in Kathmandu valley. The supply during the wet season is about 120 mld, which reduces to 80 mld in the dry season. Leakage is thought to vary from 30% to 40% of the supply. Average domestic per capita consumption is estimated at 50 lpcd to 70 lpcd.

The water supply scenario is deteriorating due to the insufficient supply of water to meet the increasing demands of the rising population. The shortage of supplies is attributed to: high population growth, delays in implementing development programs for more supplies, leakage through old pipes and connections, and decreasing yield from the wells.

There is inequitable distribution of the limited available supplies. Consumer survey (1997) has reported on four categories of service condition, which are namely good, sufficient, poor, and no water in NWSC service area. Percentage of consumers under these supply conditions and supply hours are estimated as shown in Table 7.

6.2.2.3 Household Size and Consumers Per Connection

Census (1991) reported 110,956 households in the urban areas of Kathmandu valley while SILT/DPRC (1997)

reported 92,295 consumer houses. 1991 Census reported a household size of 5.4 in urban areas of Kathmandu Valley. Other studies have reported consumers per NWSC connection, which varied from 6.54 to 9.6. Such a significant difference may be due to the disparity in the definition of household size and consumers / connection and exclusion of floating (temporary) population in census.

6.2.2.4 NWSC Connections

Inconsistency in connection figures reported by NWSC (97,711) and SILT/DPRC (78,546), led BTW (1998) to conduct spot checks at 6 different areas and found NWSC connection numbers were reasonably close to the actual connections in the sample area. Considering NWSC connections and persons per connection from Binnie (1988) and JICA studies (1990), the population served by NWSC is estimated to be 899,776 as shown in Table 8.

6.2.2.5 Category And Proportion Of Consumers

Per capita consumption varies with the category of consumers and their total demand proportion, there are three categories of NWSC consumers, fully plumbed, yard type (just a tap inside the premise) and public standposts users. Non-domestic consumers are not significant. There was no direct measure of the numbers of consumers in each category before the consumer survey. Estimate of proportion of each category made by various studies is summarized in Table 9.

6.2.2.6 Non-domestic Demand

Many industries and institutions have their own ground water supplies. Previous studies have done surveys on some industrial demands. The total water use in industries

Table 11: Non Domestic Demand

Year	Non-domestic Demand as % of Domestic Demand
2001	12.0 %
2006	15.0 %
2011	18.0 %

based on the survey of manufacturers is shown in Table 10.

Almost all industries have their own groundwater sources and only few depend on NWSC water. Estimated non-domestic demand is about 5% of the domestic demand and is estimated to increase as shown in Table 11.

It is to be noted that non-domestic demand is not likely to be met before Melamchi is brought into the Kathmandu Metropolitan. The 821 shallow and 5,499 deep tube-wells operated by private owners, besides 27 deep tube-wells run by NWSC, the commercial, institutional and industrial water use from non-NWSC sources has been estimated as shown in Table 12.

6.2.2.7 Leakage

There is wide variation in the level of leakage in NWSC system ranging from 25% to 60% of supply. Considering the low pressure in the pipe mains and intermittent supply, the current leakage is expected to be low. To arrive at a reasonable leakage assessment, the area with a particular supply condition is further sub-divided into sub-areas and supply hours in these sub-areas are reasonably assumed. Considering that longer hours of supply leads to higher pressure in pipes, leakage rate for a particular supply hour is also reasonably assumed. Current leakage is estimated at 39 mld and 27 mld, which corresponds to 32.3% and 30.5% of the total supply, during the wet and dry seasons respectively. The assessment is based on the number of connections, supply conditions and leakage rate, which are all subjective, accordingly leakage figure can be considered as indicative only.

6.2.2.8 Seasonal Variation In Demand

Seasonal variation based on consumer meter reading records have adopted the seasonal variation on demand as follows:

i. Peak Factor

The peak flow factor of the existing intermittent supply is about 6 to 12 times average daily flows as the consumers take their supplies in 2 to 4 hours each day. It has adopted an average peak flow factor of 2.1 for the distribution system design.

ii. Domestic demand

The domestic consumption with unavoidable wastage inside the premises is estimated as following:

6.2.3 Drainage and Sewerage

6.2.3.1 Drainage

Drainage is a significant problem in Kathmandu. The concerned agencies have not taken into account the seriousness of water logging in most of the core area. About 25% of the households in Kathmandu often get flooded due to inadequate drainage. Kathmandu City has a network of existing drains or sewers, which are designed as either separate or combined systems. At present, only road drains are in function exclusively for stormwater drainage purposes. Drains for stormwater transmission are connected and discharged directly into the nearest natural drain or watercourse, running north from south of the city.

The existing stormwater drainage systems are inadequate for the present population pattern in most of the core city areas of Kathmandu. Their implementation is uncoordinated, and many networks remain incomplete. Road kerbs, channels, inlets and storm drains are an integral part of the system but during storms run off from roads is not efficiently drained out. The combined drainage systems in the core areas are capable of carrying out the storm water flows, but the effectiveness has been reduced due to siltation, inadequate gutters and inlets and lack of maintenance.

Over the past two decades, Kathmandu has been physically expanding with the inflow of population. In the past, there were virtually no settlements along the flood plains of Bishnumati River, Dhobi Khola and Bagmati River. But at present 50% of the flood plains have already been occupied by residential buildings.

6.2.3.2 Sewerage And Sewage Treatment

Sanitary conditions of Kathmandu Metropolitan City are hazardous and extremely poor with rivers and drains heavily polluted with sewage. Sewerage systems and sewage treatment plants do exist in Kathmandu metropolitan but very few of households are connected to these systems. The rest of the

households use on-plot facilities, shared facilities, public toilets, or riverbanks and open spaces. Whereas the central areas of Kathmandu have a comprehensive system of sewers, predominantly combined, however, the peripheral areas are not generally well served. The metropolitan sewage has been carried up to the Kirtipur pumping station and discharged directly to the Bagmati River. There is no system to link the old sewers on the eastern side of the Bishnumati river which discharges directly into the river.

i. Sewerage

A combined storm water and sewer system, which is 50-70 years old, exists in the core area, which directly discharge into the Bagmati River. It is estimated around 17% of the households of the metropolitan are being served by the existing sewerage system. About 60% of the depth of old sewers are still clogged with settled sludge and other debris, lowering their capacity to 40%. The flows from these sewers get discharged directly into the river during the dry season. This constitutes serious health and culture hazard as people are culturally inclined to use river water as holy water.

There are four sewerage treatment plants with a total design capacity of about 17 million liters per day: Dhobighat sewerage plant (15.4 mld), Kohoku (1.1 mld), Salleri (1 mld) and Hanumante (50,000 L/d). These plants are practically non-operational and require rehabilitation. They have the capacity to treat sewerage produced by around 55,000 people on a year round basis. Since the existing sewerage treatment plant is not sufficient to treat all the sewerage to a desirable quantity, there is urgent need for expansion of sewage treatment plant in order to keep the water bodies clean.

Many people do not make any distinction between the sanitary sewer and storm water drains. Household pipes often flow out into the sewer trunk causing obstruction to the flow of sewerage. Collectors are randomly split for house connection, causing leakage and erosion of the pipe. Sewer pipes are often used for disposing of solid wastes, which block the pipe. The curved and winding streets of the newly developed urban fringe face a great difficulty in sewer line extension.

ii. Wastewater Systems

From the cities of Kathmandu Metropolitan, collected sewage are transported through the Bagmati and Bishnumati rivers towards stabilization treatment pond units at Dhobighat with a flow of 15 mld. The plants consist of two anaerobic ponds, followed by one

Table 12: Non NWSC Water Use

Industries/Area	Water Consumption from Non-NWSC Tube-wells (MLD)		
	Shallow wells	Deep Tube Well	Total
1. Carpet/Textiles	3.349	1.640	4.989
2. Hotels	0.279	1.764	2.043
3. Gas (Dept. of Mines)		1.636	1.636
4. Rural Water Supply	0.206	0.144	0.350
5. Hospitals/Social Institutions	0.080	0.787	0.867
6. Food	0.042	0.997	1.039
7. Manufacturing	0.133	0.650	0.783
8. Embassies		0.068	0.068
9. Army/Police		0.162	0.162
10. Schools		0.216	0.216
11. Others	0.286	0.583	0.869
Total	4.374	8.647	13.022

facultative and one maturation pond. Due to damaged main pipes, most of the sewage discharges directly into the river. The sewerage system is widely considered to be totally unsatisfactory and rehabilitation is being planned as the reason for its failure is often attributed to the public misuse of the system.

iii. Storm Drainage

The original storm drainage system has gradually been converted, informally, into a combined system. There are strong theoretical arguments in favor of a separate system, but it may be unrealistic in the core areas. The different views on this issue have still yet to be resolved. There is a need for a clearly defined policy in the core city areas on combined systems as the present systems make it more difficult to treat effluent. It is not clear as to who is responsible for urban drainage. Department of Roads, NWSC and the Municipalities all seem to have their roles to play, but their objectives differ. DoR for example is concerned mainly with the protection of their roads (the main roads) rather than urban drainage.

6.2.4 Solid Waste Management

There are a few studies that have been done on the characteristics of Kathmandu's waste in the past. Further more, the data are not comparable over time because the nature of the waste vary on the time and place of sample collection and methods that have been adopted. Although the nature of waste varies according to the living standards of the community, municipal waste in Kathmandu can generally be characterized as

Table 13: Wastage of Water

Type of Consumer	1997		2000		2005		2010	
	LPCD	%	LPCD	%	LPCD	%	LPCD	%
Fully Plumbed	157	25	160	27	168	46	175	50
Yard Type	102	53	105	55	111	40	116	37
Standposts	45	21	45	18	45	14	45	13
Population Served	953,159		1,127,611		1,459,239		1,648,985	
Total Domestic Demand (Mld)	99		123		188		225	
Average Domestic Consumption (lpcd)	103		109		129		136	

having high organic content, high density and fairly high moisture content. CEDA in 1989 study estimated 78% of waste as biodegradable in Kathmandu. Similarly according to waste samplings conducted by an NGO, which manages waste from 200 households in Teku and its neighborhood, consists of approximately 75 percent organic matter.

A survey conducted by the Solid Waste Management and Resource Mobilization Center in May, 1988 found that the density varied between 330 and 430 kg/m³ and the moisture content of the waste from six locations varied between 39 percent and 58.7 percent.

In 1999 a baseline survey conducted by SEECON domestic consulting firm, reported that 310 tons of waste was generated per day in the Kathmandu Metropolitan City, in which organic waste comprised nearly 57%, inorganic materials comprised 35 % and the rest was 8%. The figures clearly suggest the high potential of organic solid waste composition of Kathmandu. The solid waste generation at Kathmandu Metropolitan City is nearly 210 tons from households, 89 tons of waste is from shops and restaurants and 11 tons from institutions and organisations. The Waste disposal practices in the Kathmandu Metropolitan City is as follows:

- ❑ 52% of waste is disposed directly onto the streets,
- ❑ 22% of waste is disposed at the KMC container or in the tractor,
- ❑ 4% organic waste is being made into compost in the household,
- ❑ 8% of waste is collected by door to door services,
- ❑ 5% of recyclable waste is sold directly from the sources, and
- ❑ 10 % of remaining waste disposal is unknown.

6.2.4.1 Non-municipal Solid Waste

The city of Kathmandu Metropolitan generates large quantities of non-municipal waste such as agricultural

waste, commercial waste, hospital waste, industrial waste and dead animals. Some of the non-municipal waste is recycled by the private sector and usually contains few contaminants. Most of the agricultural waste is recycled by the farmers themselves and is therefore not a major concern. Furthermore, the area of farmland in the city is decreasing rapidly. The amount of yard waste is, however, slowly increasing.

The main sources of commercial/industrial waste in Kathmandu Metropolitan City are restaurants, vegetable/fruit markets, slaughterhouses, carpet industry and garment industry. Restaurant waste, which mainly consists of biodegradable waste is usually dumped with the municipal waste or taken by pig farmers in small quantity. Among waste from slaughterhouses, the bones and skins are recycled but the abdominal waste from slaughtered animals usually ends up in the municipal containers or is dumped on the riverbanks. Fruit/vegetable market waste is usually dumped in containers. Waste from the Kalimati vegetable market is taken straight to the Landfill site, while waste from the Kuleshwor Fruit Market is now composted to some extent. Some of the waste from carpet and garment industry is recycled while many are dumped in containers or riverbanks.

Medical waste from hospitals and nursing homes is a major source of concern because of its hazardous nature. The Teaching Hospital, Norvic Hospital and Patan Hospital have their own Incineration plants. While a few nursing homes burn their waste in crude incinerators, most of the other hospitals and nursing homes dump it with municipal waste in containers. It is estimated that approximately 700 kg of hospital waste is generated in Kathmandu each day.

6.2.4.2 Management

Currently KMC is the main agency responsible for managing Kathmandu's waste with 1,317 staff

members engaged in solid waste management, of this number approximately 1200 is sweepers. In KMC the 35 ward offices are responsible for waste collection. Each ward office is assigned a tractor or a tipper and 20 to 30 sweepers. The waste at the roadside are cleaned by sweepers, loaded on to tractors or tippers, and taken to the Teku Transfer Station. From some wards, the waste is taken directly to the landfill site. KMC also has an agreement with private firms to start door-to-door collection of waste in wards 13, 14, 15, 18 and 5 of KMC.

Residents normally deposit their waste at the roadside or in an open public place. The KMC containers are picked up and taken to the landfill site. Some people, however, dispose their waste in vacant plots or other hidden areas. These waste dumping sites are usually in areas that are difficult to access by the KMC staffs, the result being that the waste usually does not get picked up. Kathmandu Metropolitan City has recently started experimenting by composting waste from slaughterhouses, fruit markets, and domestic waste, on a small scale. KMC has also started scrap-buying centers (20 of these centers are around KMC) where people can sell recyclable scrap.

6.2.4.3 Transfer Station

The Teku Transfer Station is located in ward 12 in the southern part of the city at the junction of the Bagmati and Bishnumati rivers. The transfer station is spread over 2 ha of open land along the Bishnumati River. Currently, however, only about half the available land is being used for waste transfer. The rest is being used as a transit yard for buffaloes before they are slaughtered.

The window yard of compost plant (presently known as Teku Transfer Station) receives approximately 250 m³ of waste per day. This waste is unloaded on to a concrete platform where scavengers go through it to collect recyclable waste. During the German funded Solid Waste Management Project the platform was used for fermentation of waste into compost. Currently the platform is used mainly for the transfer of waste and parking of vehicles.

Table 14: Efficiency of Sewerage

Months	Seasonal Factor	Months	Seasonal Factor
January	76%	July	100%
February	79%	August	99%
March	87%	September	98%
April	93%	October	92%
May	97%	November	84%
June	99%	December	78%

Teku transfer station was built in 1984 along with two other transfer stations, one on the way to the airport and other at Imadole, Gorkho in Lalitpur. This was done in consideration of the volume of waste generated in Kathmandu and Lalitpur. Due to airport obligation from civil aviation and as it was within the range of 13 Km radius from the International Airport, the transport station was closed in 1988. The Imadole transport station of Lalitpur is not in operation since 1992 because of haphazard waste handling by the SWM&RMC staff resulting in strong objections from the local community. Teku transfer Station is presently not in operation (lack of proper maintenance) and almost all the waste is being transported through the window yard of the compost plant. None of the responsible organisations has recognized the double handling of waste for transfer to landfill site.



6.2.4.4 Landfill Site

From the transfer station, the loader reloads the waste into the big miller (20 cum capacity) or into the tipper trucks, which takes it to the landfill site located 13-km northeast from Teku. Currently the site receives approximately 600 m³ of waste every day. Gokarna is a canyon type landfill site, which was developed and processed by the SWM&RMC project in 1986. Between 1993 to 1994, the landfill was closed for about one and half years due to opposition from the local community. Since 1994, there have been numerous occasions when the landfill has been closed due to local community problems. The landfill does not have a liner but the waste is compacted by bulldozers and compactors and then covered with approximately 30 cm of soil immediately. Landfill gas is released through gas vents. A pond has been constructed to collect and treat the leachate. The Gokarna landfill site is already full and now, temporally, the bank of the river is being used for the final disposal of waste.

In a series of experiments at the Gokarna landfill site, it was found that a layer of refuse 1.5 meter's deep, compacted and covered with soil, could absorb rainfall for several weeks. Thereafter produce a leachate equivalent to about one third of the annual rainfall in that area, which was 635 mm. This leachate was 20-30 times as strong as settled sewage, having a BOD of 6000-7000 mg/liters and contained organic carbon, ammoniacal and organic nitrogen, ammonia, chloride and sulphate. The leachate continued for several years, but in less than three years pollutants had declined to a very low level except for sulphate.



6.2.5 Electricity: Streetlight

A 220-volt electricity supply is available in the area of Kathmandu Metropolitan City. Short outages are frequent and considerable voltage fluctuation occurs. Despite this, electricity supply is not a major infrastructure deficiency. However additional generating capacity is required nationally and bulk sub-station capacity requires increment in the valley. With increasing population and hence demand for electricity (approximately 10% p.a.), the supply situation is likely to decline before it gets better. Distribution is generally overhead and many conductors are not insulated. Cables are powerful in a variety of different types and heights of poles (concrete, metal and timber), due to space restrictions transformers are also generally mounted on poles.

Street lighting is generally inadequate, however the main traffic routes on the periphery of the core area have designed street lighting systems using sodium lanterns. With the core area streetlight schemes, in other areas lanterns have been placed on poles supporting cables but many are in need of rehabilitation. Ordinary domestic bulbs with shades have been erected either on existing poles or on buildings in many places.

The normally accepted standard of illumination is not achieved in a majority of streets, which should be considered as a serious infrastructure deficiency, particularly as streetlights in the core city is the responsibility of metropolitan. NEA has installed lighting on the major VVIP roads.

A 132 Kilovolt national grid served from 14 power generating stations, which can deliver 242 megawatt. The 66 kV, 33 kV and 11 kV systems feed upto 400-volt supply to consumers. Features of electricity supply, demand and consumption in the Metropolitan are:

- Average 50% of the nation's annual electric power is consumed in KMC, of which 89% is hydropower and remainder 11% is diesel generated.
- There is one small, diesel power operated, station in the valley and remainder is located outside the valley. The valley is served

generally from the 132 kV and 66 kV systems, mainly located around the valley's edge.

- Approximately 100% of the population in the metropolitan have access to the electricity supply system.
- The current consumer number in different categories in Kathmandu is 132, 826 domestic, 426 commercial, 2,284 industrial and are all metered.
- Demand has been growing at an average of 10% per annum over the past 5 years in the KMC.
- The maximum demand in Kathmandu is approximately 100 MW and the bulk substation capacity is 161.3 MW.
- Systems are predominantly overhead and local substations (11 kV/400 V) are normally mounted on poles in the dense urban areas.



Problems relating to capacity generation and bulk substation capacity are due to the delay in implementing new power generating stations. The NEA has benefited in the past from a number of projects supported by international financing institutions, further the World Bank supported 'Power Efficiency Project', aimed primarily at consolidating supply in the valley, is to commence shortly

System substations and capacities are listed in Table below:

Table 15 : Electricity Sub-stations and Capacities

Power Station	Capacity (Mw)
1. Panauti	2.400
2. Trishuli	21.000
3. Sunkosi	10.050
4. Gandaki	15.00
5. KL1	60.000
6. KL2	32.000
7. Devighat	14.000
8. Marsyangdi	69.000
9. Sundharjal	0.600
10. Pokhara	1.088
11. Surkhet	0.345
12. Seti(Pokhara)	1.500
13. Tinau	1.024
14. Hetauda (diesel)	14.470
	242.477

Sub-stations (Psep)	Capacity (Mw)
1. New Teku	18.000
2. New Bhaktapur	10.000
3. Lainchaur	2*18
4. New Chabel	2*18
5. New Baneshwor	18.000

Source: NEA

Street lighting in the metropolitan is very poor. Street lighting is the responsibility of KMC, but it is NEA that has erected some streetlights on the major roads. It has an innovative scheme whereby it plans, designs, installs and pays for two-thirds of the capital cost of street lighting. The remaining one-third of capital cost will be recovered by electricity charges paid in a timely manner by the beneficiaries. Concerning street lighting in the core area, the traders have associated with NEA to provide street lighting, example is a few successful cases in Thamel area.

6.2.6 Greening

Recreational facilities such as parks, gardens, zoo, view sites, and picnic spots are always essential for the public so that they can enjoy them in their holidays. Moreover, greenery contributes towards the improvement of the city environment directly. The hills surrounding the valley have mountain peaks that provide magnificent views. Kathmandu valley has a few recreation sites in natural settings but the Kathmandu Metropolitan covers only Balaju, Ratna park, Bhugol park, Panchayat Rajat

Jayanti and Bhrikuti Mandap within its territory. The available space for parks/gardens in KMC is insignificant in comparison to the huge population (425727). The total garden parks have an area of 3.06 sq.kms within its 500-meter influence zone serving only 15.53 percent of the total population. The increase of catchment area up to 1000 m. provides accessibility to only 36.66 percent of the total population. Parks/gardens provides facility within 500m catchment zone to wards 1, 4, 11, 16, 19, 20, 21, 22, 24, 25, 27, 30, 31 and 32. However, the wards 2, 3, 5, 6, 7, 8, 9, 10, 12, 13, 14, 26, 28, 29, 34 and 35 have no access to these facilities.



useless for fishing and other recreations they even pose a health risk to the surrounding community. Pokharis are used as rubbish dumps, and they become polluted and smelly and turn into health hazards instead.

6.2.6.1 Open Space And Greenery

Unplanned urban growth has caused the city to become a concrete jungle with very few open spaces. Many traditional open spaces such as riverbanks, ponds and chowks are also being encroached upon. Most of the remaining spaces are not managed properly and often converted into garbage dumps. As a result, there are very few areas where urban residents can relax, enjoy nature, play and breathe fresh air. Recently, Kathmandu Metropolitan City and some NGOs, together with the stakeholders have started to build small parks and gardens in some areas of the city including traffic islands. Traders and squatters occupy existing parks and open spaces in the towns, which leaves less space for recreation. The children and teenagers have no space to play football & other games and are forced to play in the streets.

6.2.6.2 Fresh and Clean Water Areas

Areas of fresh water in towns such as rivers, lakes, Pokharis and fountains are pleasing to the eyes and give a sense of space and peacefulness. Clean lakes in towns can be used for recreation, such as swimming, boating and fishing. The water bodies help to cool the air in the hot summer months. Polluted urban lakes are not only

6.2.6.3 Lack of Greening Plan and Policy

No organization has taken the lead in promoting the development of the city's greening. Kathmandu Metropolitan does not have any overall policy or projection on city greening, or any information on the availability of recreation space. The Metropolitan is responsible for maintaining parks and other recreation spaces, and have undertaken some greening process such as Thapathali, Maitighar, Minbhawan, Airport, Teku, Gaushala, Kalimati, Bagbazar, Jamal, Kingsway, Jawalakhel, Chabahil, Ratnapark, Tinkune, Maharajung etc, thereby creating pleasant green towns and cities.

The main problem lies in the fact that there are no clear strategies and divisions of responsibilities among the central government or at the municipal level for the provision and maintenance of recreation space. The Municipality has yet to establish definite policies on the provision of recreation space, greenery, and bylaws for the implementation of the policies.

The Government should facilitate main institutions like Guthis to operate the public places since most of these open spaces belong to Guthis and are not used, as they should be. In the past, the local Guthis were main institutions, which owned land and facilities in urban

areas. The Guthis lend their facilities to the public for various purposes but are gradually dying out due to lack of management within the Guthi system and lack of the support from the government.

6.2.6.4 Pressure on Metropolitan City Public Land

Public land is not used wisely for the benefit of the community, especially in a situation where land is under development pressure. Public land is required to make the environment vibrant.

Municipalities are always under pressure for public land in the following areas:

- ❑ Roads, bridge and drainage,
- ❑ Public latrines and urinals,
- ❑ Disposal of garbage and rotten materials,
- ❑ Landscaped areas, parks, gardens and other green areas,
- ❑ Slaughter houses,
- ❑ Parking areas for vehicles,
- ❑ Recreation grounds, stadiums, hospitals, dispensaries,
- ❑ Tree planting on road sides and at other suitable places,
- ❑ Parking places for vehicles and other transport services,
- ❑ Ponds, wells and other water features,
- ❑ Education facilities and playgrounds etc.

6.3 FUTURE TRENDS

6.3.1 Municipal Institutional Capability

Some departments, functioning in the capacity of departments in the municipality, do not match the defined role of the departments. There are many sections, which are just lingering without doing any significant work. Some departments are highly loaded with a specific task though they have great potential for focusing on other areas as well. Consequently all the staff within the department are being mobilized to meet that specific task only. Like wise, other departments undertake projects on section basis ignoring other sections. It means that no system has yet been developed to capitalize each department's scope. They have been established, but their scope has yet to be exploited. Due to lack of co-ordination among the departments, there is overlapping and duplication in program implementation.

Kathmandu Valley Development Council (KVDC) is an autonomous council comprising of locally elected representative, supported by a technical office with responsibility for strategic planning and management of Kathmandu. The necessary technical staff for the Municipalities is transferred from the central government. The objective is to equip the local government with professional staff, however this has yet to happen.

6.3.2 Road Networks and Management

The Government policy, rules and regulations are inadequate, regarding the financing and allocation of appropriate funds for city road maintenance and upgrading. Coordination between concerned agencies is lacking when dealing with the arising street problems.

Huge congestion at the junctions within the city one-way system seems to be a big problem. The present constraints in the road networks and management is due to public ignorance and the number of secondary roads created in the metropolitan city by local community.

The maintenance of roads in the metropolitan is generally the responsibility of the Department of Roads, except "D" category as this is the municipality's responsibility.

Even category 'A' VVIP roads under the DoR are not suitable for smooth vehicle movements. A number of bituminous layers patch the same potholes every year. It is already recognized that the rehabilitation of "A" category roads are prerequisite, however, the DoR has a number of conflicting priorities in regard to the allocation of resources.

Public transport vehicles loading and unloading on the street at any time is common in the city. It is due to the insufficient length and width of roads in comparison to the traffic flow and inefficient traffic control. The number of vehicles is increasing every year where as the roads remain the same.

The vehicle pressure every year demands additional new road links to the city road within the urban area and expansion of the existing road width to cope with the traffic congestion and flow. Traffic management in Kathmandu City indicates that there is no system to control the traffic flow. It is due to the overflow of vehicle

on constrained road lanes and lack of technology on traffic management.

6.3.3 Water Resources and Supply

1. The Sundarikal (Mahankalchour) system is the largest water system providing more than 45% of the present supply of water in KMC. It is estimated that there is about 30% water leakage and no precautionary measure has yet been taken to reduce the wastage of water.
2. Bishnumati Khola and Mahadev Khola system supply 10.8 mld in the wet seasons and 5.6 mld in the dry seasons. Its efficiency has been reducing every year in terms of quantity and quality due to the lack timely rehabilitation of the treatment plant.
3. The purification capacity of the river has been decreasing and can no longer digest the increasing pollution load.
4. The static groundwater level in the well fields has declined due to large scales of extraction of groundwater. The water level has fallen between 6 & 15 meters in the well fields. The static water level of private tube wells has decline up to 20m.
5. The shallow groundwater in urban areas is polluted, both chemically and biologically. The level of coliforms suggests that it is contaminated by sewage, and the pollution level has exceeded the WHO standard for drinking water.
6. Leakage of the amount of water is in proportion to the supply since most parts of the distribution system has irregular supply, averaging less than 4 hours in a day. During the period of supply, there is a high consumption rate, as the period is limited and usually the storage containers and tanks collect water to provide for the dry period.
7. Current leakage is estimated at 39 mld and 27 mld, which corresponds to 32.3% and 30.5% of the total supply, during the wet and dry seasons respectively.

6.3.4 Drainage And Sewerage

1. Lack of mitigation measures and no conscious effort to treat the industrial effluents, sewerage and other wastes are increasing the pollution load to an unsatisfactory level.
2. The catchment of the Metropolitan area has no proper sewage collection system. The core area has a combined sewer system. Few people understand the difference between surface drains and foul

sewers and connect their toilets to the nearest and most convenient drain.

3. Most of the drainage does not follow the natural topography and building development in the low land is now expanding towards urban development resulting in localized flooding.
4. There are four sewerage treatment plants with a total capacity of about 17 million liters per day; Dhobighat, Kohoku, Salleri and Hanumante. These plants are not in operation. With rehabilitation these plants will have the capacity to treat the sewerage produced by around 55,000 people on a year round basis.
5. The sewers have to be routed close to the banks of the Bagmati, Bishnumati and Dhobi Khola. Neighboring areas above the elevation of the sewer may be served at nominal additional cost.
6. For future, the Dhobighat sewage treatment plant can receive short-term flows, from Kathmandu with the necessary repairs and maintenance.
7. Previous survey has determined pocket areas in the Kathmandu Metropolitan, which urgently require clearing of the blockage of storm drains.
8. In future, along Tukucha Khola from the junction of the Tukucha Khola and Bagmati river to the ring road in the north, it may be preferable to install two sewers in the south subject to a detailed feasibility study.
9. Along both banks of Dhobi Khola, the junction of Dhobi Khola and Bagmati river to Chabahil, a detailed feasibility study may determine that one sewer within the river bed may be possible.

6.3.5 Solid Waste Management

1. Waste generation is increasing with a trend of increasing inorganic and chemical waste and decreasing organic waste due to urbanization of the city and food habits of the citizens.
2. The amount of solid waste generated daily is estimated at approximately 310 tons with an average of 0.43 kg per capita per day. Per capita generation is between 0.4 and 0.46 kg per day in higher income areas and between 0.25 and 0.35 kg per day in other areas.
3. Approximately 75% of the Kathmandu Metropolitan City area have received service that is hard to manage in the present context.
4. No sanitary landfill site exists and casual dumping is the common practice of the concerned agencies. The controlled sanitary landfill site for final disposal of solid waste is not yet in operation and there is no indication of it operating in the near future as the site is still being sought.

5. Due to casual dumping on the river banks and close to the International Airport, birds have already hit airplanes five times within two months and there are chances of more numbers of hits if casual dumping is not immediately checked.
 6. Approximately 60 tons of compost production per day plant facility exists at Teku, which may reduce around 100 tons of fresh waste each day. Due to surrounding public objection the plant was closed down. The alternative site for a compost plant is being sought for since 1990.
 7. The present technology being used for the collection of solid waste is not appropriate for the urban areas of the Kathmandu Metropolitan, though it is likely to remain so in the foreseeable future. The limited daily door to door collection in the commercial core areas is expected to continue but no major move towards a more comprehensive door to door collection has been visualized.
3. The municipality has yet to establish definite policies on the provision of recreation space and greenery and reinforce the bylaws for the implementation of the policies.
 4. Traders and squatters occupy existing parks and open spaces in the cities and less open space is left for recreation.

6.4 GAPS AND WEAKNESS

6.4.1 Institutional Capability

- ❑ Presently the KMC is technically weak, and suffers from an inefficient organizational structure and deficiency of qualified work force. The multitude of responsibilities thrust upon municipal governments is not backed by the power to act without the consent of the Central Government. Further, central level agencies operate with little or no participation with the local authorities.
- ❑ The appropriate legal and institutional gaps create ineffective urban development. Absence of local community participation and control in the development process are the main weaknesses.
- ❑ The financial situation of the metropolitan is dependent with the Central Government, resulting in lack of institutional capability. The municipality cannot collect direct taxes, consequently the revenue is on obligatory terms.

6.3.6 Electricity: Streetlight

1. At present there is a strain on the system during peak hours. Additional bulk sub-station capacity of approximately 118 MW will be required by the next 5 years.
2. The NEA normally plans, for the improvement and reinforcement of generating, transmitting and distributing systems, ahead. Planning is generally based on past trends and patterns of consumption, estimating the increase in demand and unit sales for each 5-year interval in the Kathmandu Valley.
3. The street lighting in the Kathmandu Metropolitan City is lacking, even in the VVIP category roads.

6.3.7 City Greening

1. Many traditional open spaces, such as riverbanks, ponds and chowks are being encroached upon and the remaining spaces are not maintained and often converted into garbage dumps.
2. Recently, Kathmandu Metropolitan City and some NGOs, together with the private sector have started building small parks and gardens in some areas of the city including traffic islands. Recreating spaces have undertaken some greening process such as Thapathali, Mathighar, Minbhawan, Airport, Teku, Gaushala, Kalimati, Bagbazar, Jamal, Kingsway, Jawalakhel, Green Belt, Chabahil, Ratnapark, Tinkunea, Maharajung etc.

6.4.2 Road Network

- ❑ The central area of Kathmandu has a one way traffic system and the narrow roads are off limits to vehicular movement the whole day, resulting in traffic jam and pollution from vehicle emission.
- ❑ The building of secondary roads by the local community and individual is in progress in Kathmandu. They do not meet DoR standard for both alignment and width, but none of the concerned agencies have restricted such development activities.
- ❑ Kathmandu is the capital city of Nepal, but the road conditions are pathetic with a number of humps and layers of patchwork on the same potholes. It is clear, that the repair and maintenance of roads is the responsibility of the Department of Roads.
- ❑ There is a conflicting situation between vehicle riders and pedestrians due to the lack of awareness about traffic rules and moreover traders and squatters occupy the footpaths.

- ❑ The public transport vehicles loading and unloading on the street is very common in the city.

6.4.3 Water Resource and Supply

- ❑ There is an absence of a workable procedure and institutional mechanism for allocating, reallocating and monitoring the use of water resources.
- ❑ There is a need for effective national water resources conservation and management policy and regulation. Besides, there is the absence of a specific administrative authority with the mechanism to resolve conflicts between water users.
- ❑ The Act prohibits pollution of drinking water and empowers the corporation to control pollution and take action against those who violate the provision of the Act. However the provision has been ineffective because there is no system of monitoring and controlling.

6.4.4 Drainage And Sewerage

- ❑ Few people understand the difference between surface drains and foul sewers and connect their toilets to the nearest and most convenient drain.
- ❑ Low-lying areas adjoining the rivers of Kathmandu are poorly drained. These areas are now expanding towards urban development.
- ❑ Most of the drainage does not follow the natural topography in Kathmandu and building development in the low land is in progress.
- ❑ A number of previous survey studies have determined pocket areas in the Kathmandu Metropolitan, which urgently requires clearance of storm drains.

6.4.5 Solid Waste Management

Municipal solid waste management is governed by the SWM&RMC act, NWSC act and Municipalities act, resulting in a conflict between the organisations, making the waste acts ineffective. Legislative jurisdiction needs to be specified to sort out confusion and focus the responsibilities on the concerned agencies.

- ❑ There is weak policy on management of domestic waste and hazardous wastes from hospitals, industries and other sources as well.
- ❑ Although the policy mentions public participation and the involvement of NGOs in managing waste,

it is not stated how the public and NGOs are to be involved.

- ❑ Solid waste management policy does not mention incentive programs for those promoting recycling activities to reduce the waste volume.
- ❑ There is alternative technology for the entire waste treatment process but none of the organizations explore its advantage and instead focus only on the landfill sites, which is very difficult in the present context.
- ❑ Solid waste management of KMC is becoming complex largely due to the emerging notion of "WAR on WASTE" rather than prioritization of "GIFT from WASTE" with effective disposal and economic treatment.

6.4.6 Electricity: Streetlight

- ❑ Lack of infrastructure, strength, skilled personnel and long term vision, makes Kathmandu Metropolitan unable to handle the distribution of streetlights within Kathmandu Metropolitan boundary.
- ❑ The streetlights in the Kathmandu Metropolitan City are very poor. Even in the VVIP category roads, there are very few sodium lights, which are anyway irregular.

6.4.7 City Greening

- ❑ Kathmandu Metropolis does not have an overall policy or projection on city greening. No strategy to protect the necessary space and allocate required resources, thus losing the opportunity to create pleasant green towns.
- ❑ Public land is not used wisely for the benefit of the community, especially in a situation where land is under development pressure.
- ❑ Many traditional open spaces such as riverbanks, ponds and chowks are already occupied; the remaining spaces are not managed properly and often converted into garbage dumps.

6.5 PROBLEMS AND ISSUES

6.5.1 Institutional Capability

- Too many agencies are involved in infrastructure development.
- KMC is not authorized to exercise direct tax collection within its boundary.
- The KMC is bound to handle entire municipal services as a metropolitan city but is unable to handle

it in the existing situation due to lack of organization structures and experienced workforce.

- (d) No specific agency determines a set of standards, reinforcement or monitoring issues related to municipal services.
- (e) Disputes in solid waste management activities between SWM&RMC and KMC has resulted in waste dumping on the roads and casual dumping at riverbank.

6.5.2 Road Network

- (a) Protection work is yet to be done on the number of potholes on the road where the water has accumulated and damaged the base course of the roads' pavement
- (b) Road accidents in the city core area are accelerating due to uneven movement of vehicles in deformed roads and due to potholes.
- (c) It seems there is absence of traffic regulation in the city road junctions, contributing to traffic jams and vehicle emission.
- (d) There should be due consideration of vehicle growth rate in the city. Traffic congestion demands additional new road links to urban area and expansion of the existing road width.
- (e) Neither DoR nor KMC has set the city road standard for secondary roads, which is the reason for the haphazard construction of these roads.
- (f) The DoR or KMC is unable to check secondary roads built by local community or individual.
- (g) KMC or DoR do not yet have a long-term vision on city road expansion, keeping in view the traffic volume increase in Kathmandu.
- (h) The KMC is institutionally weak, as it has no experienced work force to handle entire road works in Kathmandu and no construction equipment for future activities.
- (i) There is lack of appropriate road construction equipment with the Nepalese contractors. Most of the works are completed by labour force resulting in the poor quality of infrastructure.

6.5.3 Water Resources and Supply

- (a) Drinking water distribution pipelines are very old and the sewerage lines are located near the water distribution pipeline, thus contamination occurs frequently in the city core area.

- (b) There is around 30% of water leakage detected by NWSC. It is due to the lack of a controlling mechanism and meter facility in the cities.
- (c) Large quantities of water are required in the industries, hotels, institutional and commercial company located within KMC and no regulation has been maintained.
- (d) Riverbed levels are falling due to regular sand removal and are polluted by the human activities.
- (e) The concerned agencies have not yet developed any alternate technology to fulfill the present water scarcity in the city core area, even though it is possible to fulfill the demand with little effort.
- (f) A regular monitoring and management of water source and quality control is seriously lacking. There is more groundwater extraction due to inadequate supplies.

6.5.4 Drainage and Sewerage

- (a) Drainage of the core city area is frequently blocked due to siltation and solid waste disposal. NWSC, KMC and DoR, none of the organizations have taken responsibility for regular maintenance & cleaning.
- (b) The existing legal enforcement is not actively implemented by the municipality or by NWSC. Those who repeatedly create problems by disposing waste into the drainage are not aware of penalization according to regulation.
- (c) Most of the sludge are disposed into the river, due to non-functioning of sewerage treatment plant in Kathmandu.
- (d) Drainage in urban areas are in worse condition due to lack of co-ordination among KMC, DoR, and NWSC in rehabilitation and maintenance works.
- (e) No policies and acts are active regarding drainage under the responsibility of the municipality, where as most of the complaints are faced by KMC.
- (f) Most of the chamber and branch connection is overflowing in the city core area due to lack of proper maintenance and timely cleaning of sewers.

6.5.5 Solid Waste Management

- (a) There is no standard code and practice to regulate pollution control, which occurs from haphazard waste disposal.

- (b) Due to earlier mismanagement of the Gokarna landfill site, it is difficult to convince the public for landfill sites anywhere else.
- (c) There is good opportunity in the waste recycling business for the entrepreneur, stakeholders and local communities but the existing policy does not clearly mention incentive activities for recycling of waste.
- (d) Around 57% of the total waste is biodegradable and the existing mechanical composting plant has the capacity to produce 60 tons/day. However due to lack of experienced manpower it has to be disposed at the landfill sites.
- (e) Due to absence of waste collection technology, in the same location or within the same route, separate vehicles collect the waste, which is inefficient use of vehicles.
- (f) The existing Teku transfer station has the capacity to transfer more than 75% of daily waste (at one time 60) to the dumping site, where as presently KMC is double handling waste by unloading and reloading waste in the window yards near landfill sites.

6.5.6 Electricity: Streetlight

- (a) Streetlights is the responsibility of the metropolitan but it appears to do little in this field and NEA installed lights, on the major roads of KMC, are inadequate.
- (b) Involvement of KMC is lacking in planning and implementation of electricity programs within the municipality.

- (c) Legalization and policies for handling of streetlights by the stakeholders does not exist.
- (d) The overhead distribution cables are not insulated which is dangerous for households in the city core area, as it is quite near the windows.
- (e) Industries and Institutions require large quantities of electricity, which is fulfilled from taking the power from the domestic line.
- (f) There is no long-term vision on electricity supply in the Kathmandu Municipality.

6.5.7 City Greening

- (a) Traders and street hawkers have occupied the open spaces where public gatherings are supposed to take place
- (b) Most of the Guthi lands are unproductive within KMC and used as waste dumping site for the locality.
- (c) KMC does not have an overall policy or projection on city greening and no information on the availability of recreation space within its territory.
- (d) Along the ring road, green belts are presently used as parking space for bus and trucks due to lack of enforcement and caretakers.
- (e) The entrepreneurs are not giving any attention to the building of parks and gardens.
- (f) The codes of standard and legal provision are overlooked when issuing building permits by the municipality.

6.6 SWOT ANALYSIS

6.6.1 Municipal Institutional Capability

STRENGTH	WEAKNESS	OPPORTUNITY	THREAT
<p>The central authority has started the decentralized process by empowering local authorities.</p> <p>Capacity building of local bodies and exercising good governance principles such as participation, transparency, accountability, rule of law, equity and efficiency are the institutional strength of the KMC.</p> <p>Civic societies including local community groups, NGOs and few entrepreneurs are involved in the development process of KMC.</p> <p>Print media, media and FM radio stations are playing an accelerating role in raising public awareness in KMC.</p>	<p>Institutional capability of KMC for urban management and planning are technically weak, it has an incompetent organizational structure and deficiency of qualified manpower.</p> <p>The financial situation of the municipality is dependent on the Central Government, resulting in deficit in institutional capacity, as municipality cannot collect direct taxes.</p> <p>There is absence of legally enforceable building and sanitation codes, standards and regulations.</p> <p>There is absence of institutional mechanism and workable procedures for allocating, reallocating and monitoring the use of water resources. The absence of specific administrative authority with mechanism to resolve conflicts between different water users groups.</p> <p>There are duplications of functional jurisdiction among NWSC, Ministry of Industry, DDC and Municipalities regarding sewerage management and pollution control.</p>	<p>There are Ministries government departments, DDC, INGO, NGO's including few entrepreneurs involved in the governing, planning and management of municipal urban development.</p> <p>The central authority has started the decentralized process by empowering the local authorities.</p> <p>Local bodies have exercised good governance principles for capacity building such as participation, transparency, accountability, rule of law; equity and efficiency.</p> <p>Entrepreneurs, civic society, NGO's and community groups are involved directly or indirectly in the development process of KMC.</p> <p>For raising effective public awareness, media's and FM radio stations are playing an intensifying role in KMC.</p>	<p>There is urgency to activate enforcement and agencies consultation with an expressive motivation and action towards planning and innovative arrangement.</p> <p>Technical and managerial capabilities built-up are prerequisite for the institutional functioning and urban development. The Councils, Committees are constituted to get specific programs assignments with mandates to get over administrative, organizational and even authoritative interference.</p> <p>Presently the KMC is technically weak, and suffers from an inefficient organizational structure and deficiency of qualified manpower.</p> <p>The multitude of responsibilities thrust upon municipal governments is not backed by the power to act without the approval of the Central Government.</p> <p>Local control and community participation in the planning process have been noticeable by their absence.</p> <p>The financial situations of metropolitan are seriously dependent on the Central Government.</p>

6.6.2 Road Networking

STRENGTH	WEAKNESS	OPPORTUNITY	THREAT
<p>There is approximately 274 km of motorized roads within Kathmandu Metropolitan City, among which 113 km is black tops, 93 km gravel and 68 km are earthen roads excluding minor local access roads within the urban areas of Kathmandu</p> <p>Surfacing of some parts of the major roads around and within the core area is generally good.</p> <p>Some of the secondary roads are paved and generally in good condition although alignment and width are not in the standard. Frequent repair and maintenance is needed.</p> <p>Access to the surrounding residential areas within the Ring Road is via a series of secondary roads built by individuals or community.</p>	<p>The Government policy, rules and regulation are inadequate for effective co-ordination among concerned agencies.</p> <p>Apart from the distribution roads and resurfaced link roads, most other streets are in a bad condition. Limitless potholes are evident which hold water and further weaken the road base.</p> <p>Major secondary roads are full of mud in the Core City due to drainage problems, poor engineering practice and a lack of significant maintenance.</p> <p>Road widths are generally built to inadequate standards of both alignment and traffic volume due to lack of long term vision.</p> <p>Maintenance of roads within Kathmandu is generally the responsibility of the Department of Roads. However the DoR has a number of conflicting priorities with regard to the allocation of resources.</p> <p>Inadequately laid out of traffic control junctions contributes to the inefficient use of the available road space.</p>	<p>There is a clear need of additional new road links to the city core area or expanding the existing road width considering the traffic congestion and flow, so as to form a link to the main sectors of the city.</p> <p>Kathmandu is the capital of Nepal, with almost all the Ministry, Embassy and International organization, it should have developed a good standard of road networks.</p> <p>Expenditure on road maintenance for Kathmandu comes mostly from the Capital Works and Development Budget.</p> <p>Access to individual plots within urban road link areas is often winding and indirect, substantial sections of the urban area have minimal vehicular access.</p>	<p>The DoR is carrying out paving of some streets in the core area, unfortunately no attention is given to drainage needs.</p> <p>Traffic volume is very high in the heart of Kathmandu Metropolitan area. In a 16-hour period, more than 109,400 vehicles enters into central Kathmandu.</p> <p>The secondary road built by local communities and individuals in the urban area is not of the same standard as the main road.</p> <p>The road condition is bad with numerous potholes with layers of patch work on the same potholes every year.</p> <p>There are conflicts between vehicles and pedestrians due to insufficient and narrow roads in comparison to the traffic flows.</p> <p>There is no system to control the traffic. It is due to the overflow of vehicles in saturated road lanes and lack of appropriate traffic management mechanism.</p>

6.6.3 Water Resources & Supply

STRENGTH	WEAKNESS	OPPORTUNITY	THREAT
<p>Sundarijal Mahankalchour system is the largest water system providing more than 45% of the present supply in Kathmandu.</p> <p>Groundwater supply contains negligible amount of iron and ammonia.</p> <p>Balaju water supply system has both surface water source and groundwater.</p> <p>There are five surface sources in Bishnumati Khola and Mahadev Khola.</p> <p>NWSC water supply, tankers, household shallow wells and Inars are the main source of water for domestic use.</p>	<p>The deterioration of the facilities has reduced its efficiency in terms of quality and quantity. The treatment plant and the reservoir are in need of major rehabilitation.</p> <p>Limited supply and low quality of water use, creates unsanitary situation in most of the household and largely affects personal hygiene.</p> <p>The static groundwater level in the well field has declined due to the large quantity abstraction.</p> <p>The shallow groundwater in urban areas is heavily polluted, both chemically and biologically.</p> <p>Quantities of water supply are insufficient due to inadequate source and leakages (30% water at sources is either consumed locally or wasted) in distribution.</p>	<p>The groundwater having negligible amount of iron and ammonia should be treated before it is supplied.</p> <p>There are five surface sources in Bishnumati Khola and Mahadev Khola. Balaju water supply system has both surface water source and groundwater supplied to Kathmandu.</p> <p>Proper chlorinating and chemical treatment in the supply, and quality monitoring of household water from shallow wells & Inars will reduce the health risk.</p>	<p>The purification capacity of the river has degenerated and can no longer digest the increasing high pollution load.</p> <p>The water level has fallen between 6 to 15 meters in the past years in the Manohara, Gokarna, and Basbari field. In the central district, the static water level of private tube wells has also declined to 20m.</p> <p>The drinking water supply pipelines are very old in the city core area and leakage is increasing in NWSC supply.</p> <p>The ground water level of coliforms suggests that it is contaminated by sewage, and is not up to the WHO standard for drinking water.</p>

6.6.4 Drainage and Sewerage

STRENGTH	WEAKNESS	OPPORTUNITY	THREAT
<p>Kathmandu City has a network of existing drains or sewers, which are designed as either separated or combined systems.</p> <p>The combined drainage systems in the core areas are capable of carrying out the storm water flows with maintenance.</p> <p>The central areas of Kathmandu have a comprehensive system of sewers, which is carried up to the Kirtipur pumping station.</p> <p>There are four sewerage treatment plants Dhobighat, Kohoku, Salleri and Hanumante with a total capacity of about 17 million liters per day:</p>	<p>Lack of mitigation measures and facilities to treat industrial effluents, sewerage and other wastes will increase the pollution load to an unsatisfactory level.</p> <p>The catchment of Metropolitan is without a proper sewage collection system. The core city area has a combined sewer system, few people understand the difference between surface drains and foul sewers and connect their toilets to the nearest and most convenient drain</p> <p>Most of drainage is not following the natural topography in the KMC and building development in the low land is in progress.</p> <p>There are four sewerage treatment plants Dhobighat, Kohoku, Salleri and Hanumante with a total capacity of about 17 million liters per day.</p>	<p>The Dhobighat sewage treatment plant can receive short-term flows from Kathmandu with necessary repaired and maintenance.</p> <p>Collector sewer along both banks of Dhobi Khola junction and Bagmati river to Chababil. The detailed feasibility study may determine that one sewer within the river bed may be possible.</p>	<p>Low-lying areas adjoining the rivers of the Kathmandu are poorly drained. These areas are now expanding towards urban development, but in a successively uncoordinated manner which cannot resolve these inherent drainage constraints. Localized flooding is common and floodwater is generally polluted.</p> <p>Most of the drainage does not follow the natural topography in the KMC and building development in the low land is in progress.</p> <p>Completion of the interceptor sewer (missing link) between the existing Bagmati north bank sewer, which terminates near out-fall of Tukucha Khola and the existing Pashupatinath sewer which terminates at the bridge over the Bagmati at old Baneswor.</p> <p>The available options need to be implemented with strong political commitment with effective resource mobilization and management.</p> <p>The economical dimension of Kathmandu cannot sustain without improving social, cultural and environmental status; it requires co-ordination and integrated approach for implementation of urban infrastructure programs.</p>

6.6.5 Solid Waste Management

STRENGTH	WEAKNESS	OPPORTUNITY	THREAT
<p>Kathmandu Municipal waste composition has 57 % of organic and 35% of recyclable waste.</p>	<p>Conflict of solid waste management act controlled by (i) Municipalities Act, (ii) NWSC Act and (iii) SWMRM Act.</p>	<p>SWMRMC have sufficient legal coverage in regard to solid waste management and control of legislative.</p>	<p>Jurisdiction needs to be specified to sort out confusion and focus on the responsibilities of waste management among the concerned agencies.</p>
<p>Municipal waste generation is 68 % domestic, 29% shops & restaurant and 3% from organization. It contains no significance toxic or harmful substance.</p>	<p>The controlled sanitary landfill site for final disposal of solid waste is not yet in operation and no indication of it operating in the near future as the site is still being sought.</p>	<p>Composting facility at Teku with a capacity of 60 tons/d output is existing for operation. This reduces around 100 tons of waste per day for final disposal.</p>	<p>Approximately 25% of the area has received solid waste.</p>
<p>Mobilization of local concern has been notable towards local community & stakeholder involvement.</p>	<p>No arrangements are in place for the proper treatment and disposal of hazardous wastes, including hospital waste.</p>	<p>The limited daily door to door collection in commercial core areas is expected to continue with major movement towards comprehensive collection.</p>	<p>Institutional function for waste management in KMC is strongly required along with technical and managerial capabilities.</p>
<p>The standard codes and practices are the basic parameter of waste management including local regulation and procedures leading to enforcement.</p>	<p>The policy does not make clear the management of domestic waste only or for domestic and hazardous waste coming out from hospital, industries and form other sources as well.</p>	<p>The policies clearly mention public participation and the involvement of NGOs in waste management.</p>	<p>In view of attending to the urban waste management & population distribution, re-location of industrial arrangement is a meaningful measure for solid waste management.</p>
<p>Besides the KMC, there is MLD, SWMRMC, NWSC and numbers of INGO & NGO's involved in waste management.</p>	<p>The levels of operational organization are limited; priorities and concerns; jurisdiction and authorities are variable and there are overlaps and conflicts.</p>		<p>Local authorities are better proficient to ensuring equitable service delivery and equitable fees setting and enforcement.</p>

6.6.6 Electricity; Streetlight

STRENGTH	WEAKNESS	OPPORTUNITY	THREAT
<p>100% 220-volt electricity connection is available in the Kathmandu Municipality Cities area.</p> <p>Streetlighting is generally adequate in the Kathmandu cities. The main traffic routes on the periphery of the VVIP core area roads have streetlight systems using sodium lanterns.</p> <p>With regard to streetlight in the core city area, the schemes by Thamel traders association with NEA to provide street lighting has been successful.</p> <p>Improvements in the layout of new development with more regular street patterns as well as logical phasing would greatly assist the lighting process.</p>	<p>Short outages and voltage fluctuation occurs frequently and is notable in KMC.</p> <p>Normally accepted standards of illumination are not achieved in the majority of streets, there is serious infrastructure deficiency.</p> <p>Streetlighting in the core city area is the responsibility of metropolitan but it appears to do little in this field and NEA has installed lighting on the major roads of KMC.</p> <p>Major efforts are still lacking to improve the level of street lighting in urban areas of Kathmandu. NEA has been addressing the problem but it requires further effort to encourage municipalities.</p> <p>Involvement of stakeholder concept is not present and strongly required to adopt to commercial areas for street lighting.</p> <p>Enforcement, laws and regulation regarding streetlight in the city is not in the present act.</p>	<p>The plans to increase the generating capacity, build sub-station capacity and generally improve electricity supply in Kathmandu have been outlined in the NEA strategy.</p> <p>NEA has innovative scheme for street lighting in the city with proper planning, design & installation. The two-thirds of the capital cost of a street lighting scheme will be discounted by NEA on the understanding that the beneficiaries would contribute the remaining capital cost and pay future electricity charges in a timely manner.</p> <p>If electricity consumption charges for street lighting are not met by KMC, the NEA is ready to taking over this responsibility too, by increasing electricity tariffs from consumers by mobilization of stakeholder.</p>	<p>At present there is strain on the system at peak hours. Additional bulk sub-station capacity of approximately 118 MW will be required over the next 5 years.</p> <p>There is no policy formulation which legalizes the street lighting handling by the stakeholders.</p> <p>The streetlights in the Metropolitan City is lacking, even sufficient lighting in the VVIP category roads are found to be irregular.</p> <p>Industries and Institutional establishment inside the Kathmandu Metropolitan requires large quantity of electricity, which is fulfilled from the domestic line.</p>

6.6.7 City Greening

STRENGTH	WEAKNESS	OPPORTUNITY	THREAT
<p>The hills surrounding the valley have mountain peaks that provide magnificent views of the valley floors as well as the Himalayan range.</p> <p>Metropolitan covers Balaju, Ratnapark, Bhugolpark, Panchayat Rajat Jayanti and Bhrikuti Mandap park/garden within its territory.</p> <p>The park / garden has the area of 3.06 sq.kms within its 500 meter influence zone serving only 15.53 percent of total population in KMC.</p> <p>The park/garden provides facility within its 500m catchment zone to wards 1, 4, 11, 16, 19, 20, 21, 22, 24, 25, 27, 30, 31 of KMC.</p> <p>Kathmandu Metropolitan City and some NGOs, together with entrepreneurs have started to build small parks and gardens in some areas of the city including traffic islands.</p>	<p>Kathmandu Metropolitan is losing the opportunity to create pleasant green towns in the cities due to acquisition of necessary space strategy and allocation of resources.</p> <p>Traders and street hawkers occupy the open spaces where public relaxation, gatherings are supposed to take place.</p> <p>The wards 2, 3, 5, 6, 7, 8, 9, 10, 12, 13, 14, 26, 28, 29, 34 and 35 have no access to park and garden facility</p> <p>There is no legal provision in KMC for use of land for garden and parks.</p> <p>None of the government agencies have shown interest in garden and park development.</p>	<p>KMC is responsible for maintaining public parks/ garden and other recreation spaces, and have undertaken some greening process in Thapathali, Mathighar, Minbhawan, Airport, Teku, Gaushala, Kalimati, Bagbazar, Jamal, Kingsway, Jawalakhel, Green Belt, Chabahil, Ratnapark, Tinkunea, Maharajung etc.</p> <p>Local communities or stakeholders are capable to manage and protect open spaces of Green Belt against encroachment.</p> <p>Utilization of lands around growing urban centers for public recreation as public parks/gardens and playground for teenagers.</p> <p>The available public ponds and fountains are maintained for beautification and common use in the municipality.</p>	<p>At present concerned agencies do not have overall policy or projection on city greening. No strategy for acquisition of the necessary space and allocating the needed resources.</p> <p>Government should consider the need for green parks, public places and play grounds for childrer..</p> <p>Public land is not used wisely for the benefit of the community, especially in a situation where land is under development pressure.</p> <p>Traders and squatters are occupying most of the existing parks and open spaces in the city, less space is left for recreation.</p>

Table 16: Municipal Services - Issues and Implications

<i>Municipal Institutional Capability</i>		
ISSUES	IMPLICATIONS	ACTORS
Too many agencies involved in Infrastructure, urban development laws and jurisdictions.	Duplication of activities	MPP&W, MLD and KMC
KMC is unable to exercise direct tax collection within its boundary due to debatable judicial procedure.	Limited Municipal services in KMC.	MoF, MLD and KMC
The KMC is unable to handle entire municipal service due to lack of experienced manpower and competent organization structures.	Intervention by central government and involved too many agencies in municipal services.	MPP&W, MLD, INGO, NWSC, MoF, DoR and KMC
There is no institutional arrangement, which needs to be involved at local level for urban development and monitoring process	Local level are not properly benefited from municipal service facilities	MPP&W, MLD, INGO, NWSC, MoF, DoR and KMC
No specific agencies determine set of standards, reinforcement or monitoring issues related to municipal services.	Municipal services are contradicted in each ward of municipality.	MPP&W, MLD, NWSC, MoF, DoR and KMC
<i>Road Network</i>		
Numbers of potholes with accumulated water on the road are damaging base course of the roads pavement	Accumulated water penetrating into base course of the road	DoR, KMC
The pothole and deformed road pavement is accelerating accident in the city	Uneven movement of vehicles occurring frequent accident.	DoR, KMC & Stakeholders
Its seems there is absent of traffic regulation in the city roads junctions.	Difficult vehicle movement and increase emission level.	DoR, KMC & Traffic Police
Present traffic congestion demands for widening the existing road in urban area.	Traffic jam in city core area is common most of the time.	DoR, KMC & Local Community
Long-term vision on city road expansion is absent	The city road is always in bad condition.	DoR, KMC & Expert
The KMC has no experienced manpower to handle entire road works in the KMC for future activities.	Always have to depend on DoR or consultant.	DoR, KMC
Most of the road works are completed by labour force.	Always depends with International contractor or accept weak road structures.	DoR, KMC & Expert
<i>Water Resource And Supply</i>		
Drinking water supply in KMC is insufficient and quality not confirming to WHO standard.	Citizen of KMC are suffering from viral water borned disease	MWR, NWSC & KMC
Drinking water distribution pipelines are very old and sewerage lines are located nearby.	Contaminated water supply in KMC.	NWSC, KMC
More than 30% of waters are in leakage due to the lack of controlling mechanism.	Scarcity of drinking water in KMC.	NWSC & KMC
Large quantities of water are consumed in the industries located within KMC and no regulation has yet maintained.	Population pressures and inferior supplies.	MWR, MOI, NWSC & KMC
The stone spout water sources flows out into the drain entire night and non-of the agency had utilized such water.	Higher volume of wastage water.	NWSC, KMC and Culture Heritage Society
Riverbed levels are falling down due to regular sand removal and polluted by the human activities.	Effluents are flowing in the rivers of the valley.	MWR, NWSC & KMC
More than safe yielding groundwater abstraction.	Ground water capacity is deteriorating with more than safe yield abstraction.	NWSC, MWR & KMC

CITY DIAGNOSTIC REPORT

<i>Drainage And Sewerage</i>		
ISSUES	IMPLICATIONS	ACTORS
Drainage of the core city area is frequently blocked due to siltation and solid waste disposal.	Disposals of waste into the drainage are common.	NWSC, DoR and KMC
The existing legal enforcement is not actively functioning either from the municipality or from NWSC.	Citizens are not aware.	NWSC, DoR and KMC
Most of the sludge is disposed into the river, due to non-functioning of sewerage treatment plant.	Sewerage disposals at the river are common in the KMC.	NWSC, MWR, DoR, KMC & Stakeholders NWSC, DoR, KMC & Community
Most of the chamber and branch connections are overflowing in the city core area due to lack of proper maintenance and timely cleaning.	For general public, drainage chamber and open branch are the waste throwing places.	NWSC, DoR, KMC, Stakeholders & Contractors.
Lack of timely cleaning and regular maintenance of city drainage in the core area.	Stakeholders and responsible agencies lack city drainage standard.	NWSC, DoR, KMC, Stakeholders & Contractors.
Unbalanced size of storm pipes in city core area.	Lack of city storm drain standard.	MLD, SWMRMCKMC
<i>Solid Waste Management</i>		
Disputes in solid waste management activities with SWM&RMC and KMC resulting wastes dumping on the roads and casual dumping at riverbank.	Waste producers disposed their waste on the street.	MLD, SWMRMC and KMC
Landfill site is presently sought and unusual dumping being started at riverbank.	MLD & SWM&RMC have problems.	MLD, SWMRMC and KMC
There is no definite objective and long term's vision on solid waste management.	Solid waste is the chief source of politics for the politician.	MLD, SWMRMC and KMC
210 tons of waste are biodegradable but non-of the organization had yet initiated its utilization as raw material.	Volumes of daily production waste are increasing for final disposal.	MLD, SWMRMC and KMC Stakeholder
Around 35% of wastes are disposed haphazardly in the street.	Increasing municipal cost for final disposal.	SWMRMC, KMC & Local Community
Due to lack of motivation, enforcement and weak management of the municipality, around 900 sweeper of KMC collect daily waste from street.	Waste producers responsibilities are limited.	MLD, SWMRMC KMC, & Local community
The existing policy does not clearly mention incentives for recycling of waste.	Stakeholders & local communities are not interested in recycling activities.	MLD, SWMRMC and KMC
Due to absence of waste collection technology, KMC is facing insufficient waste collection vehicles.	Double handling of waste collection effect operating cost.	KMC
Presently KMC is double handling of waste for unloading and reloading in the window yards.	Incomparable operating cost of municipal solid waste handling.	KMC

<i>Electricity; Street Light</i>		
ISSUES	IMPLICATIONS	ACTORS
Streetlighting is the responsibility of metropolis but it appears to do little in this field.	Inadequate streetlights even in the major roads of KMC.	NEA, DoR & KMC
Legalization and policies for streetlight handling by the stakeholders does not exist.	Stakeholders are not handling streetlight.	NEA, DoR & KMC
Industries and Institutions require large quantity of electricity that is fulfilled at the cost of household supplies.	Unaware NEA, MOI and KMC.	MOI, NEA, & KMC
There is no long-term vision on electricity distribution within Kathmandu Municipality.	No regulations on electricity supply at KMC.	NEA & KMC
Kathmandu as a Metropolitan City has not yet uniform electricity supply and adequate streetlight in the major street.	Lack of electricity supply in Metropolitan City.	NEA & KMC
<i>City Greening</i>		
Traders and street hawkers had occupied the open spaces where public gatherings are suppose to take place.	Limitation of interaction among the citizen due to lack of open space available.	City Police & KMC
Most of the Guthi lands are found unproductive within KMC.	Guthi's lands are converted into traditional waste dumping place.	Guthi, KMC and Stakeholder
KMC does not have overall policy or projection on city greening.	Lack of park and garden.	MPP&W, MLD and KMC
Along the ring road, green belts are presently used for parking of Busses and Trucks.	Easy parking spot for Busses and Trucks.	City Police DoR & KMC
The entrepreneurs are not giving any attention in park and gardening business.	The entrepreneurs do not visualize scope of payable private parks/gardens.	FNCCI, KMC and Stakeholder
The codes of standard are overlooked for greenery in building permit issues by the municipality.	Lack of understanding of greening at building and houses.	KMC

BIBLIOGRAPHY

- ❑ A Study of Mass Transit System Development in Kathmandu Valley: NPC/ Integrated forum (P) Ltd.
- ❑ Department of Housing and Urban Development/ ADB/ Halcrow Fox : Sept. 1991
- ❑ Environmental Protection: Method of Re-use and recycling of Municipal Solid Waste- A Community Based Manual Book prepared for IUCN.
- ❑ Environmental friendly Low cost Community Based Water Supply Construction Technology Manual Books for National Planning Commission (NPC).
- ❑ Environmental Consideration & Management during Road Construction - Delhi School of Engineering -1993
- ❑ International Workshop on Solid Waste Management & Resources Mobilization Kathmandu Nepal. 1990.
- ❑ Investigative Works on Development & Introduction to Intermediate Means of Transport ITDG- Nepal / SEECON
- ❑ Improved Organizational Structure of KMC-Working Paper No. 41-March 2000
- ❑ Institutional Strengthening of Kathmandu Metropolitan city-Asian Development Bank technical Assistance 3185-NEP
- ❑ Kathmandu Valley Urban Development Plan and Programs; HMG of Nepal
- ❑ Manual for Municipal Working in Nepal MLD/ HMG, UDLE/GTZ; Vol. II - IV
- ❑ Master Plan for Strategic Road Network and Rural Transport (RMRP)
- ❑ Nepal Road Statistics ; MWT/ DoR -1998
- ❑ National Transport Policy Final Report July 1998; NEPECON/ CEDA
- ❑ Priority Investment Plan Project - DoR, 1997
- ❑ Rural Transport Sub Sector in Nepal June 1994; ITDG- Nepal
- ❑ Sustainable Development Policy & Action Plan; Regulating Growth: Kathmandu Valley; IUCN; July 1995
- ❑ Transport Management and Planning technology - National Planning Commission - 1992. Environmental friendly road construction technology - Training Manual Books
- ❑ The Water Supply and Sanitation Situation of the Urban Poor in the Kathmandu Valley; NEWAH/ Water Aid, July 2000
- ❑ Urban Based Pollution Management; Sectoral Programme assistance Document; MFA/ Danida; 1996
- ❑ Urban Environmental Guidelines for Nepal; GTZ/ UDLE

HERITAGE CONSERVATION

Dr. Sudarshan Raj Tiwari
HERITAGE CONSERVATION SPECIALIST

LIST OF ABBREVIATIONS

ADB:	Asian Development Bank
AMP:	Ancient Monuments Protection Act 1957 & Revisions
CBO:	Citizen Based Organization
CDO:	Chief District Officer
CDS:	City Development Strategy
CHT:	Cultural Heritage Tourism
DOA:	Department of Archaeology
DHUD:	Department of Housing and Urban Development, HMG.
DWSS:	Department of Water Supply and Sewerage
FAR:	Floor Area Ratio
GC, GS:	Guthi Corporation, Guthi Samsthan
GSA:	Guthi Samsthan Act
HMG:	His Majesty's Government
INGO:	International Non-Government Organization
IUCN:	The World Conservation Union
K2020:	Kathmandu 2020 Volunteer Group
KMC:	Kathmandu Metropolitan City
KV:	Kathmandu Valley
KVPI:	Kathmandu Valley Protective Inventory
KVPP:	Kathmandu Valley Plans and Programs
KVPT:	Kathmandu Valley Preservation Trust
KVUDP:	Kathmandu Valley Urban Development Program
KVWHS:	Kathmandu Valley World Heritage Site
LSGA:	Local Self-Governance Act
MLD:	Ministry of Local Development
MZ:	Monument Zone of KVWHS
NGO:	Non-Government Organization
NHS:	Nepal Heritage Society
NTB:	Nepal Tourism Board
TA:	Technical Assistance Package
TDR:	Transfer of Development Rights
UNCHS:	United Nations Center for Human Settlements
UNDP:	United Nations Development Program
UNESCO:	United Nations Educational Scientific and Cultural Organization
WHS:	World Heritage Site

TABLE OF CONTENTS

List of Abbreviations	220
Table of Contents	221
List of Tables	222
7. HERITAGE CONSERVATION	223
7.1 Introduction	223
7.1.1 History of Kathmandu City	224
7.1.2 Cultural Growth and Accretions Over History	225
7.1.3 Types of Heritage	227
7.1.4 Status of Heritage	228
7.2 Review of Earlier Plans for Heritage Management and Tourism	229
7.2.1 Trends in Heritage Protection, Transformation and Creative Use	231
7.3 Envisioned Future	232
7.3.1 Kathmandu... A Capital with a Living Cultural Heritage	232
7.4 Stake Holder Analysis	233
7.5 Problems and Issues	236
7.5.1 Conservation/Preservation of Heritage	236
7.5.2 Heritage as a Resources for Capatilization	236
7.5.3 Image of the Town	237
7.5.4 Heritage/Cultural as an Environment for Living of the People	237
7.6 Challenges and Possibilities	237
7.7 Institutional Arrangements and Gaps	238
Annex: 1 Calendar of Festivals in Kathmandu Valley	242
Annex: 2 Inventory of Dhunge Dharas	245
Annex: 3 Movement and Sites; As Per Kathmandu Valley Protestive Sites	247
Endnotes	252

LIST OF TABLES

Table 1: Stakeholders' Analysis

Table 2: Heritage Conservations Issue and Implications

7.

Heritage Conservation

With its urban history going as far back as 1500 years, Kathmandu Metropolitan City (KMC) shares a significant portion of the world famous built heritage of Kathmandu valley (KV). Within its jurisdiction lie four of the seven monuments zones constituting the KV World Heritage Site (KVWHS) as listed by UNESCO. Apart from these monument zones, namely Kathmandu Durbar Square, Pashupatinath, Svayambhu and Baudha, there are many more, less known sites of buildings or other forms of cultural heritage, which are as, or more, important from the standpoint of the living culture of the people. The ancient sites of Pachali Bhairava and Machali, Teku, Naxal and Hadigaon, Chabel Ganesh and Dhando Chaitya, Balaju and Mhepi, to name a few, carry significant emotional, religious and cultural values for the people. The Kathmandu Valley inventory¹ lists as many as 256 individual monuments and monument sites in the historic core, alone. The popular image of the city as a 'place' is derived out of this profuse collection of historical and cultural heritage buildings as well as the spaces and cultural activities that take place around them. The importance of heritage to KMC accrues because of its paramount role in defining the visual and cultural environment of the city core and hence of the city as a whole. The listing of the four monument zones of KMC within the KVWHS, which cited the heritage value as "unparalleled in the world" in 1978, has further added responsibility to KMC as a repository of the heritage of mankind too. Recent debates and concerns of the country on possible impending action of UNESCO of putting KVWHS in "endangered list" more than drives home the point that the cultural heritage of KMC and other sites have acquired a 'national identity' status and has become a matter of pride for Nepal in the international committee of nations. For the image of the city and the identity and pride of the nation, and more so, because of their continuing loss and threats to the city from developmental pressures, city development strategy for KMC needs to actively protect, conserve and promote the physical and other heritage so that its cultural image definition is retained and enhanced.

7.1 INTRODUCTION

Kathmandu, as the capital of Kathmandu City State from 15th and 18th century and as the capital of the country of Nepal, following the unification thence after, has been continuously growing. Today, it is the largest city of Nepal and as it carries with it the primacy of administrative, social and political power and services, KMC continues to be subjected to developmental expansion and migration. In effect, its capital city function has been overtaken by its commercial, economic and social roles. The conflict of growing business centricity in a city, which has been largely culture centric in the past, has brought into focus many pressures, problems and issues associated with cultural conservation.

Nepal's marvelous natural attractions and the equally marvelous asset of cultural heritage of the valley are the

reasons behind the international visitor interest in Nepal. In recent years, this has attained such proportions that tourism contributes significantly to the total national foreign exchange earnings. Within the tourism industry of Nepal, cultural heritage tourism (CHT) or "travel concerned with experiencing the visual and performing arts, heritage buildings, areas and landscapes, and special lifestyles, values, traditions and events"² has been gaining strength over the years. The listing of KVWHS by UNESCO and the associated publicity that it has received, provides an added impetus to the growth of CHT. Almost two-thirds of the 500,000 annual tourist arrivals in Nepal visit two or more WHS monuments zones located within KMC. KMC's cultural heritage and its conservation, therefore, are of paramount importance to the Nation's economic well-being as well.

On top of the economic potentials of heritage tourism and in addition to it, it is now believed that cultures have

a critical role to play in human affairs, environmental sustainability and global well being in the future, particularly when they are dealt with in a positive and holistic terms and proper precautions and safeguards are taken.³ Its role in augmenting the livability of the city for its citizen, who have created and live within the context of their culture, makes it imperative for us to recognize that culture forms an important part of the urban metabolism of Kathmandu. An explicit and direct incorporation of heritage context in its city development strategy is, therefore, called for. Although the nature of this heritage is similar to other traditional towns of the valley, its potential for and exploitation as a tourism resource has been higher than others due to its central location in Kathmandu valley and easy access from key tourist accommodation and other facilities.

Therefore, for the image of the place, the international acclaim of the Kathmandu valley heritage, the emotional environmental support to the residents in the core areas still sustaining a life style shaped and supported by cultural heritage and the significant and growing contribution of cultural heritage tourism to the national economy, strategic conservation and deployment of heritage for direct economic and social gains of the nation, valley and the city, conservation and sustenance of cultural heritage demands its critical incorporation in the development strategy of the city.

KMC's involvement in heritage conservation has only recently started and still follows the 'monument approach'. It is only beginning to discuss potential use of this resource for direct economic gains at institutional level. Being an extant resource subjected to transformation and/or loss through actions from outside rather than from within it, and forming a complex ambient background to the city rather as a developmental entity in a general sense, incorporation of conservation in development strategies demands 'filtered actions' more from other sectors and indirect policy interventions from these 'external sectors' than simple conservation of elements of physical heritage. Such strategic application of policies and approaches, which have been conspicuously absent currently, will have to be central in the heritage context of the CDS for KMC.

7.1.1 History of Kathmandu City

The history of Kathmandu town is as old as the urbanization of the valley itself, which seems to have started about a little over two thousand years ago, during

the proto-historic Kirata rule.⁴ The small Kirata settlements of the Kathmandu core area, such as Yambi (current Indrachowk), Jama (current Jamal) and Lanjagvala (current Lagan) were on crossroads of the network of trading highways that passed through the area, the Bhimsenthan-Kamalachhi route still extends along the same alignment, in silent testimony, to this day. Alongside Kathmandu's core area and to its east, another settlement of the Kiratas, called Andipringga,⁵ was annexed and expanded by the Lichchhavis to make their capital city. Deopatan on the western bank of Bagmati river was developed as an early Lichchhavi religious town. This ancientness of settlements in Kathmandu is also what is possibly remembered by Svayambhu Purana, a medieval Buddhist document, which states that Manjupattan, the mythical city created by architect-god Visvakarma, was located on the eastern bank of river Visnumati. Hindu legends also remember the same area as Bishalnagar, the city of gods. The Lichchhavis period saw the addition of the settlement of Daxinakoli-Grama on the south west of Kathmandu's historic core. Different from the Kirata settlements, which were located on higher grounds, Daxinakoli-Grama was located on the banks of river Bishnumati, as they traditionally preferred riverside settlements, for easy access to water.⁶ Manadeva, the famed Lichchhavi king of the 5th century, had a stone water conduit built at Kel-tole area to service the wayfarers along the main highway that passed through Daxinakoli-grama, Yambi and Jama. By 7th century, it had already acquired limited self-rule as a Drangga, a term having political, territorial and commercial connotations during the Lichchhavi period. Its trading links extended to India and Tibet. The development of the urban culture of Kathmandu, in discernible terms, may be ascribed to the period of the Lichchhavis that covered most of the first millennium AD, ending sometime in the 9th century. Gunakamadeva, a ruler of the transitional period, is said to have restructured the city into one settlement, called Kantipura, after placing Shakti-cult doctrinal goddesses around the general conglomerate of settlements, presumably in the shape of a sword, Kadga with thirty three gateways and associated temples. The outer boundary of the town, excluding Chhetrapati, Thamel and Mehpi area, is still traced by the devout during the upako vanegu festival of Kathmandu.⁷ Popular memory has it that he constructed a nine-storied palace, called Gunapo pa,⁸ in Hanumandhoka area and the temple of 'Tana Deval' for their tutelary goddess, possibly giving Kathmandu a capital role briefly in the 11th century. Chronicles state that Kathmandu had 18,000 houses. By 1143A.D, the landmark temple of Kashthamandapa near

the Hanumandhoka palace was already constructed and it is after this temple that both the city and the valley have been named. It was apparently constructed amid a group of antrepodal sattals. The centrality of Kasthamandapa temple was further affirmed by separate settlement amalgamations to the north and south of the palace, respectively named as Yambu and Yangala. As the role of Kathmandu was reduced to that of a provincial city with the Malla move of the capital to Bhaktapur, its commercial role, continued to increase steadily. With the split of the valley into 'brotherly city states' following the death of Yaksha Malla, in 1482, Kathmandu became the capital again, albeit of the city-state, with its new ruler Ratna Malla. Before Ratna Malla took control, Kathmandu was ruled by twelve Mahapatras of the merchant class on behalf of the Mallas at Bhaktapur. The continued high role of commerce is evident by the powers endowed on these Mahapatras by the ruling house.

The Malla capital city, with a physical and Hindu ritual nucleus at Hanumandhoka Palace and around it, grew with a remarkable urban civic life, a social structure based on concepts of ritual purity-pollution, high and low ritual distance and proximity, fundamental increase in commercial activities and momentous development of art and architecture.⁹ The purity-pollution consideration in anthropological terms pushed the lower jatas such as Poda, Chyame and Kasain outside the town walls. The noble jatas¹⁰ clustered around the palace area, roughly dividing the larger town into three sectors, svamdesa, or Tathu puin, Dathu puin and Kwathu puin, as remembered in late medieval records. Great builder kings, such as Mahendra Malla and Pratap Malla, were to leave their works as landmark heritage in the city. The palace of Kathmandu, temples of Taleju, Degutaleju and Kapindrapura are some of the fine examples of the architecture of the Malla period.

As the Shahs took over, the palace of Hanumandhoka was further expanded and embellished, generally following the old architectural traditions. The towering Nautale pavilion is an example of excellence. In early Shah period, the gentry started building large houses and influence of the Muslim and Rajasthani architecture came in. With Jang Bahadur and the century long hereditary prime-ministership phase, called the Rana period, huge palatial buildings modeled after European Classical architecture became the rule. This spelled, with a finality, the decline of the traditional art and architecture of the valley, which had stood up to the changes and developments for over 1500 years. Some of these edifices

of the Ranas, their palaces and religious developments along the river Bagmati at Arya Ghat, Sankhamul Ghat and Teku Ghats have assumed the status of city heritage today.

The great earthquake of 1934 caused further losses and even the merchants and other high society Newars took to the likings of their aristocratic prime-ministers as they gathered up for massive reconstruction works leading to, as it were, a popular move to modernity. This march to modernity continues unabated to this day much to the detriment of the heritage and culture of KMC in particular and the valley in general.

The centralization of politics, services and urban economic activities in Kathmandu, brought in and continues to do so, a large migrant population, reducing the Newars to a minority. The internal stress already developing in the parent culture group was thus subjected to external stress hastening the disintegration and loss of culture and heritage. Along with the loss, calls for conservation have been growing, too, over the last few decades.

7.1.2 Cultural Growth and Accretions over History

Kathmandu's culture is a syncretism of aboriginal Kirata traditions and the Buddhist and Hindu developments over the last two thousand years. Although the Kiratas and their precedents are shrouded in legends, for KMC the centrally located Kirata settlement of a hoary past, 'Yam' and its tutelary deity of the Akash-Bhairava and its pith counterpart the '*kalasas*' of Wongha,¹¹ both of which are still linked through ritual worship according to annual lunar seasonality, are silent reminders of the Kirata origins. The local name for Kathmandu, 'Yen', 'n' pronounced nasally, still recognizes that the city is an accretion around this ancient embryonic settlement.¹²

Literary and inscriptional sources indicate that the valley has been seeing an amalgamation of peoples and their cultural and ethnic characters since the time of the Kiratas. People from several high cultures from the time of Lord Buddha, such as those from the republics of Sakyas and Vrijjis came into the valley in the pre-Christian era. Buddhism appears to have come to the valley with them. Hinduism gained strength with the arrival of the Lichchhavis around the first century AD. The culture of Kathmandu valley, and also of Kathmandu city, developed through the intermingling of the Kiratas

with the new comers. Hinduism and Buddhism and their associated social and cultural practices lived together with the indigenous faiths to characterize the culture with a tenacity that led to a continuous and unabated growth over millenniums to follow. This was apparently made possible by the efforts of the rulers and the ruled alike. The tradition of harmonious existence of religious groups started by the Lichchhavis was particularly reinforced during the Malla period. The influence of the esoteric Tantrik practices on both the religions is an important contributor to the harmonious co-existence of different basic faiths. Religious fundamentalism had become alien to the culture.

The existence of a high urban culture in the valley can be surmised from the records of the Lichchhavi period. The Chinese travelers and diplomats in Kathmandu valley, of that time, have left records of urban festivities accompanied by musical troupes playing drums and pipes, apparently similar to the current Dhime and Ponga and buildings with carved window decorations, again close to what we see around KMC today. They also saw more tradesmen than agricultural people, a sure sign of urbanization. A number of temples and deep underground water conduits had already dotted the cityscape. Daxinakoli-grama had specialized itself as 'a site of a major festival and a source of other entertainments of that time', this can be observed from the information that *go-yuddha*, interpreted as a bullfight, festival used to be held here annually. Judging by the amount of money taxed and the wide application of the tax.¹³ The festival seems to have been popular even among the rural population and brought them in throngs to the town during the festivals.

The Kirata veneration of Aju and Ajima traditions may be surmised from the profuse presence of Bhairava and Ajima sites within the town areas of that time. In the Akash-Bhairava of Indrachowk and the Kalasa worship site of Wongha, we still see traces of their festive traditions. Similar ancient traces are observable in the case of Pachali Vairab Jatra. The festival of Seto-Matsendranatha, that links Jamal (the Kirata settled Jama) with Lagan (the Kirata settled Lanjagvala) through Kasthamandapa and its Gorakhanatha tradition¹⁴ may be still carrying echoes of another festivity of the times. With the revival of the Ajima cult and merger with tantrik-Shakti cult during the time of Gunakamadeva, the festival of Keltole Ajima and other 'sisters' seems to have gained wider popularity. Many other Jatras were initiated and popularized during the Malla rule.

Dabali, a low rise platform at crossroads and squares, became a common city furniture providing for dancing, entertainment or plain resting places for gods and goddesses, who seasonally moved about the town to visit their heavenly relations and 'purify' the town and re-energize the people for a happy life on earth.

The extensive popularity of Hinayana and Mantraya Buddhism in the Lichchhavi period is mostly expressed by Viharas located outside the town in pristine natural settings. Within the area of KMC, was located one of the most ancient Bahals to be located within a settlement (Naxal), called Jivaverma Vihara in Lichchhavi period, today it is survived by the site named Bhagavan Bahal near Char-dhunge. Bikama Bahal, Tham Bahi and Te-Bahal also seem to have been Buddhist monastic sites¹⁵ since before the Malla period. The popularity of Buddhism and its associated bahals and bahis are also as ancient and their origins traceable to the close of the first millennium or thereabout, when the Bajrayana started gaining strength. By the time of the Mallas, 1200 AD and onwards, 'the Bajracharyas had assumed a predominant role in the Buddhist community of Kathmandu, overshadowing the other non-Bajracharya bahals'.¹⁶ Quite a few monasteries, belonging to the Bajracharyas as well as Sakyas pre-date the reign of Ratna Malla. Chusya Bahal of Jyatha provides the finest example of monastic architecture.

Along with the many Bahals and Bahils, the Buddhist tradition of constructing Chaityas and Stupas have left an equally impressive collection in the KMC area. Along with many miniature Chaityas now adorning many a monastic courtyard, the most ancient Chaityas of gigantic dimensions such as the Dhammare Chaitya of Chabel, the Svayambhu Mahachaitya have been inherited from the Lichchhavi periods. Of the large Chaityas from the early Malla period, the ancientness of Kathe-svayambhu of Srigha Vihara is historically attested. One of the major festivals of the Buddhists, popular since the medieval period is the Bhuikhel, 12-yearly congregation of Dipankaras in worship in various Bahals and private chapels of Kathmandu. Upaku, Baha-puja and other festivals are also popular.

The most ancient Hindu site within the area of KMC is the Pashupatinath of Deupatan. The Satyanarayana of Hadigaon and the Srituka Narayana of Narayanhiti, have been popular Vishnu sites since Lichchhavi times. Within the core itself, the rough central artery of Daxinakoligrama of Lichchhavi period is still reminded by Hyumat Narayana of Hyumat, Ramchandra Narayana



A Recently Restored Dhungeghara

of Jaisideval and Atako Narayana of Marutole.¹⁷ Several mother goddess temples and associated traditions seem to have firmly gained ground within KMC in the transitional period following Gunakamadeva's reign. 23 of the 32 mother goddess sites ascribed to Gunakamadeva can still be seen around the old city core. Some of the associated festivals such as the festival of Kankeswori, Bhadrakali, etc. seem to have survived to the present times.

Most other Hindu temples, we see in the area of KMC were built during the Malla period. Many of the current festivities of the town, such as Khadga Jatra, Indrajatra, Kumari Jatra, Gaijatra, the Jatra of Annapurna, the festival of Kumar of Jaisideval, the Dance of Halchowk Bhairava and Pachali Bhairava, were expanded and popularized in this period.

7.1.3 Types of Heritage

The heritage of KMC is very extensive and of a varied nature. Man-made physical heritage consists of monuments and sites of international, national, local and clan importance and these consist of palace, temples, Chaityas, Bahals and other edifices of community and service importance. Many natural sites with numerous stones, called piths, form an important emotional heritage to the residents. The many festivals and their ritual and cultural processes, celebrated in seasonal cycles, breath life into these monuments and along with these a variety of artifacts also get associated as heritage. The intangible aspect of KMC heritage extends from rhythm, music, songs and hymns to language and their nuances. The

tradition of heritage conservation ingrained in the Guthi system itself also assumes a heritage dimension.

Four of the seven monument zones inscribed as KVWHS, falling within the political boundaries of Kathmandu Metropolitan City are the Kathmandu Palace square, Svayambhu Mahachaitya, Boudda Chaitya, and Pashupatinath temple areas. Apart from the monuments like palaces, temples and Chaityas, the inscription to WHS clearly recognizes the spaces around these sites as heritage too. With over sixty monuments and associated spaces, Kathmandu Palace Square is the largest of the palace squares in the valley. Likewise, along with the main Svayambhunath Mahachaitya, Svayambhu hillock site has twelve other structures of historical and cultural value. The Boudda Chaitya by contrast is a single monument surrounded by a listed street. With over 550 large and small monuments, associated afforested hillock and a section of river Bagmati, Pashupatinath site is the largest of the sites listed under KVWHS.

There are many more temples and Dyochhens in the city than those in WHS monuments zones. The many Buddhist monasteries, bahals and bahils, as many as 113, dispersed¹⁸ around the town form a heritage group by themselves. There are also scores of other monuments built by rulers and commoners alike and housed in various hierarchical spaces, called chowk, chukka, nani and lachchhi as well as simple streets that form important spaces both in terms of their aesthetic excellence and functional relevance to the local residents, quite a few fall under the Ancient Monuments Protection Act, 1956 and qualify as national and local heritage.

Several kinds of other community service buildings, elements and spaces, such as those represented by *palchas*, *patis*, *sattals*, *hitis* (recessed pit stone water conduits), wells and *jahrus* are abundantly dispersed over the old part of the town today. Festivals and the route they take, processions and the routes of the living and the dead, the *ghats* (riverside ritual spaces), the *piths* and their temples and the open spaces called *Khyos* are different physical heritage that are of great importance to the people by way of their culture. Within the group of tangible heritage, we could further add built structures or un-built spaces culturally significant at the clan and family levels, such as, *Digudyos*, private shrines, feasting spaces and even residential courtyards and street side houses.

The music, songs, rhythm and *laya* and the instruments of accompaniment, artifacts and associated skills passed on as family professions, artifacts and rituals of worship, special socio-cultural functions, associated costumes and rituals of entertainment, traditional food and culinary skills, songs and their seasonality rituals, the language itself that has survived and developed over a long history etc., and many others make a complex set of tangible and intangible heritage, not only of relevance to the associated people but also of interest to the world at large.

Even the tradition of conservation of all of the above heritage known to us as *Guthi* set-up itself, whether private, clan, public, corporate or royal, is a heritage of another kind. The practice of making land or cash provisions for operation, maintenance and rehabilitation and setting up private and public committees, *Goshthika* for the preservation of heritage, both monuments and associated rituals and festivals, is as old as the urban culture itself and can be traced to the Lichchhavi period. During the Malla period, such provisions seem to have proliferated even further leading to concurrent existence of all kinds of new and old practices. As a matter of fact conservation practiced through the *Guthi* system is at the root of the large inherited culture of the valley and the city.

A detailed inventory of the various types of heritage has not been prepared as a comprehensive exercise. The glaring absence of an inventory for cultural service elements and *guthis* is notable and deserves immediate attention. However some elements have been inventoried at various times for various purposes. In the interest of brevity, Annex-1, provides a list based on available information such as;

- (a) Monuments and monuments sites,¹⁹
- (b) *Dhunge Dharas*²⁰
- (c) Dates of local and city level ritual importance and major festivals only.²¹

7.1.4 Status of Heritage

Sketches of Kathmandu valley from about 1850 already show a comparatively deteriorated state of Buddhist monuments,²² a state attributable to the locally claimed discrimination of the then rulers towards Buddhists. Much of the *Guthi* lands of this cultural group were presumably awarded to others, starting a process that left the future to decay unattended. We have already noted the other events that followed and brought about a still faster decay of cultural practices. Following 1950's political changes and the associated cultural stress, the speed of decay started assuming worrisome proportions. This speed was further hastened as the community resource for conservation, the *Guthi* land, further dwindled, ironically due to the larger land reform measures and the formation of the *Guthi* Corporation. Growing amnesia among the people with traditional life and artifacts and exposure and attraction to other cultural glitters hastened the speed of loss as both the cultural climate and physical climate went about their degenerative play. The *Guthi* Corporation replaced the decentralized autonomous system of management with a centralized one and has been unable to maintain and manage the numerous shrines and monuments that came under its jurisdiction.²³

Heritage loss and disintegration has also been hastened by the property division traditions and laws. Much of the *Guthi* land and *Bahals* were registered as personal property of the tillers or the head of the *Bahals* in the sixties. With the passage of two generations, the division of such property among the heirs has led to physical disintegration as well as change, totally erasing the heritage building as well as its quality. Even in the case of private houses of heritage significance, the breakdown of a traditional extended family into several nuclear families as well as the legal and traditional practice of dividing land among heirs, has meant vertical division of the building and dismembering of its artistic doors and windows. This kind of division has brought about loss of heritage even in the absence of developmental pressures.

The pressures of development have engulfed many a heritage sites under the foundations of new

constructions. Temples, Bahals, Sattals, Patis, Dharas, ponds and other such tangibles have already been lost in large numbers. Sculptures and idols have been easy prey for thieves and international collectors, assisted, in part, by the distancing of the community from its own heritage. Heritage spaces, such as chowks, chukas and khyos are encroached upon commonly and some have been lost already. Many privately owned heritage buildings have been pulled down, to be replaced by modern buildings or are permanently disfigured. Many of the Buddhist monasteries are undergoing the same plight as the private houses, a situation resulting out of the complex legal and religious web. Heritage streets and spaces have been slowly clad in an unpleasant cloak of modernity.

However, blessed as the city is with so much of heritage, and despite of the cloak of modernity that has lessened the quality of the heritage, much still remains and pockets of heritage charm still embellish the core of KMC.

All the four monument zones of KVWHS within KMC are facing problems of change on the envelope of privately owned buildings, Baudda and Kathmandu Palace Square are suffering the most. The building control regulations providing for building façade, and form and height, applied to all WHS zones have largely failed to be enforced, leading UNESCO to threaten putting KVWHS in an 'endangered list'. Although conservation inputs have been made to the key monuments in the various zones, many of the peripheral monuments have been languishing in dilapidated shapes for lack of funds. A few of the listed monuments have even been pulled down.²⁴

Only since the last few years, some conservation attempts on a few of the outlying built heritage have been made. This has been affected mostly due to reconstruction and unguided and inappropriate approaches and techniques which have led to the loss of its originality, despite the intent of conservation. Some stone water conduits, temples and patis, along with paving of public spaces, have featured in such revival activities.

The state of the software aspects of the cultural heritage of KV and KMC is worse than its built heritage. Many of the festivals and rituals are vanishing or truncated beyond recognition. Many monasteries and temples have lost their religious function. Squatting is common in such defunct institutions and their associated buildings. The traditional skills handed down from the elders in the family is being lost by the day as the traditional

professions lose their commercial value, failing to give a decent earning to those who undertake these professions. Although a minor resurgence in traditional food and culinary skills is observed, such is not the case with songs, music, language etc.

7.2 REVIEW OF EARLIER PLANS FOR HERITAGE MANAGEMENT AND TOURISM

The conventional approach to cultural heritage conservation, preservation and protection has been dominating so far and this has limited it from looking at museums and historical and cultural heritage sites. A brief review of plans and recent attempts at heritage management, including conservation, is made here to assess how conservation of heritage and development of heritage tourism has been incorporated in various development plans and strategies, either specific to Kathmandu town, Kathmandu valley or Nepal in general and also to assess their impact and results.

With the democratic change of 1950 and its opening to the world, Nepal's natural and cultural heritage became instant attractions. In 1955, for the benefit of international guests at the coronation ceremony of King Mahendra, the building heritage around Hanumandhoka was given a 'face-lift.' The lime plaster and white wash applied to the temple cores and ridges then, have stayed to date to tell how the new Nepal misunderstood the character of its own heritage. However, the fragility of the heritage was realized too and the Ancient Monuments Protection Act (1956) framed for legal protection of monumental and artistic heritage adopted. The problems precipitated by the Land Reforms Act, 1961, on the age old Guthi land system, was aimed to be resolved through the setting up of the Guthi Corporation (GC) in 1964. Problems within the act and inefficient management of the GC itself put a final seal on the fate of community led conservation tradition. Building heritage and their associated socio-religious functions started to face worse days as the act brought close to 85% of the total heritage of the nation under the corporation, the remaining 10% under HMG/GC and 5% directly under HMG. The issues of ownership and responsibility of conservation and utilization as a positive resource were further complicated by uncoordinated and conflicting provisions of the Municipality Act, 2048 and the Decentralization Act, 2056.

The UNDP assisted urban planning exercise undertaken in 1963-64 was the first to recognize that strategic actions and town development guidance had to be moderated through heritage specificity for the urban core of Kathmandu. As a matter of fact, the town development control guidelines proposed then have been more or less retained at the core of the currently applied guidelines and controls in force at WHS. The Kathmandu Valley Plan 1968 considered the extensive cultural heritage of the valley towns and villages and proposed several measures for city core preservation and protection. All the plans remained on paper only. In 1972, the first modern conservation work in Nepal started with the UNESCO/UNDP Hanumandhoka Conservation Project. UNESCO assisted in preparing 'The Master Plan for Conservation of Cultural Properties in Nepal' in 1978. Yet to be adopted²⁵ and only sometimes used as 'reference', it provides policies and programs that are still of relevance to Kathmandu and the valley. The Kathmandu Valley Plans and Programs prepared in 1992, also, contains recommendation and action plan for the historic core of Kathmandu, particularly its pedestrianization and some of the actions have been recently implemented or are under implementation with ADB funds. The strongest challenge to the urban heritage of the valley stems from the economic and social changes associated with continuing urban expansion and its pressures on the traditional core. Although, the mainstay of the urban economy of the KMC core has always been commerce, its social reflection was also culturally centered all along. Starting from the past century, the culture centric nature of the society has been speedily replaced with a business centric approach. It is this global trend of new urban character that is forcing our cultural heritage pockets, the majority of which also occupy strategic business locations from current economic perspectives, such as city center and main access crossings, into change. Both, the loss in the heritage per se and the changing visual environment around it, are results of this basic change in urban emphasis. This needs strategic approach of relieving economy stress induced at such heritage nodes by consciously planning and placing business counter poles. Strategic land use planning has not been seriously used as a pro-heritage policy in any plan so far. Conservation specific interventions are more common elements in plans proposed for the KMC's core Hanumandhoka Monument zone. Local area conservation plans have also been prepared for Svayambhu zone and Pashupatinath zone, but their implementation has been peripheral. Most of these are guided by the 'control syndrome' rather than 'depressurization goals'.

As early as 1968, a UNESCO expert had prepared a plan for the 'Development of Cultural Tourism'²⁶ in Nepal and it carried a section on KV. The 'Tourism Master Plan',²⁷ adopted by HMG in 1972, advocated preservation of the historic core of the three towns as well as Svayambhunath, Pashupatinath and Bodhanath, now constituting KVWHS along with the Changunarayana monuments. Projects have not only been implemented on the preservation components as related to Kathmandu Durbar square.²⁸ UNDP also prepared another report for HMG in 1974.²⁹ UNDP and Department of Tourism executed a three-year program at Svayambhu heritage zone to develop a community led heritage management process for tourism development. This has been quite successful.

Thus, heritage action in Kathmandu city has been limited to conservation of monuments of national importance, reconstruction of small public buildings like patis and restoration of some stone water conduits through DOA, Municipal and Ward initiative. These actions and investments have not only been insignificant in relation to the volume and need of activities, but are also only related to monumental heritage. Spatial aspects of town level heritage, as reflected in built spaces (e.g. chowk and chukka, nanis, lachchhis), routes of heritage (e.g. festivals, processions routes of the living and the dead, ghats and riverside spaces), service spaces (e.g. patis, sattals, *khyos*, stone water conduits, wells, *jahrus*) or the family and clans level heritage, such as Bahals, *Digudyos*, private shrines, feasting spaces etc. or conservation of artifacts, costumes, traditional food, musical instruments and the associated intangibles such as rituals, skills, songs, music, culinary specialties, etc., or the heritage of institutions such as *Guthis*, that may be private, clan, public or corporate, their land and management system, etc. have not been specifically and strategically addressed.

'Regulating Growth: Kathmandu Valley', yet another 'sustainable development policy and action plan' document was prepared in 1995 under a IUCN/HMG National Conservation Strategy Implementation Project but this remains to be implemented. Its treatment of 'Culture and Heritage', Annex 5, is extensive. Nepal's 'National Plan of Action' proposed to UNCHS (Habitat II) puts conservation of cultural heritage as one of the priority issues and opines that changes in people's³⁰ attitude and perceptions, cultural transformations, a lack of public awareness, poor management of cultural endowments are at the root of the continuing loss of heritage of archeological, architectural, religious, social

and historical significance.³¹ It also has outlined objectives and activities for conservation of cultural heritage. It is observed that the issues, objectives and actions do not go beyond monumental heritage and guthi system. There is an evident need of expanding the definition of heritage and culture as well as seeing it as a part of the living environment.

No study or plan strategically addressing the multi-faceted heritage and its conservation with objective of augmenting livability of the town and exploiting its economic potentials through tourism or other uses is available. Even the available plans and programs pertaining to the core and its monuments need to be cautiously approached as their do-ability and also stakeholder approval and appreciation are not clear.

The above review shows that many plans have been drawn at various times and concern for heritage conservation and proposed action plans are profuse in government and international assistance literature of Nepal. Yet only a few small actions have been undertaken.

The impressive ensemble of heritage of KV and KMC, has been subject to inventorization for some time starting with the UNESCO sponsored photographic inventory of 1968. So far the Kathmandu Valley Inventory of 1975 remains the most extensive monument and monument zone inventory.³² Several other 'typology specific' inventories have been made relating to 'open spaces and chukas', patis and sattals, Bahals, hitis, etc. but a single document compilation is not available to the user. As a matter of fact most of the inventory reports are treated more as ends in themselves rather than inputs to conservation. No inventory of movable cultural property, archeological sites, festivals, rituals, heritage routes and open spaces, family associated cultural locations or surviving guthis and their land, has yet been compiled.

7.2.1 Trends in Heritage Protection, Transformation and Creative Use

Although cultural heritage defined as a set of artifacts, associated uses and ways of using, handed down from the past is often taken as a 'commodity of visual and experiential consumption' by an outsider, for the people who live through the culture, it is not a commodity but a medium of a way of living. Living cultures are dynamic mediums that are constantly in dialogue with economic and social demands of the time as felt from within the

practicing culture. Thus, active cultures are characterized by gradual transformations. Losses occur when the change is too speedy for assimilation in a social/cultural sense. Recently, the public opinion and inclination towards conservation has greatly increased and positive attitude towards traditional culture and its practice has been observed. Such a change is very important as it provides a setting where conservation strategies may be more easily understood and applied for the betterment of humanity. The support and understanding for the culture of the indigenous groups from the immigrant population has also increased compared to the past decades. In such a context, we may suggest that the trend of loss seen in the past can be stemmed in the future from within the practicing group as well as the mature immigrants.

Trends in loss of visual ambience of the heritage zones, caused by the construction of modern buildings without regard to material, form and height control may continue until a compromise between objective ends of conservation and developmental demands pertaining to such zones is not reached. Recent experience shows that there is a growing trend towards the use of special facing bricks, Dachi-apa, and minimum carved frames for doors



The Reinstated Torana of the Bahal at Ason

and windows in private building construction in the city core. This is certainly a positive indicator that public respect for the character of the heritage streets and spaces is increasing. However temples continue to be 'overshadowed by multi-storied concrete buildings'. A strategic approach to create a situation so that roof formation and height control regulations are acceptable to the owners in the area seems to be a necessary call for dealing with the trend that is still threatening to continue.

Loss of Buddhist Bahals continue unabated and a review of legal provisions for allowing registration of Bahals as 'paternal property' and possible reversal of past registrations is necessary to bring about a semblance of order. The loss of the traditional, religious and educational association of the monasteries and the intrusion of 'new'³³ orders also threaten to continue this trend. Similar trends in the loss of archeological sites is apparently growing and unless concerted policy efforts are applied, archeological sites will be permanently lost.

Creative use of culture and heritage is a recent phenomenon as exemplified by the tourist trade. A move towards grafting traditional architectural elements and details to new constructions may be said to have started from the early seventies along with national overtures on 'Nepalese style'. Although one might question how much we have really understood the character of our style, sometimes leading experts to comment that our new buildings have become 'touristically traditional rather than traditionally modern'. New buildings continue to be given a paste of 'Nepalese architecture' in varying parts of buildings such as doors, windows, roofing, etc. As long as it does not become an exercise in poor caricature we may see this as creative use.

Cultural artifacts have been an area of large creative adaptations. Gifts and tourist mementos and as well as items of interior decoration ranging from Chessboards to light-shades have created their own market. With design and pattern innovations, the adaptations by pottery, dress, carpet, paper craft and jewelry industries have also been remarkable.

The need to use heritage for economic gains at the level of the citizen as well as the city and turn it into a significant economic resource is exemplified by the important location of 'Heritage and Tourism Department' in the Kathmandu Metropolitan City's functional organization structure. KMC also sees heritage as an infrastructure of great significance.³⁴ The deteriorating

situation of the cultural infrastructure, typified by the change in the ambient visual environment as well as loss of traditional open spaces such as courtyards and khyos of the city has affected the total living environment of the city, and is as much in need of redress as other physical environmental problems such as air pollution, water pollution or waste pollution. The potential of creative use of culture in generating city revenue and creating jobs for the citizen has been felt to be great in its role in providing an environment for good living and providing an image to the city.

7.3 ENVISIONED FUTURE

KMC has been heir to cultural heritage from the earliest period and includes within its area the largest collection from the post-Malla period such as the riverside developments in Teku-Thapathali and Pashupati sections of Bagmati. Of the five municipal towns in Kathmandu, KMC is the worst affected in terms of heritage loss, heightened by its continuing role as the capital and the associated developmental pressures. Despite the immense loss already taken by the cultural heritage in KMC, a lot still remains and quite a few of the losses may yet be recovered through appropriate actions.

Being the capital of Nepal and an inseparable and definitive part of Kathmandu Valley, KMC's envisioned future must be seen within the wider context of the country and the valley and fit the respective visions thereof. The Ninth Plan of Nepal envisages the role of KV as a cultural region, a capital region and a 'conference' region. This would mean visioning Kathmandu city as a cultural city, a capital city and a conference city. A valley wide strategic planning exercise, nearing completion now, also shares a similar vision. All of them recognize that the specialty of KV is derived out of its historical and cultural character and, additionally for KMC, its place as the capital city. The conference center objective partially capitalizes and derives out of the capital role and heritage excellence. This is pretty much the same vision that also emerges out of the stake-holder meeting of August 25:

7.3.1 Kathmandu... A Capital with a Living Cultural Heritage

It has been estimated that by 2020 the population of Kathmandu valley, which stands at 1.5 million now, will reach 2.6 million with 85% of the additional population

of 1.1 million likely to seek residence in KMC³⁵ doubling its size. KMC's heritage strategy has to be realized within this perspective of continuing development prospects and pressures.

The issues of culture and heritage for building up the City Development Strategy of Kathmandu Metropolis will, therefore, have three pronged policy objectives; (1) its conservation and preservation, (2) its deployment for financial sustainability through cultural heritage tourism and other creative uses and (3) augmenting its relevance for quality of life of its citizen amid the scenario of contemporary development.

7.4 STAKE HOLDER ANALYSIS

Cultural heritage, like environment, has a wide body of stake-holders. Its varied role as a medium of living for the residents of the city, its importance to mankind, international community, national cultural history and identity and in creating a sense of local place combined with the critical contribution and demands as a commodity for cultural heritage tourism, generate a host of international, national and local stake-holders of both governmental and non-governmental nature. Their functions range from those of legal custodians e.g. Department of Archeology to those of Nepal Heritage Society, which primarily sees itself as a watchdog of both the natural and cultural heritage of the nation. Still others such as the tourism industry and the people directly or indirectly employed by it see heritage as a commodity they offer to their clients and it becomes a matter of business and economic interest. The indigenous population of the city for whom culture provides the background for living and whose fore-fathers were the creators of the heritage themselves, ironically, also appear to be a stake-holder in the background. For KMC, with its vision of making heritage a living culture, they assume significant importance. For these very reasons, the interests of the various agencies, if left uncoordinated, will not only lead to actions at cross-purposes with each other but also to a loss of scarce resources.

The following key stake-holders have been identified to assess their possible interests areas, expectations and potentials and most of them were invited to participate in the stake-holder consultations at various times, either in group or individually. It will be noted that some are only typical organizations that represent a group. They have been identified among the group mainly because

of their active standing in the heritage arena. The analysis is presented in a tabular following the list.

The key stakeholders:

- ❑ UNESCO (UN)
- ❑ Department of Archaeology (HMG)
- ❑ Guthi Samsthan (HMG)
- ❑ Department of Housing and Urban Development (HMG)
- ❑ The Chairman of a Ward with Monuments and Sites (Rep./Local Government)
- ❑ Nepal Tourism Board (Public-Private Organization)
- ❑ Nepal Heritage Society (NGO)
- ❑ Kathmandu 2020 Group (NGO)
- ❑ The Jyapu Mahaguthi (Private Consortium of Guthis)
- ❑ The Guthi of Chhusya Bahal
- ❑ Federation of Svayambhu Management and Conservation Committee (WHS/Zone-NGO)
- ❑ One Dafa Group (Rep.)
- ❑ The Handicraft Peddler (Rep.)
- ❑ One Handicraft Shopkeeper (Rep.)
- ❑ One Hotel Operator (Rep.)
- ❑ One Tour Operator (Rep.)

Ranking of National stakeholders in order of importance to KMC on heritage issues:

- (1) Department of Archaeology (HMG)
- (2) Guthi Samsthan (HMG)
- (3) KV Town Development Committee
- (4) Nepal Tourism Board (Public-Private Organization)
- (5) Nepal Heritage Society (NGO)
- (6) Kathmandu 2020 Group (NGO)
- (7) Department of Housing and Urban Development (HMG)
- (8) Federation of Svayambhu Management and Conservation Committee (WHS/Zone-NGO) & The Guthi of Chhusya Bahal
- (9) The Jyapu Mahaguthi (Private Consortium of Guthis) & Dafa Group
- (10) Tour Operator
- (11) Handicraft Shopkeeper & Hotel Operator
- (12) The Handicraft Peddler

Ranking of international organizations in order of importance for KMC on heritage issues:

- (1) UNESCO
- (2) KVPT
- (3) IUCN

Table 1: Stakeholders' Analysis

STAKEHOLDER	NATURE/INTERESTS	EXPECTATIONS FROM KMC	POTENTIALS FOR KMC
UNESCO	Preservation and Conservation of the four monuments zones of KVWHS within KMC	Implementation of proper controls for new developments in heritage areas and conservation action	Funds for conservation and Technical support for design and implementation of actions
IUCN	Interest in the conservation of built environment	Commensurate actions	Small funds for conservation/ strategy implementation
Dept. of Archeology	As legal custodian of archeological and other tangible artistic heritage under the Ancient Monuments Act and for responsibilities accruing thereof, towards protection, preservation and conservation of heritage	Implementation of proper controls for new developments in heritage areas and conservation action and take full responsibility for heritage of 'local' importance	Technical advice, joint action for conservation, mediation with HMG on heritage matters
Guthi Samsthan	As a legal administrator of trust properties of heritage monuments under various traditional guthis and the heritage element itself and responsible for maintaining the element as well as organizing rituals and festivals required for their socio-cultural sustenance	Development and investments in its properties, revival of public participation in cultural activities, repair and maintenance	Joint development actions and coordination and resource management
Dept. of Housing and Urban Development	As urban development department, involved in urban policies, planning and regional planning aspects of the valley and the town	Cooperation and coordination in housing and urban development activities and activities at heritage sites	Policy and Planning and implementation support (technical)
KV Town Development Committee	Regional development and valley wide plan/ policy adherence	Co-operation in implementation	Technical and execution support
Ward Chairman	As people's representative and part of local administration interested both in preservation of heritage as well as local development	Financial and technical support	Local support, community participation and local heritage inventory and protection
Nepal Tourism Board	As a public-private development board, promotes and facilitates development of cultural tourism	Support to tourism interest in heritage conservation/ protection of tourist sites	Business & private sector support to heritage conservation & management of sites
KV Preservation Trust	INGO with direct interest in providing resources for joint action in conservation of monuments	Community led proposals for fund raising and actions	Funds and technical support may be sought

STAKEHOLDER	NATURE/INTERESTS	EXPECTATIONS FROM KMC	POTENTIALS FOR KMC
NEPAL HERITAGE SOCIETY	As a volunteer society, it serves a watchdog function and also aims to assist in conservation through awareness building	Active conservation and joint action	Help in awareness building, voluntary technical assistance and marshal business support
KATHMANDU 2020	Volunteer awareness building in youth for heritage and conservation	Forum assistance	Youth mobilization for cultural revival and heritage sensitivity
JYAPU MAHAGUTHI	Volunteer consortium of Guthis for revival of religious and ritual practices / pride development	Support for conservation of intangibles of cultural practice	Wide specific community participation
GUTHI: CHHUSHYA BAHAL	An active Monastic Guthi that has successfully mobilized its traditional and new resources for conservation/duplication	Duplication in other monasteries	Specific monastic and religious group support
FEDERATION OF SVAYAMBHU M&C COMMITTEE	Local NGO consortium brings coordination between local NGOs/participation and institutional assistance	Backup and ward level support	Local responsibility sharing for WHS-MZ management / funds
DAFA GROUP	Conservation of singing tradition/ support for conservation of pati, sattals etc	Financial / institutional understanding	Elderly involvement in cultural conservation
HANDICRAFT PEDDLER	Individual citizen seeking employment in tourism	Allow public space use for business	Citizen employment/ cleanliness management
HANDICRAFT SHOPKEEPER	Heritage area business and supports local skill employment / improvement of site visitor numbers	Planning action / training to craftsmen	Potential contributor to local financing of activities / training support to skill trades
HOTEL OPERATOR	Heritage based business interest	Promotion Heritage Conservation / zoning support	Financial support to conservation/ promotion
TOUR OPERATOR	Heritage based business interest	Promotion Heritage Conservation	Financial support to conservation/ promotion

7.5 PROBLEMS AND ISSUES³⁶

Problems and issues on cultural heritage were discussed in the first stakeholder workshop. First and foremost, concern was expressed for conservation and preservation of heritage. The problems of institutional coordination, lack of proper preparatory inventories, the failure of the institution of the Guthi, lack of proper understanding and awareness about the culture itself and development pressures were key reasons cited as being responsible for the currently poor status of conservation and preservation. The various issues raised may be broadly grouped into four headings and are listed below:

7.5.1 Conservation / Preservation of Heritage

(a) Non-compliance to building regulations by new constructions at the WHS, particularly at Hanumandhoka Palace Square and Boudda monument zones

- i. Issues of compromise between development pressures and conservation needs at WHS zones
- ii. Issues pertaining to private buildings enveloping heritage sites
- iii. Issues of planning strategies to relieve heritage areas of development pressures - counter polarity development / etc.
- iv. Issues relating to offsetting development rights at heritage sites and appropriate reimbursement
- v. Issues of pedestrian attitudes.

(b) Lack of co-ordination between various agencies involved in the conservation of religious and cultural heritage.

- vi. Issues of management of conservation or sharing responsibility of conservation / preservation between Department of Archaeology and Guthi Corporation.
- vii. Issues related to lack of community participation in heritage conservation

(c) Lack of sufficient investments in conservation

- viii. Issues of conservation of the Guthi system (Resurrecting private / community Guthis)
- ix. The drying out of traditional resources for conservation such as Guthi funds and land and lack of efforts to mobilize contemporary resources (Detailing NGO / CBO participation, involving tourism industry in conservation, etc.) to meet the gap

(d) Lack of local awareness and appreciation of maintaining heritage ambience

- x. Issues related to limited interpretation of heritage buildings (smarak or murta sampada) alone as heritage
- xi. Issues related to conservation of intangibles (amurta sampada)- such as festivals, rituals, language, music, songs, bhajans etc.
- xii. Issues relating to conservation of dhunge dhara (recessed pit stone water conduits) and their sources.
- xiii. Lack of study and research on heritage and its importance - lack of appropriate educational and awareness campaigns
- xiv. Lack of involvement in conservation and reduced traditional cultural practice by the younger generation

(e) Lack of inventory

- xv. Need of intensive investigation of historical and archeological heritage and their identification
- xvi. Need to consolidate various inventories and making it available in user friendly format
- xvii. Need to make inventory of intangibles such as festivals, bhajans, rituals, etc

(f) Dying traditional skills

- xviii. Lack of sufficient skilled workers to undertake conservation
- xix. Loss of 'originality' in conservation/reconstruction works undertaken locally due to lack of appropriate knowledge and skill

7.5.2 Heritage as a Resource for Capitalization (Heritage Based Tourism)

(g) Visitor Entry Fee

- xx. Uncoordinated application of Visitor entry fees
- xxi. Undefined state of who has the authority to collect fees or what agency is responsible.
- xxii. No direct contribution of heritage dependent industries or institutions such as Hotels, Restaurants, Handicrafts Shops, Travel Agencies, Cultural Performance centers, Money Exchange, etc. towards heritage conservation and management costs

(h) Tourism based Employment

- xxiii. No data on Heritage Tourism as an employer / employment generator for the city residents
- xxiv. No direct benefit to the immediate 'community'

xxv. Lack of city based museums

(i) Expenditure of heritage revenue

- xxvi. Lack of clarity in use of heritage revenue
- xxvii. Need to spend resources on
 - a. Conservation and presentation of physical heritage (monuments and sites, routes of heritage, river side heritage, etc.)
 - b. Support for preservation of festivals, rituals, music, songs etc.
 - c. Enabling actions (for earnings and employment) e.g. training, marketing, promotion, public education

7.5.3 Image of the Town

(j) A city with a living Cultural Heritage

- xxviii. Need to conserve heritage buildings and other tangibles
- xxix. Need to conserve character of heritage areas such as streets and squares
- xxx. Need to fully regenerate and conserve cultural activities such as festivals, rituals etc.
- xxxi. Need to rehabilitate and use traditional urban services such as Dhara, khyos, Patis and Sattals

(k) Modern city with living Cultural Heritage

- xxxii. Policy for private heritage buildings
- xxxiii. Policy of city core and Development right reimbursement
- xxxiv. Policy for new development areas
- xxxv. Policies for public development works
- xxxvi. Policies of planning

7.5.4 Heritage / Culture as an Environment for Living of the People

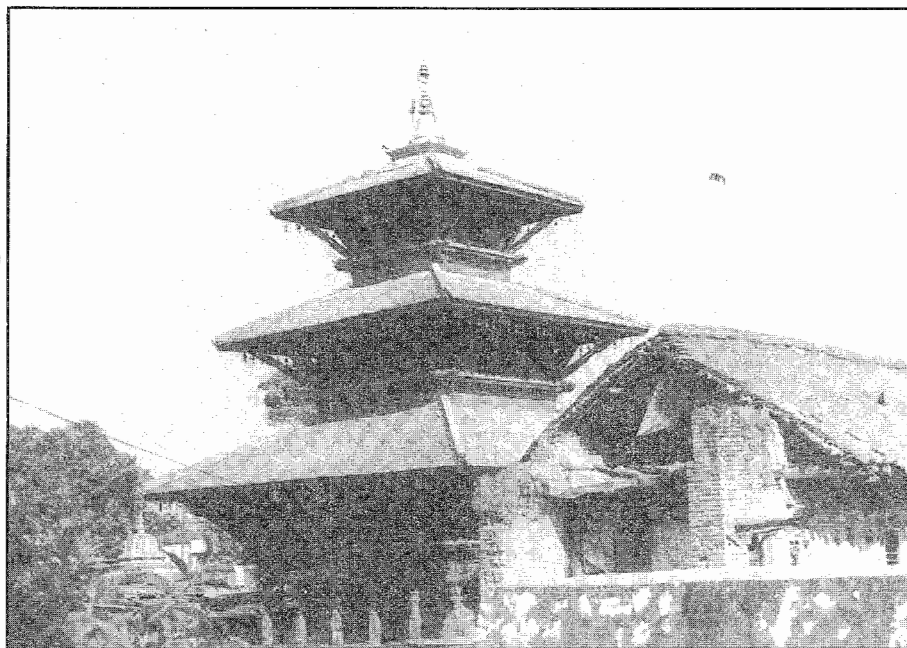
- xxxvii. Heritage for the continued well being of the people, increasing awareness towards heritage
- xxxviii. Assisting deliberately in cultural transformations and practice of culture
- xxxix. Augmenting Citizen value of Heritage
- xl. Community participation in conservation
- xli. Arresting further loss of heritage due to private development

7.6 CHALLENGES AND POSSIBILITIES:

Loss of cultural heritage in Kathmandu valley may be ascribed to three basic reasons - (a) pressures of development, (b) loss of cultural practice in the parent group and lack of understanding of its importance and relevance by the traditional inhabitants and the immigrants alike, and (c) loss of traditional sources of funding and institutional set up or the Guthi. The key challenge to KMC's strategic vision of transforming itself into a "Capital with a Living Cultural Heritage" would be the continuing development and population pressures that the growing capital city would have to sustain for the immediate future and also on a medium range. In the long range, we may forecast that the unprecedented high growth rate of Kathmandu city may be slowed down to some extent, if the nation is able to sincerely affect a decentralized governance and a dispersal of development and social services facilities. But for two decades or more, Kathmandu city will have to absorb most of the immigrants to the valley, with a small share going to Lalitpur and Kirtipur towns. In such a situation, the successful heritage strategy must be aimed through careful application of planning options that would divert mercantile economic development to outside the heritage areas of the core and wards nos. 4, 5, 6, 7 and 15. As the heritage areas are also physically the densest sections, conscious creation of economic development counterpoles is quite possible and feasible. Economic diversion would also potentially lengthen the building replacement period in the heritage sites. Revitalization of the Guthi system as well as the cultural rejuvenation must of necessity be taken as a slow process and that too, if at all successful, will remain to a very small scale. Therefore, all the past causes of heritage loss will remain active and demand directed policy action.

It has already been pointed out that KMC has suffered the worst loss of heritage as compared to other four towns in the valley. In terms of heritage environment and tourism potential, Kathmandu faces the strongest competition from Bhaktapur and also from Lalitpur. Comparatively, Kathmandu, however, enjoys comparative advantage from all the rest in that it has large pockets of wide diversity built heritage and also most of the tourism services are concentrated within its central part. With four monuments of WHS KV within

The Tripureswora Mahadev: awaiting Conservation



the KMC, one secular, one of Hindu and two of Buddhist religious association, as well as the river Ghats heritage from the most ancient to the most recent historical-cultural periods, it has truly diverse sites to offer. It is also equally important that popular new sites such as Thamel and Jhochhen have no equals in the valley. KMC could enhance this strategic advantage by further diversifying the attractions and also taking advantage of its cosmopolitan nature. For example, the Rana palaces, such as Keshar Mahal, can provide an entirely unexpected new attraction to the western tourist.

With the widely dispersed physical heritage, both movable and immovable, it is virtually impossible or unlikely that institutional approach and application alone will be able to bring about significantly better protection and conservation of heritage. Lack of community participation and their distancing from the heritage in the past are obvious bottlenecks for improvement to the situation. However, in the past few years, one has been observing a growing positive attitude towards physical heritage and this could be capitalized as an opportunity of significant dimension for conservation. Strategic nurturing of the nascent situation should be a conscious guiding principle for enduring conservation.

The most vexing problem at the monument zones listed in KVWHS or others of national and city importance is the incompatibility of privately built replacement structure with the heritage ambience of the site or buildings not conforming to the 'building codes' in force in the areas. The main problem that has remained is the tendency to construct buildings taller than allowed by

regulations, while the other façade controls like openings and exposed brick requirements are slowly being respected. Although, the general blame for the situation has often been put on the private citizen and his lack of sensitiveness to heritage requirements, the situation is also a result of the controls not properly satisfying the development needs of a changing society. Just as heritage needs to be conserved, so also the residents living in the heritage area need to

move with the times and enjoy their development rights. Since, development potential and consequent right of economic exploitation is a complex function of service availability and proximity to other types of economic zone, the diffusion of potential economic exploitation may be strategically used to reduce propensity towards tall constructions. Since it would not be in the interest of the vitality of the area to reduce beyond redemption, that would ultimately lead to slum formation in heritage areas, the experiments in transfer of development rights (TDR) being successfully tried in Hong Kong etc. may be more handy in helping adherence to architectural and height controls in such areas. TDR as a planning tool offers a different kind of easy maneuver to create business counter poles at a safe distance from heritage zones and for KMC too this can be capitalized with advantage.

For heritage conservation, institutional and legal weaknesses will be constrains of another kind. The weakness of the Guthi Corporation, the weaknesses in the AMP act 1957 and its revisions, the 'built heritage' oriented government institutions and their governing rules and regulations threaten to continue to hamper development of a heritage focused core.

7.7 INSTITUTIONAL ARRANGEMENTS AND GAPS

Institutions, in general, derive their existence out of the legal enactments of the nation, which, in the case of cultural heritage, are summary provisions under the

Ancient Monuments Protection Act, 1956, Guthi Samsthan Act, 1964 and Municipality Act, 1992 and their revisions. Under the last act, Section 63.1(L) requires municipalities to preserve historic and religious places, and to promote their importance and reputation. Its Section 15.2(H) requires them to also make land-use and town development plans. The responsibilities for implementation of legal provisions under the Ancient Monuments Protection Act are vested in the Department of Archeology (Ministry of Tourism and Culture) and the Chief District Officer, the latter working under the Ministry of Home. These provisions require municipalities to issue building permits for new buildings or alterations at heritage sites on permission of DOA. Although the Local Governance (Decentralization) Act makes Municipality an autonomous administrative institution, it is located under the Ministry of Local Development. The town development function, which enables any planning intervention to cause heritage preservation, is, however, located under the Ministry of Transport and Public Works and its Department of Housing and Urban Development. The split in the departmental responsibilities between technical support (DHUD) and management support (MLD) for municipalities have brought about their own difficulties. The right to raise resources from heritage in the context of cultural tourism may be interpreted to rest with the municipality. There is little or no 'legally established' linkage of Ministry of Tourism to cultural heritage.

The conflicts between Local Governance Act, Municipality Act and AMP act in terms of ownership

of sites, responsibilities for conservation, responsibilities of developmental works and authority for revenue generation, etc. add up to debilitating proportions. It is seen that only the Guthi Samsthan Act requires that institution to act towards sustaining and maintaining cultural practices as explicitly stated by donors in the past. However this is limited to 'Raj Guthi' only and other Guthis such as 'Chhut Guthi' and 'Niji Guthi' are left to unguided private action, and most of the latter have virtually ceased to exist.

The KMC organizational set up provides the 'Heritage and Tourism' department, which is in its formative stage and not sufficiently built for handling the vast works associated with the department. KMC may, however, use any institutional/technical support provision (see stakeholder map above) of the various departments and NGOs and INGOs.³⁷ However, all the government departments are not legally required to assist in or act directly for the implementation of KMC's policies, plans and programs.

We can, also, see a glaring gap in institutional provision for conservation of intangible cultural elements. As a matter of fact, Section 63.1(L) of Municipality Act omits reference to properties of aesthetic, cultural or social importance. This will make preservation of even physical heritage components such as private residential courtyards, wells, stone water conduits etc. contestable legally.

Table 2: Heritage Conservation - Issues and Implications

<i>Conservation / Preservation of Heritage</i>		
ISSUES	IMPLICATIONS	ACTORS/DONORS
Non-compliance to building regulations by new constructions at the WHS, particularly at Hanumandhoka and Boudda monument zones / Issues pertaining to private buildings enveloping heritage sites	Discordant visual backdrop with changing façade and Increasing height of private buildings, Conflict of building materials	DHUD(HMG) / DoA(HMG) / KVTDC / KMC
Issues of compromise between development pressures and conservation needs at WHS zones / offsetting development rights at heritage sites and appropriate reimbursement	Change of usage of private buildings in WHS monument Zones, Loss of development right of private citizen	DHUD(HMG), KVTDC, KMC
Issues of development pressure in heritage areas	Change to incompatible use, Loss of ambient visual environment and encroachment of heritage spaces	KVTDC / KMC / HMG (Sectoral Departments)
Issues of pedestrian attitudes towards heritage sites	Loss of monuments by vibration, Limited access to residents, No through movement	KVTDC / KVUDP/ ADB
Issues of management/sharing responsibility of conservation / preservation between DoA and GC / Lack of co-ordination between various agencies involved in the conservation of religious and cultural heritage	Loss of investment, Conflicting signals to general public, Loss of heritage	HMG, DoA(HMG), GS(HMG), KMC NHS
Issues of lack of community participation in heritage conservation / Lack of local awareness and appreciation of heritage ambience / Lack of involvement of youths in conservation and in traditional culture	Distancing of community from its heritage and its operation, loss of meaning of heritage to daily life and limited institutional capacity in the context of profuse heritage	KMC, NHS, Kathmandu 2020, WB, EU (poverty Alleviation)
Lack of sufficient investments in conservation / Drying out of traditional resources for conservation such as Guthi funds and land and	Loss of heritage, priority tends to go to peak edifices and of national importance, neglect of heritage of local, community and clan significance	FSMCC / GCB / NHS/ JMG, NTB, HMG (Sectoral Departments), UNESCO,
Lack of efforts to mobilize contemporary resources	Loss of capacity to conserve	UNDP
Issues of conservation of the Guthi system		NHS, KMC, Kathmandu 2020
Issues of limited interpretation of built heritage (smarak or murta sampada) / Need to make inventory of intangibles such as festivals, bhajans, rituals, etc, Issues related to their conservation	Reduced meaning as a living heritage	KMC, DoA, GS, EU
Issues relating to conservation of <i>dhunge dhara</i> (recessed pit stone water conduits) and their sources.	Loss of heritage, free water supply to poorer section of society and loss of drainage capacity	KMC, DoA, DWSS, WB, NORAD
Lack of study and research on heritage and its importance – Need for investigation/identification of historical and archeological sites	Continued loss due to lack of knowledge	KMC, TU, DoA, UNESCO
Lack of inventory / Need to consolidate various inventories	Continued loss due to lack of listing and protection	KMC, Wards
Dying traditional skills / Lack of sufficient skilled workers to undertake conservation / Loss of 'originality' in reconstruction works	Loss of skill capacity to conserve, Loss of employability	KMC, Wards, NHS

Heritage as a Resource for Capitalization (Heritage Based Tourism)

ISSUES	IMPLICATIONS	ACTORS/DONORS
Visitor Entry Fee, uncoordinated application / undefined authority or associated responsibility	Harrassment of Tourists, Difficulties in travel and trade	KMC, SCDC
No direct contribution of heritage dependent industries, e.g. Hotels, Restaurants, Handicrafts Shops, Travel Agencies, etc. towards heritage conservation/management	Overexploitation and loss	KMC, NTB, Individual Businesses
Tourism based employment / Lack of data on Heritage Tourism as an employer / employment generator for the city residents / No direct benefit to the immediate 'community'	Disorganised capitalization of culture and tourism at individual level, over exploitation of tested options	KMC, NTB, Individual Businesses
Lack of city based museums / Lack of unique attractions	Reduced competitiveness	KMC, NTB, Bilateral Donors, KVPT

Image of the Town

Issues of developing KMC as a city with a Living Cultural Heritage	Increased relevance to people / Augmented potential for heritage tourism	KMC, EU, NORAD, IUCN
Issue of heritage buildings in private ownership / Arresting further loss of heritage to private development	Loss of heritage at private level	DoA, KMC, Wards

Heritage / Culture as an Environment for Living of the People

Developing Heritage for the continued well being of the people	Increased Relevance for people	KMC, Donors (poverty alleviation), KVPT
Deliberate cultural transformations and practice of culture	Recognition of change needs	KMC, Local Clubs, IUCN
Community participation in conservation / Augmenting Citizen value of Heritage	Reduction of community and individual distancing from heritage	NHS, Kathmandu 2020, Institutional Development Donors
Making a Modern city with living Cultural Heritage	Increased relevance for people and their changing aspirations	KMC, DHUD, KVPTDC, DoA

CALENDAR OF FESTIVALS IN KATHMANDU VALLEY

ANNEX: 1

1901AD Date	1958 BS Tithi	1958 BS Date	Festival	Trithi	1999 BS Date	1942 AD Date	Festival	Regular Name
Mar. 21.	chaitrasudi 1	Chait 9	chovanhava		Baisakh 1. mon	.13.Apr.	Bhaktapure Viswodwojvanjanam	
27.	chaitrasudi 8	Chait 15	(Aadinathsnan) Machhindra Ratha yatra		Baisakh 2. tue	.14.Apr.	Srimahakali Mahalaxmi yatra	
Apr. 3.	chaitrasudi 15	Chait 22	Vaukot devi yatra (Lhutsinan)		Baisakh 3. wed	.15.Apr.	Matatirthasnanam /Sri Brahmani yatra	Balaju Mela
5.	baisakhbadi 1	Chait 24	Vuganhava		Baisakh 4. Thu	.16.Apr.	Chhumaganesh yatra Bhaktapure	Jatra at hadigaon
18.	baisakhbadi 14	Baisakh 6	Matritirtha yatra		Baisakh 5. Fri	.17.Apr.	Sri Vairab Vadrakali ratha yatra Bhaktapure	
19.	baisakhsudi 1	Baisakh 7	Vugayata		Baisakh 7. Sun	.19.Apr.	Lalitpattane Matsyendra natha Ratha yatra	
					Baisakh 12. Fri	.24.Apr.	Sripashupa terdamanarohanam	
May. 3.	baisakhsudi 15	Baisakh 21	Svanyapunhi		Jestha 1. Thu	.14.May	Sithichahre	Buddhajayanti
23	jesthasudi 6	Jestha 10	Sithinakha		Asadha 6. Sat.	.20.June		Sithi
Jun. 3.	jesthasudi 15	Jestha 20	Panautisnan		Asadha 14. Sun	.24.June		
.12.	asadhbadi 10	Jestha 30	Nakwadisi		Asadha 22. Mon.	.6.Jul.	Trisul yatra (Deupatan)	Deupatan Jatra
					Asadha 24. Wed.	.8.Jul.		
					Asadha 28. Sun.	.12.Jul.	Dilachahre	
Jul. 17.	asadhsudi 2	Srawan 3	(Sringam ?) Rathayatra		Asadha 31. Wed	.15.Jul.	Jaggannath Ratha yatra	
.28.	asadhsudi 12	Srawan 14	Tulasipiye		Srawan 5. Mon.	.20.Jul	Ganga Ratha yatra	Deupatan Jatra
Aug. 12.	srawan badi 13	Srawan 29	Ghantakarna		Srawan 12. Mon.	.27.Jul.	Dilapunhi	
					Srawan 26. Mon.	.10.Aug.	Gathamugachahre	Gathemangai

CALENDER OF FESTIVALS IN KATHMANDU VALLEY

1901AD Date	1958 BS Tithi	1958 BS Date	Festival	Tithi	1999 BS Date	1942 AD Date	Festival	Regular Name
.22.	srawan sudi 8	Bhadau 7	Yalapanjadaan	srawansukla1	Srawan29.Thu.	.13.Aug.	Gunladharmarambhah	Gunla starts
.26.	srawansudi 12	Bhadau 11	Vahiboya		Bhadra3.Wed.	.19.Aug.		
.29.	srawansudi 15	Bhadau 14	Gunpunhi, Vyanjanake		Bhadra10.Wed.	.26.Aug.		Janai purne
.30.	bhadrabadi 1	Bhadau15	Saparu		Bhadra11.Thu	.27.Aug.	Saparu, Goyatra	Gai Jatra
Sep.5.	bhadrabadi 7	Bhadau 21	Krishnasthami					
				bhadrakrisna8	Bhadra18.Thu.	.3.Sep.	Srikrishna yatra	
				bhadrakrisna13	Bhadra23.Tue.	.8.Sep.	Panjadaanam	Panchadaan Kathmandu
				bhadrakrisna14	Bhadra24.Wed.	.9.Sep.	Panjadaanchahre	
.12.	bhadrabadi 30	Bhadau 28	Panjadaan, Gokarnasan					
.16.	bhadrasudi 3	Asoj 1	Teej, Ganes chauthi, Chatha					Gunla ends
.21.	bhadrasudi 8	Asoj 6	Kayasthmi, Kayajasan	bhadrasukla6	Bhadra31.Wed.	.16.Sep.	Kokhajabiye	
.25.	bhadrasudi 12	Asoj 10	Yankisvaye, Matachhoya		Asoj2.Fri.	.18.Sep.	Kageswor18	
					Asoj5.Mon.	.21.Sep.	Indradhwojothhanam, Matachhoye	Indra Jatra, Mata chhoye, Kumari Jatra
.28.	bhadrasudi 15	Asoj 13	Yankidahasan, Vadhapunhi	bhadrasukla14	Asoj.7.Wed.	.23.Sep.	Indra yatra	
.30.	aswinbadi 2	Asoj 15	Gatila		Asoj.8.Thu.	.24.Sep.	Bhaktapure Siddhapokhari mela	
				aswinkrisna4	Asoj12.Mon.	.28.Sep	Nanicha yatra	Nanicha Jatra
				aswinkrisna11	Asoj20.Tue.	.6.Oct.	Harishanker yatra	
				aswinkrisna14	Asoj23.Fri.	.9.Oct.	Nalaasanechhahre	
				aswinsukla5	Asoj28.Wed.	.14.Oct.	Pachali Vairab yatra	Pachali Bhairava Jatra
				aswinsukla8	Kartik1.Sat.	.17.Oct.	Kuchhimwe	
				aswinsukla9	Kartik2.Sun.	.18.Oct.	Syakkotyakko	Dasain
				aswinsukla10	Kartik3.Mon.	.19.Oct.	(Chaaan) Khadga yatra	Tika
				aswinsukla11	Kartik4.Tue.	.20.Oct.	Asanchaalan	Asan Chalan
Oct.27.	aswinsudi 15	Kartik 11	Katimpunhi, Sigapunhi					
Nov.11.	kartikbadi 30	Kartik 26	Mahpuja	kartikkrisna14	Kartik22.Sat.	.7.Nov	Swantichahre	Tihar, Dipavali

CALENDER OF FESTIVALS IN KATHMANDU VALLEY

1901AD Date	1958 BS Tithi	1958 BS Date	Festival	Tithi	1999 BS Date	1942 AD Date	Festival	Regular Name
.26.	kartiksudi 15	Mangsir12	Sakimalapunhi		Mangsir18.Thu.	.3.Dec.	Balachahre	Jatra at Hadigaon
Dec.5.	margabadi 10	Mangsir 21	Guheshori yatra	margakrisna14	Mangsir22.Mon.	.7.Dec.		
.19.	margasudi 8	Push 5	Bakunmada		Mangsir30.Tue.	.15.Dec		
.25.	margasudi 15	Push 11	Thinlapunhi		Push7.Tue.	.22.Dec	Yomaripunhi	
Jan.4.	poushbadi 10	Push 21	Chilladishi		Push17.Fri.	.1.Jan.	Dishipuja	
.17.	poushsudi 8	Magh 4	Jamanhavam Machhindrasnan	poushkrisna14	Push21.Tue.	.5.Jan.	Ukhuchahre	
.21.	poushsudi 12	Magh 8	Muswadhuli		Push29.Wed.	.13.Jan.		
.23.	poushsudi 14	Magh 10	Milapunhi		Magh5.Mon.	.18.Jan		
				poushsukla15	Magh8.Thu	.21.Jan	Changu n. Haigu, Bhktp Hanuman tirhasnan	
				maghkrisna14	Magh22.Thu	.4.Feb	Laichahre	
								Basantapanchami
Feb.15.	maghsudi 7	Falgun 4	Lagalachuyake		Magh29.Thu	.11.Feb	Rathasaptami	
.19.	maghsudi 12	Falgun 8	Sannyadhuli		Fagun5.Tue	.16.Feb	Vatu Magha yatra	Jatra at Wotu
.22.	maghsudi 15	Falgun 11	Sipunhi	maghsukla14	Fagun8.Fri	.19.Feb	Maghayatra	
Mar.17.	fagunsudi 8	Chait 4	Chisyajegu	falgunkrisna13	Fagun21.Thu	.4.Mar.	Shilachahre	Sivaratri
.24.	fagunsudi 15	Chait 11	Chisyaye					
.25.	chaitrabadi 1	Chait 12	Dhulayata		Chait9.Mon.	.22.Mar.		Fagu Purne (Holipunhi)
Apr.1.	chaitrabadi 8	Chait 19	Duduchyanhyan	chaitrakrisna7	Chait15.Sun	.28.Mar.	Duduchyanhyan	
.8.	chaitrabadi 30	Chait 26	Ghotakayatra	chaitrasukla1	Chait23.Mon		Chavahanaba	Chhode Jatra
				chaitrasukla6	Chait28.Sat	.10.Apr	Sribhairav Bhadrakali Ratha yatra	
				chaitrasukla8	Chait31.Tue	.13.Apr	Matsendra yatra, Viswodehojotthan, Jamayata	Seto-Matsendra nath jatra
1902						1943		

INVENTORY OF DHUNGE DHARAS³⁸

ANNEX: 2

S.No.	Name & Location	Year Built	Built By	Code & Status
1	Tangal Gairidhara	6th Century	Amshuverma	1.1 Good
2	Nandikeshor Naxal	14th Century	-	3.1 Good
3	Tindhara Pathsala	14th Century	Laxminarayan	8.1 Poor
4	Narayanhiti	15th Century	-	9.1 Good
5	Dhobichowr Lazimpat	-	-	8.2 -
6	Dhobichowr Lazimpat	-	-	2.2 -
7	Bhatbhateni	Ren. 18th Century	-	4.4 Fair
8	Dhumbarahi	18th Century	-	4.5 Poor
9	Handigaon Ukalo	16th Century	Palsinga Prajapati	26.5 Fair
10	Panchedhara Handigaon	14th Century	Ren. Dhir Sumsher Bir Sumsher	28.5 Poor
11	Satyanarayan Handigaon	10th Century	-	32.5 Fair
12	Naxal Bhagabati	17th Century	-	39.5 Fair
13	Sifal	19th Century	-	40.5 Fair
14	Boudda	17th Century	-	2.6 Fair
15	Boudda	19th Century	-	3.6 Fair
16	Tinchule Boudda Mahankal	19th Century	-	4.6 Poor
17	Tinchule Boudda Mahankal	16th Century	-	5.6 Good
18	Boudda	18th Century	Dadhi Buda	6.6 Poor
19	Chabel	18th Century	Siddhiman Karnel	2.7 Poor
20	Chabel	15th Century	Community	6.7 Fair
21	Chabel	18th Century	-	7.7 Poor
22	Chabel Chakrapath	18th Century	Ren Bisnumani Acharya	8.7 Good
23	Chabel Chakrapath	20th Century	-	9.7 Good
24	Chabel Ganesh	17th Century	Siddhiman Karnel	10.7 Poor
25	Jayabageswori	NS 508	Jayasthiti Malla	5.8 Poor
26	Bhubaneswori	15th Century	-	27.8 Poor
27	Bhubaneswori Devpattan	16th Century	-	29.8 Fair
28	Bankali	18th Century	-	34.8 Fair
29	Battisputali	18th Century	-	4.9 Good
30	Battisputali	NS 968	Thakusing Bharo, Hari Bharo	6.9 Poor
31	Pimbahal Battisputali	16th Century	-	7.9 Fair
32	Battisputali	19th Century	Purne Dhobi	8.9 Fair
33	Battisputali	18th Century	-	9.9 Fair
34	Sinamangal	18th Century	-	11.9 Good
35	Harjantole	18th Century	-	13.9 Good
36	Battisputali	19th Century	Gopal Bhatta	15.9 Fair
37	Koteswor	18th Century	-	1.10 Fair
38	Koteswor, Mahadevsthan	18th Century	-	7.10 Poor
39	Koteswor Mahadevsthan	19th Century	-	8.10 Fair
40	Koteswor	19th Century	-	12.10 Good
41	Minbhavan	20th Century	Bhim Sumsher	13.10 Fair
42	Baneswor	BS 1980	Kulbahadur Mali	16.10 Poor
43	Baneswor	18th Century	Padamdwoj Thapa	17.10 Poor
44	Mahadevsthan Baneswor	19th Century	-	18.10 Poor
45	Dhobidhara Baneswor	18th Century	Fattebahadur Sardar	19.10 Fair
46	Battisputali Baneswor	19th Century	-	20.10 Fair
47	Kohiti	15th Century	-	82.12 Fair
48	Chhauni	BS 1939	Juddhabir	4.13 Fair
49	Svayambhu Dallu	15th Century	-	1.15 Poor
50	Dallu	14th Century	-	3.15 Fair
51	Dallu	17th Century	-	4.15 Poor
52	Dallu	17th Century	-	5.15 Fair
53	Vhuikhel Svayambhu	17th Century	-	9.15 Poor
54	Svayambhu	18th Century	-	26.15 Fair
55	Balaju	19th Century	Rambahadur	3.16 Poor
56	Balajutar	19th Century	Machabhai Maharjan	12.16 Fair
57	Nayabazar Ganeshthan	BS 1998	Bishnukumari Shrestha	23.16 Fair
58	Sohrakhutte, Pakanajol	BS 1864	Kapardar Bhotu Pandey	33.16 Poor

CITY DIAGNOSTIC REPORT

59	Sohrakhutte Pakanajol	15th Century	-	36.16 Poor
60	Sohrakhutte Pakanajol	BS 1919	Dhirjanarayan	39.16 Fair
61	Pakanajol	NS 837	Bilekha	48.16 Fair
62	Kaldhara Pakanajol	15th Century	Dhinnarayan Dhobi	49.16 Good
63	Kaldhara	19th Century	Community	51.16 Fair
64	Dhaliko	17th Century	-	1.17 Fair
65	Dhaliko	17th century	-	2.17 Fair
66	Dhaliko	19th Century	-	3.17 Fair
67	Dhaliko	17th Century	Beti	4.17 Poor
68	Dhaliko	19th Century	Tirthaman	5.17 Fair
69	Dhaliko	18th Century	-	7.17 Fair
70	Dhaliko	20th Century	Ananda	9.17 Poor
71	Dhaliko	20th Century	Tejman	10.17 Poor
72	Dhaliko	19th Century	-	11.17 Fair
73	Dhaliko	20th Century	-	12.17 Fair
74	Dhaliko	19th Century	-	14.17 Fair
75	Dhaliko	20th Century	-	15.17 Fair
76	Chhetrapati Dhaliko	20th Century	Simhabir	26.17 Fair
77	Tamsipakha	18th Century	-	4.18 Poor
78	Tamsipakha	15th Century	-	6.18 Fair
79	Kyatahiti Tamsipakha	19th Century	-	7.18 Poor
80	Tamsipakha	19th Century	-	8.18 Poor
81	Tamsipakha	18th Century	-	10.18 Fair
82	Bhurungkhel	19th Century	Debender Dhobi	11.18 Poor
83	Bhurungkhel	18th Century	-	12.18 Poor
84	Tamsipakha	18th Century	-	29.18 Poor
85	Maruhiti	16th Century	-	1.19 Good
86	Dhokatol Maruhiti	19th Century	-	5.19 Poor
87	Damaitol	16th Century	-	20.19 Good
88	Dhokatol	16th Century	-	23.19 Good
89	Chasandotol	16th Century	-	25.19 Good
90	Banjahititol	17th Century	-	28.19 Fair
91	Bhimsenthan	16th Century	-	11.20 Poor
92	Bhimsenthan	16th Century	-	14.20 Good
93	Maru	17th Century	-	24.20 Poor
94	Lagan Nyayamaju	14th Century	-	16.21 Fair
95	Lagan	20th Century	-	17.21 Good
96	Sundhara	BS 1885	HM Lalit Tripura Sundari	5.22 Fair
97	Ganabahal	18th Century	-	7.22 Poor
98	Sundhara	BS 1901	Gen. Mathabir Singh Thapa	19.22 Poor
99	Thamel	13th Century	-	1.29 Poor
100	Kaputdhara Lainchihan	16th Century	-	2.29 Fair
101	Kaputdhara Lainchowr	18th Century	-	3.29 Fair
102	Golkhupakha	19th Century	Padmanarayan	4.29 Good
103	Lainchowr	18th Century	Ratnaman Dhobi	6.29 Poor
104	Lainchowr	19th Century	Lal Dhobi	7.29 Fair
105	Lainchowr	18th Century	Mahila Dhobi	8.29 Good
106	Lainchowr	15th Century	-	9.29 Fair
107	Lainchowr	18th Century	Hari Dhobi	11.29 Fair
108	Dhobidhara	16th century	Buddhilal	1.31 Fair
109	Dhobidhara	16th Century	Bhaktabahadur	2.31 Poor
110	Dhobidhara	19th Century	-	6.31 Good
111	Dillibazar	16th Century	-	1.32 Poor
112	Dillibazar	19th Century	-	2.32 Good
113	Putalisadak	18th Century	Buddhiman	3.32 Poor
114	Putalisadak Dillibazar	19th century	-	4.32 Poor
115	Putalisadak	19th Century	-	5.32 Poor
116	Dhobidhara	17th century	-	6.32 Fair
117	Gyaneswor	17th century	-	5.33 Good
118	Gyaneswor	14th Century	Ganganath Joshi	12.33 Fair

For Patis and Sattals: See the same inventory.

MONUMENTS AND SITES: AS PER KATHMANDU VALLEY PROTECTIVES INVENTORY

S. NO. INVENTORY	CODE	NAME	LOCATION	GRADE
1.	K-1	Indrayani-Luti Ajima	Vishnumati Khola	B
2.	K-2	Bhodikha Ganesh	Dhobi Chaur	C
3.	K-3	Saraswati	Chhetrapati	-
4.	K-4	Bhagyati	Chhetrapati	C
5.	K-5	Krishna	Chhetrapati	C
6.	K-6	Sweta Ganesh	Chhetrapati	C
7.	K-7	Ram Bahal	Paknajol	C
8.	K-8	Shankasteswari Bhagwati	Thamel	C
9.	K-9	Than Bahi Bhagwan Bahal	Thamel	A
10.	K-10	Agan Chok	Thamel	C
11.	K-11	Kamuru Kamakshya Devi	Thamel	C
12.	K-12	Mana Kamana	Thamel	C
13.	K-13	Dakshin Kali	Thamel	C
14.	K-14	Kwa Bahal	Kwabahal	B
15.	K-15	Bhagyati Mandir	Bhagwati Bahal	C
16.	K-16	Chhusya Baha	Jyatha Tol	A
17.	K-17	Musya Baha	Jyatha Bahal	A
18.	K-18	Chaitya	Thanhiti	C
19.	K-19	Nriteswar	Thanhiti	C
20.	K-20	Swan Chhapu Ganesh	Chhetrapati	C
21.	K-21	Gswa Baha	Kusumbiyalalashi	C
22.	K-22	Jotiya Baha	Jhwa baha dune	-
23.	K-23	Biswa Karma	Tanlashi	-
24.	K-24	Ganesh	Tanlashi	-
25.	K-25	Dhoka Baha	Tyauda	A
26.	K-26	Luti Muaru Agima Dio Chhen	Tyauda	-
27.	K-27	Gambaha	Naghal	C
28.	K-28	Srigha Baha	Naghal	C
29.	K-29	Srigha Chaitya	Naghal	A
30.	K-30	Nagha Baha	Naghal	B
31.	K-31	Ikhanarayan	Bangemudha	B
32.	K-32	Ganesh	Tengal	C
33.	K-33	Raktakali	Tangal	C
34.	K-34	Wasya dyo	Bangemudha	-
35.	K-35	Nhu Baha	Bangemudha	C
36.	K-36	Ganesh	Nhayakantala	-
37.	K-37	Nrisihgh	Nhayakantala	-
38.	K-38	Ugratara	Nhayakantala	C
39.	K-39	Cha Baha	Nhayakantala	C
40.	K-40	Jwala Mai	Tyauda	C
41.	K-41	Kamaladi Ganesh Dyo Chhen	Tyauda	-
42.	K-42	Dhalasiko Baha	Asan	C
43.	K-43	Haku Baha	Asan	B
44.	K-44	Kwothu Baha	Asan	-
45.	K-45	Krishha	Balkumari	B
46.	K-46	Bal Kumari	Balkumari	-
47.	K-47	Tachhe Baha	Asan	B
48.	K-48	Okha Baha	Jarunchhen	C
49.	K-49	Asan Baha	Jarunchhen	C

CITY DIAGNOSTIC REPORT

50.	K-50	Annapurna	Asan	A
51.	K-51	Narayan	Asan	C
52.	K-52	Ganesh	Asan	C
53.	K-53	Daru Baha	Bhotahiti	C
54.	K-54	Ganesh	Bhotahiti	-
55.	K-55	Ajima Dyo Chhen	Bhotahiti	C
56.	K-56	Tekan Baha	Asan-Kamalashi	C
57.	K-57	Lunchun Lubun Ajima Dyo Chhen	Mahabaudha	C
58.	K-58	Maha Bu Kacha Baha	Mahabaudha	B
59.	K-59	Maha Bu Baha	Mahabaudha	C
60.	K-60	Ganesh	Chikanata	C
61.	K-61	Ganesh	Dugan Bahi	C
62.	K-62	Dugan Bahi	Bhonsiko	-
63.	K-63	Te Baha	Te Baha	C
64.	K-64	Shankata Mandir	Te Baha	C
65.	K-65	Bandhu Datta Maha Bihar	Te Baha	C
66.	K-66	Dyochhen	Te Baha	C
67.	K-67	Chaitya	Te Baha	C
68.	K-68	Sundhara	Sundhara	B
69.	K-69	Bhimsen Stambha	Sundhara	C
70.	K-70	Mahadve Mandir	Dharahara	C
71.	K-71	Krishna Mandir	Dharahara	C
72.	K-72	Taleju	Dharahara	C
73.	K-73	Bhagvati	Dharahara	C
74.	K-74	Rana Mukteswar	Purano Bhansar	C
75.	K-75	Gana Baha	Gana Baha	-
76.	K-76	Bhote Baha	Central Jail	C
77.	K-77	Jagannath Mandir	Central Jail	C
78.	K-78	Buddha Bari	Onde	C
79.	K-79	Narayan	Onde	C
80.	K-80	Kunsa Bahi	Hyumata	C
81.	K-81	Tamu Baha	Hyumata	C
82.	K-82	Tukan Baha	Hyumata	B
83.	K-83	Narayan	Hyumata	C
84.	K-84	Lhuga Baha	Jaisidewal	C
85.	K-85	Jaisi Dewal	Jaisidewal	B
86.	K-86	Ram Chandra Mandir	Jaisidewal	C
87.	K-87	Kohiti Kacha Baha	Kohiti	-
88.	K-88	Kohiti Baha	Kohiti	C
89.	K-89	Kohiti	Kohiti	C
90.	K-90	Takhtta Ajimi Dyo Chhen	Kohiti	C
91.	K-91	Yo Baha	Bhimsenthan	-
92.	K-92	Bhimsen Mandir	Bhimsenthan	B
93.	K-93	Bhindy Hiti	Bhimsenthan	C
94.	K-94.	Bichhe Baha	Bhimsenthan	C
95.	K-95	Shiva Mandir	Bhimsenthan	C
96.	K-96	Chwaspa Baha	Maru Tole	C
97.	K-97	Maru Hiti	Maru Tole	B
98.	K-98	Santaneswar Mahadev	Maru Tole	C
99.	K-99	Maru Bahi	Maru Tole	C
100.	K-100	Chivakhyo Chaitya	Kankeswari	C
101.	K-101	Kankeswari	Kankeswari	A
102.	K-102	Mukum Bahi	Dami Tole	-
103.	K-103	Ganesh	Yatkha	C

104.	K-104	Dhansingh Baha	Yatkha	-
105.	K-105	Yatkha Baha	Yatkha	C
106.	K-106	Tamu Baha	Tamuga Galli	C
107.	K-107	Tamu Baha	Tamuga Galli	-
108.	K-108	Nrisingh	Naradevi	B
109.	K-109	Krishna	Naradevi	C
110.	K-110	Uma Maheswer	Naradevi	C
111.	K-111	Nara Devi	Naradevi	B
112.	K-112	Akha Chhen	Naradevi	C
113.	K-113	Namsingh Dega	Tamsipa	C
114.	K-114	Naradevi Dyo Chhen	Nyatapacho	C
115.	K-115	Bhuluka Dega	Yatkha	B
116.	K-116	Arkhu Bahi	Yatkha	C
117.	K-117	Kanga Ajima Dyo Chhen	Yatkha	C
118.	K-118	Somlingeswar Mahadev	Yatkha	C
119.	K-119	Makhan Baha	Makhan Tole	C
120.	K-120	Itum Baha Nani	Itum Baha	C
121.	K-121	Baku Nani	Itum Baha	C
122.	K-122	Itum Baha	Itum Baha	A
123.	K-123	Tara Nani	Itum Baha	B
124.	K-124	Saraswati Nani	Itum Baha	C
125.	K-125	Lokeswar	Kilagal	C
126.	K-126	Chanchal Ganesh	Kilagal	C
127.	K-127	Mahadev Mandir	Kilagal	C
128.	K-128	Naudeha	Bhedasing	C
129.	K-129	Machhendra Nath	Jana Baha	A
130.	K-130	Jana Baha	Kel Tole	A
131.	K-131	Lunchun Lun Bun Ajima	Kel Tole	B
132.	K-132	Shiva Mandir	Indra Chok	C
133.	K-133	Mahadev Mandir	Indra Chok	C
134.	K-134	Akash Bhairab	Indra Chok	B
135.	K-135	Shiva Mandir	Rakhi Bazar	C
136.	K-136	Moobaha	Otu	C
137.	K-137	Nav Durga	Otu	C
138.	K-138	Manjusri & Nriteswar	Otu	C
139.	K-139	Lamuda Ajima Dyo Chhen	Otu	C
140.	K-140	Khun Baha	Otu	A
141.	K-141	Chindhan Baha	Otu	C
142.	K-142	Tadhan Baha	Otu	C
143.	K-143	Sawal Baha	Sawal	C
144.	K-144	Sawal Baha	Sawal	C
145.	K-145	Pyukha Baha	Pyukha	C
146.	K-146	Mahalakshmi Bhagwati	Bishal Bazar	C
147.	K-147	Tunchhen Baha	Makhan Galli	C
148.	K-148	Makhan Bahi	Makhan Tole	C
149.	K-149	Tarani Devi Mandit	Makhan Tole	B
150.	K-150	Kalika Mandir	Makhan Tole	-
151.	K-151	Mahendreswar Mahadev	Makhan Tole	C
152.	K-152	Pancha Mukhi Lakshmi Narayan	Makhan Tole	C
153.	K-153	Mahadev	Human Dhoka	C
154.	K-154	Kageswar	Human Dhoka	C
155.	K-155	Mahadev	Human Dhoka	C
156.	K-156	Mahadev	Human Dhoka	C

CITY DIAGNOSTIC REPORT

157.	K-157	Taleju Bhawani	Human Dhoka	A
158.	K-158	Budhanil Kantha Narayan	Human Dhoka	C
159.	K-159	Mahadev	Human Dhoka	C
160.	K-160	Dasai Ghar	Human Dhoka	C
161.	K-161	Mool Chok	Human Dhoka	A
162.	K-162	Pancha Mukhi Human	Human Dhoka	B
163.	K-163	Nasal Chok	Human Dhoka	C
164.	K-164	Basantapur Bhawan	Human Dhoka	A
165.	K-165	Kantipur Bhawan	Human Dhoka	B
166.	K-166	Bhaktpur Bhawan	Human Dhoka	A
167.	K-167	Lalitpur Bhawan	Human Dhoka	A
168.	K-168	Lohon Chok	Human Dhoka	B
169.	K-169	Nrising	Human Dhoka	B
170.	K-170	Aagan Mandir	Human Dhoka	B
171.	K-171	Mohan Chok	Human Dhoka	A
172.	K-172	Sundari Chok	Human Dhoka	A
173.	K-173	Human	Human Dhoka	C
174.	K-174	Jagannath	Human Dhoka	B
175.	K-175	Gopi Nath	Human Dhoka	B
176.	K-176	Mahadev	Human Dhoka	B
177.	K-177	Kal Bhairab	Human Dhoka	B
178.	K-178	Lakshmi Narayan	Human Dhoka	C
179.	K-179	Degu Talle Mandir	Human Dhoka	A
180.	K-180	Sweta Bhairab	Human Dhoka	B
181.	K-181	Chasin Dega	Human Dhoka	B
182.	K-182	Saraswati	Human Dhoka	C
183.	K-183	Krishna	Human Dhoka	C
184.	K-184	Taga Gan	Maru Tole	B
185.	K-185	Layaku Bahi	Maru Tole	C
186.	K-186	Nava Gogini	Maru Tole	B
187.	K-187	Bhagvati	Maru Tole	A
188.	K-188	Kumari	Maru Tole	A
189.	K-189	Narayan	Maru Tole	B
190.	K-190	Joshi Agan	Maru Tole	B
191.	K-191	Laju Dega	Maru Tole	B
192.	K-192	Garud Narayan	Maru Tole	B
193.	K-193	Ashok Binyak	Maru Tole	B
194.	K-194	Durga	Maru Tole	C
195.	K-195	Agan Dyo	Maru Tole	C
196.	K-196	Shiva Ling	Maru Tole	B
197.	K-197	Kashtha Mandap	Maru Tole	A
198.	K-198	Mahadev	Maru Tole	B
199.	K-199	Silyan Sata	Maru Tole	B
200.	K-200	Dhansa	Maru Tole	A
201.	K-201	Bimaleswar Mahadev	Maru Tole	C
202.	K-202	Naryan	Maru Tole	B
203.	K-203	Sikhonmu Baha	Maru Tole	B
204.	K-204	Kumari Baha	Basantapur	A
205.	K-205	Kumari Dyo Chhen	Basantapur	A
206.	K-206	Bania Baha	Basantapur	-
207.	K-207	Saraswati	Basantapur	-
208.	K-208	Aaagan Dega	Basantapur	-
209.	K-209	Jho Chhen Baha	Jho Chhen	-

210.	K-210	Na Bahi	Na Bahi	B
211.	K-211	Na Bacha	Na Bahi	C
212.	K-212	Watum Baha	Jorganesh	C
213.	K-213	Jorganesh	Jorganesh	C
214.	K-214	Nriteswar	Jorganesh	C
215.	K-215	Nhuchhen Baha	Jorganesh	B
216.	K-216	Twake Baha	Om Baha	C
217.	K-217	Guva Baha	Om Baha	-
218.	K-218	Mim Nani	Om Baha	C
219.	K-219	Biswakarma Baha	Om Baha	C
220.	K-220	Om Baha	Om Baha	C
221.	K-221	Punchhen Baha	Om Baha	C
222.	K-222	Ratnapur Maha Bihar	Ganchenani	-
223.	K-223	Buddha Kanti Maha Bihar	Ganchenani	-
224.	K-224	Bhon Baha	Om Baha	C
225.	K-225	Thana Baha	Chikan Mugal	C
226.	K-226	Narayan	Chikan Mugal	C
227.	K-227	Joreswar	Chikan Mugal	-
228.	K-228	Adko Narayan	Chikan Mugal	B
229.	K-229	Hari Shankar	Chikan Mugal	C
230.	K-230	Bajra Jogini	Chikan Mugal	C
231.	K-231	Nhu Baha	Chikan Mugal	C
232.	K-232	Lakhe Nani	Majipat	C
233.	K-233	Mikha Baha	Manjeswari	C
234.	K-234	Jya Baha	Jya Baha	C
235.	K-235	Manjesware	Manjeswari	B
236.	K-236	Sho Baha	Yangal-Manjeswari	C
237.	K-237	Yanga Hiti	Yangal	A
238.	K-238	Iku Baha	Yangal	B
239.	K-239	Chaitanya Maha Bihar	Jya Baha	-
240.	K-240	Khalachhen Baha	Lagan	B
241.	K-241	Jog Baha	Lagan	-
242.	K-242	Wanta Baha	Lagan	C
243.	K-243	Lagan Baha	Lagan	C
244.	K-244	Machhendra Nath	Lagan	C
245.	K-245	Nhayakan Bahi	Lagan	C
246.	K-246	Chwakan Bahi	Lagan	C
247.	K-247	Ta Baha	Lagan	C
248.	K-248	Yata Baha	Gophale	C
249.	K-249	Bhagwati	Gophale	C
250.	K-250	Na Baha	Gophale	C
251.	K-251	Pikha Baha	Brahma Tol	C
252.	K-252	Bare Nani	Musum Baha	C
253.	K-253	Bhala Nani	Musum Baha	C
254.	K-254	Musum Baha	Musum Baha	C
255.	K-255	Musum Baha	Musum Baha	C
256.	K-256	Dhan Chakra Baha	Musum Baha s	C

ENDNOTES

- 1 HMG, Dept. of HBPP, Kathmandu Valley - Preservation of Physical Environment and Cultural Heritage - A Protective Inventory, Volume I & II, 1975.
- 2 Jamieson, Walter, The Promotion of Culture and History in the APEC Region, APEC Seminar, Manila, June 2000.
- 3 Schafer, Paul D., Culture: Beacon of the Future, Twickenham, Adamentine Press Limited, 1988.
- 4 Although academic doubts for lack of 'authentic archeological evidence' (cf. Shrestha, C. B., et. el., The Historic Cities of Asia Kathmandu, 1986, CNAS, pp.8) have been expressed, nomenclature studies prove that Kirata settlements called Yambi, Jama, Lanjagvala, Gita etc. were located in the area prior to the founding of the Lichchhavi settlement of Daxinakoligrama (ref. Tiwari, S. R., The Pattern of Settlements in Kathmandu Valley in Ancient Nepal, unpublished dissertation, TU, 1995).
- 5 Now called Hadigaon, for details see Tiwari, S. R., The Brick and The Bull, Himal, 2000.
- 6 Also, Pant, N., Yangal Yambuvisayama Kehi Vichar, Issue. 62, Madan Puraskar Guthi, B.S. 2031.
- 7 The exclusion relate to later period readjustment of town boundaries. During the mid-Malla period, Kathmandu was possibly walled in (ref. Slusser, NM, Vol II, map 7) to enclose the dense settlement areas only. See also Oldfield, H.A., Sketches from Nepal, Cosmo, 1974, pp. 95.
- 8 Bajracharya, G., Hanumandhoka Rajadarabara, CNAS, B.S. 2033, pp.15-16.
- 9 Shrestha, C. B., et. el., The Historic Cities of Asia Kathmandu, 1986, CNAS, pp.31.
- 10 Jaat is erroneously translated as caste often, but the true intent of jaat is a reference to family trade ('jaat' means 'born into it') and it was independent of religious faiths.
- 11 Pradhan, Bhuvanlal, "Indrachowkko Ghada" in Nepalko Itihash ra Samskritiko ek Pakshya, Royal Nepal Academy, 1998. pp. 131-137.
- 12 The Kirata area appears fully defined by the dyochhens of Kankeswori and of Swetakali on the west and dyochhen of Bhadrakali in the east.
- 13 Given that Lichchhavis had imposed tax on animals for sacrifice (Malla-kara), go-yuddha festival might have involved bull sacrifice, which was usual prior to Aryan domination. Sacrificial animal was possibly changed to a he-buffalo later. Kathmandu used to have a gory buffalo sacrifice festival called Bhakkulai Rango Dine, until it was discontinued about a hundred years ago by a royal order.
- 14 The annual day of the Gorakhanatha of Kasthamandapa falls on the concluding day of the Seto-Matsendranath festival and rituals provide a tenuous link.
- 15 The site now called Te-bahal was called Tedo-vihara in 1145 AD. This is the same area of Tvedya-gram (sic. Vidya-gram), where Lichchhavi king Sivadeva II had set up Sivadevesvora, a Saiva deity, by 695 AD. A large number of Lichchhavi Chaityas can be seen at Te-bahal till today.
- 16 Locke, J. Buddhist Monasteries of Nepal, Sahayogi, 1985. pp. 254.
- 17 Ikha Narayana of Bangemuda looks too far for Daxinakoligrama.
- 18 As per Locke, ibid.
- 19 HMG, Dept. of HBPP, Kathmandu Valley - Preservation of Physical Environment and Cultural Heritage - A Protective Inventory, Volume I & II, 1975.
- 20 Kathmandu Nagarko Inentry (In Nepali)
- 21 Taken out of *Patros* (calendars) of the past one hundred years from Madan Pustakalaya, Lalitpur.
- 22 Oldfield, H. A., Sketches from Nepal.

- 23 NCSIP, Regulating Growth: Kathmandu Valley, Annex 5, pp. 13.
- 24 Ibid. pp. 10-12. Also see for details.
- 25 NCSIP, Amatya, S. in Regulating Growth: Kathmandu Valley, Culture and Heritage Annex 5, writes, "whether it has been endorsed by HMG is not known."
- 26 UNESCO, Pollaco, J.C., Development of Cultural Tourism, 1968.
- 27 Bundestelle Fur Entwicklungshilfe, Nepal Tourism Master Plan, 1972.
- 28 A large scale project prepared by Bundestelle Fur Entwicklungshilfe for Bhaktapur has been successfully completed.
- 29 UNDP, Kastarlak, B. I., 'Environmental and Tourism Development Planning of the Kathmandu Valley and other Major Urban Centers of Nepal', (phase I report), 1974.
- 30 Cultural transformation process should not be a problem of cultural conservation. If 'transformation' is happening, it might actually be positive to cultural conservation and development strategy.
- 31 Chapter 5, Priority Issues, Page 16-18.
- 32 UNESCO-HMG, Kathmandu Valley- the Preservation of Physical Environment and Cultural Heritage- a Protective Inventory.
- 33 Theravada and Tibetan Mahayana incursions are common in many 'Bajrayana' institutions.
- 34 Presentation by Mr. P.S. Joshi, CDS launch, July 9, Kathmandu.
- 35 Based on estimates of KV Strategy Plan, 2020.
- 36 This section is largely based on the outcomes of the First CDS Stakeholder Workshop held on, 25th August, 2000.
- 37 UDLE, LUDTC: Urban Environmental Guidelines for Nepal, 1992, UDLE, Kathmandu.
- 38 HMG, Ministry of Works and Transport, Kathmandu Valley Town Development Planning Team.

COMMUNITY DEVELOPMENT

Shambhu Rai
COMMUNITY DEVELOPMENT SPECIALIST

LIST OF ABBREVIATIONS

CD	Community Development
CDS	City Development Strategy
CWIN	Child Workers in Nepal Concerned Center
DDC	District Development Committee
DH	Department Head
EC	European Community
FY	Fiscal Year
GIS	Geographic Information Section
GO	Government Organization
HH	Households
HMG/N	His Majesty's Government of Nepal
KMC	Kathmandu Metropolitan City
KVMP	Kathmandu Valley Mapping Program
KVRMP	Kathmandu Valley Earthquake Risk Management Project
INGO	International Non-government Organization
MIS	Management Information Center
MLD	Ministry of Local Development
MPLD	Ministry of Panchayat and Local Development
NA	Not Available
NSET	Nepal Society for Earthquake Technology
NGO	Non-government Organization
SWCC	Social Welfare Coordination Council
SWD	Social Welfare Department
SWOC	Strengths, Weaknesses, Opportunities and Threats
UNDP	United Nations Development Program
UNICEF	United Nations Children's Fund
VDC	Village Development Committee
WHO	World Health Organization
WOREC	Women's Rehabilitation Center

TABLE OF CONTENTS

List of Abbreviations	256
Table of Contents	257
List of Tables	258
8. COMMUNITY DEVELOPMENT	259
8.1 Introduction	259
8.2 Community Development In Kathmandu	260
8.3 Objectives of City Development Strategy	261
8.3.1 Objectives of City Development Strategy for KMC	261
8.3.2 Methodology	261
8.3.3 Community Development in the Context of CDS	262
8.4 Pertaining Issues of CD In Kathmandu Valley	262
8.4.1 Population Growth	262
8.4.2 Centralized Opportunities	262
8.4.3 Income, Poverty and Unemployment	263
8.4.4 Education and Public Health	263
8.4.5 Urban Utilities and Services	263
8.4.6 Road and Transportation	264
8.4.7 Environment and Pollution	264
8.4.8 Women and Children	264
8.4.9 Social Security and Safety	265
8.5 Community Development in KMC	265
8.5.1 Social Welfare Department	266
8.6 Information and Communication Department	267
8.6.1 Media and FM Section	267
8.6.2 Information Section	267
8.6.3 GIS Section	267
8.7 Organizations Involved in CD Program	267
8.7.1 The Government	268
8.7.2 INGOs and NGOs	268
8.7.3 Private Sector	268
8.8 Plans and Policy Framework of the Government	269
8.8.1 The Ninth Five Year Plan (1998 – 2002)	269
8.8.2 Local Self-governance Act (1999)	270
8.8.3 Work, Responsibility and Authority of the Municipality	270
8.8.4 Issues Related to the Policies and Plans	273
8.9 Swot Analysis of KMC	274
8.10 Vision, Mission And Objectives of CD Works	275

8.11 Framework Guidelines	275
8.11.1 Area and Scope for Intervention in CD Works	275
8.11.2 Networking with the Concerned Partner Organizations	276
8.11.3 Documentation	276
8.11.4 Structural Adjustment	276
8.11.5 Human and Financial Resources	276
8.12 Monitoring And Evaluation	276
8.13 Summary Conclusion	276
Annex - 1 Stakeholders' Map	279
Annex - 2 Persons Consulted	280
Bibliography	281

LIST OF TABLES

Table 1 :	Present Status of the NGOs and INGOs Affiliated With the Social Welfare Council.
Table 2 :	Comparison of Some Selected Socio-economic Development Indicators for the Whole Nation and KMC (Planned for 9th Five Year Plan Period Within the Range of 20 Years Long-term Planning Perspectives)
Table 3:	Community Development - Issues and Implications

8.

Community Development

The interdependent characteristics of social organism automatically demand collective efforts from all individual members for their own survival and growth. In general the community is defined as the group/s of people living in specific geographical condition by carrying out similar pattern of livelihood endeavors with frequent inter-actions among themselves. Community development initiatives could be stated as collective efforts of a certain group/s of people to satisfy their need/s. Communities being social entities also connote all spheres of human endeavors for their own survival and growth. Besides, life sustaining activities or fulfillment of basic needs, it also encompasses the cultural and political dimensions of the social structure. Thus, the community development aspects cannot be dealt in total isolation of other aspects, which concerns the people living within the given environment.

8.1 INTRODUCTION

Communities are categorized into two broad perspectives: the urban and the rural. Currently the majority of the people tend to consider community development as an activity primarily focusing on the rural areas. However, the common people fail to observe many of the complexity of the human endeavor that also takes place in the urban cities. If someone goes for an in-depth analysis, he/she could feel the strong community development initiatives taking place within the complex social structure of the metropolitan cities at various local levels.

For the past 50 years community development has drawn much attention within the development arena. For the survival and growth of humankind, the sense of community and its development has been recognized as a great force. The growth in the size of population automatically gears up the process of urbanization within any given rural society. The fast pace of scientific invention and extension of modern technologies in the field of communication, transportation, industry and commerce has introduced many new opportunities and comforts to the human life. This phenomenon has also brought deterioration in the social structure and its value system.

Due to the competitive socio-economic nature of the urban dwellers, their life style has gradually transformed

into a more individualistic pattern. Most of the populace belonging to the new generation has adapted to a new way of life by showing indifference towards the traditional community development approach especially in comparison to their rural counterparts. However, such indigenous or traditional community development practices can still be observed in various forms at the local level (guthis, clubs and various users' groups formed at wards or tole). The very nature of the users groups constrains them from undertaking any big collective projects.

The urbanization process has been observed as a global phenomenon, which has continued to grow in a much faster pace for the past few decades. This process has brought much affluence to the city dwellers on the one hand and at the same time it has also adversely affected the socio-cultural pattern of the urban communities residing within the Kathmandu valley. Humans being the central focal point of development endeavor have experienced and adapted to the changing environment which has brought both adverse and positive effects in their living styles.

In the context of the given City Development Strategy (CDS), an in depth assessment on the historical background of the community development aspect and its changing modalities in line with the external and internal influences becomes necessary

8.2 COMMUNITY DEVELOPMENT IN KATHMANDU

The Kirats ruled Kathmandu valley till the first century AD. They were followed by the Lichhivis and Malla kings. The Lichhivi King, Guna Kamdev built assimilated and restructured the various settlements of Kathmandu in the 11th century AD and established it as his capital city. Since the medieval period, it has remained as one of the main hubs of socio-cultural and economic activities in the Himalayan region. Following the division of his kingdom among his three sons by Yaksha Malla in 1482 AD the three primary cities of Kathmandu valley, i.e. Kathmandu, Bhaktapur and Lalitpur came to be established as separate city-states. Kathmandu city became the capital city of Nepal in late 18th century after the Gurkha King Prithivi Narayan Shah conquered it (1769 AD), and united all the petty states of Nepal into one nation.

During the regime of the Lichhivi and Malla kings, Kathmandu valley prospered in its art and architecture,



culture and commerce. It flourished as a commercial center as it lay along the trade route linking the northern high Tibetan (China) plateau and the southern Gangetic plain of India. Throughout, its long history it has been observed that the populace of Kathmandu valley had been practicing community development in different forms for a long time. The establishment of different forms of Guthis is a good indication of the measures taken to initiate and preserve various historical monuments and cultural heritage along with fulfillment of community requirements through collective efforts. The Raj Guthis initiated under the patronage of the ruling kings still has a remarkable form of community

development approach to preserve the cultural and religious monuments. Similarly, the Chhut Guthis, which were formed under the collective efforts of certain communities to initiate different types of community development activities, hails as a great achievement. Besides, Niji Guthis initiated by the then affluent and powerful elites have their own hallmark in the historical perspective of community development. In spite of the deterioration in the traditional values and practices of the Guthis due to the influences of the modern form of community development approach, they are still practiced within certain communities. The unspoiled continuity in the practice of the Shi Guthis (cremation of the dead body) among certain Newar and Jyapu communities can be noted as an example of the strong community development activities among these traditional groups.

The involvement of the early kings of the Shaha dynasty in the reformation of social welfare and community development aspects is very low, as the period was primarily directed towards the unification of modern

Nepal. While tracing the social reform and community development activities, one encounters a certain degree of such activities initiated during the Rana regime (1846 – 1950). Abolition of the Sati Pratha, witchcraft and slavery along with the establishment of libraries, schools and colleges, printing press, electricity and rope lines are a few examples of the activities undertaken to improve the socio-cultural aspects of the Nepalese people. However, the modern form of community development initiatives can be traced to the last phase of the Rana regime, where initiation was taken from the commoners to form social welfare groups like Charkha Pracharak Sanstha (1937) and Paropakar Ausadhalaya (1947) respectively.

During the Panchayat era (1962 – 1989), in spite of the promulgation of an organization establishment act in 1959, very few social welfare organizations were established under the direct supervision of the administrative body. It was recorded that till 1989 only 191 NGOs were registered in the country as a whole. The restoration of democracy in 1990 has been a breakthrough in establishing various forms of NGOs in the country, roughly estimated to exceed 15000 at present.

At present, Kathmandu valley being the capital city still remains as the major administrative, business and commercial center along with educational, health and



other opportunities. The opening and introduction of modern services of scientific technologies and facilities during the last three decades, has brought tremendous change in all spheres of urban life in Kathmandu valley. This has certainly created many opportunities for the city dwellers and other citizens of Nepal. The new modalities in community development approach have been introduced in various forms. Introduction of new concepts and models to initiate community development activities through collective effort has been geared towards the NGO sectors. Involvement of many international NGOs along with bilateral and multilateral agencies has provided further impetus to community development initiatives in multi dimensional activities. Different users' groups and committees have overtaken the community development activities by replacing the traditional roles of Guthis. Both the public and private sectors have also come forward, as a whole, to raise and protect their interests by placing pressure on the government

8.3 OBJECTIVES OF CITY DEVELOPMENT STRATEGY

8.3.1 Objectives of City Development Strategy for KMC

The city development strategy (CDS) for KMC is expected to enhance the city's livability, competitiveness, bankability, governance and management capacity. In the increasing global market economy, these factors are considered as crucial indicators to measure the success and failure of the urbanization process. Hence, in achieving the objectives of the CDS, an integrated approach by incorporating the smooth planning and implementation process of various components to improve the city's infrastructures, natural and built

environment, socio-cultural and economic environment as well administrative functions is needed. The CDS is expected to provide an overall framework to guide and synchronize KMC's future actions, which will help KMC to make judicious use of its limited resources by investing in key priority sectors linked to the city's long term development strategy.

One of the key underlying themes of the CDS process is the ownership and participation of stakeholders. As the lead organization, KMC is expected to take ownership of the CDS and ensure that all concerned stakeholders of the city participate in the formulation of the development strategies. It is expected that the prime stakeholders' will identify a common vision for the city as well as the actions required to help the city proceed towards this vision. At the same time it is also expected that the strategies proposed in the CDS will be directed more, towards the doable projects which have a more immediate effect.

8.3.2 Methodology

While developing the CDS for KMC, the focus was directed to address three basic questions: what is the present situation of the city? What is the situation it aspires to achieve in the future? and what actions are required to reach the desired future condition or goal? The first question primarily postulates the past, present and future development trends of the city. Based on the available documents an assessment was made of its strengths and weaknesses and the opportunities and limitations. The second question deals with the structuring of a collective common vision for the city while the third question deals with the strategy to bridge the gap between the current condition and the envisioned future of the city.

The methodology for the preparation of the CDS for KMC more or less attempts to follow the above sequence of analyzing the city's development trends, identifying a common vision and formulating the development strategy for the city. Because of the limited time and resources the analysis of the city's urban sector will be based on the review of existing literatures, previous studies and interviews with concerned stakeholders and experts. The city diagnosis is expected to identify the key issues as well as the opportunities and limitations for future actions.

8.3.3 Community Development in the Context of CDS

The central theme of all CDS activities is peoples' participation in all the development components. Therefore, the community development aspects need to be dealt within a holistic approach by incorporating all sectors related to development, i. e., physical infrastructure and facilities, economic, environment and socio-cultural aspects of the city. In the context of the CDS for KMC, community development has been conceived as one of the prime sectors to be addressed by the CDS. Therefore, in the current study, community development has been dealt in a much broader perspective by assessing the overall concept and community development trends in the country as a whole. Similarly, the effectiveness or limitations of past as well as present plans, regulations and agency involvement has been analyzed within the same context. The city's economy, infrastructure, transportation, institutions etc. have also been dealt within the context of community development perspectives. This has helped to accord equal recognition to all the different urban sectors of the city, which otherwise would probably have been dealt with, in a more cursory manner. Thus, this study on the community development part of KMC should be considered as a crosscutting sector while dealing with other sectorial programs.

8.4 PERTAINING ISSUES OF CD IN KATHMANDU VALLEY

In the regime of free market economy the centralized opportunities and democratic practices have brought both affluence and freedom to Kathmandu city. To exploit these opportunities Kathmandu valley has had an influx of permanent and temporary migrants to the city. To survive within the environment of modern culture, it has created competitiveness among the people by making them more individualistic and work oriented. At the same time it has also brought some adverse effects on the overall social structure and environment of the valley. The materialistic and human relationship approach has superceded the core value of collective efforts of the communities and deteriorated considerably, the philosophy and principle of the community development process. As many of the issues pertaining to the modern Kathmandu city can be identified as being different in nature, their overall impact on the people

should be taken as an integral part of the community development approach.

8.4.1 Population Growth

Encompassing an area of about 667-sq. km., Kathmandu valley provides shelter to about 1.5 million people. The population census of 1991 had shown that altogether 1,064,899 people resided in the bowl shaped Kathmandu valley with an annual growth rate of 3.9 percent. Out of the total population 56 percent were city dwellers belonging to Kathmandu, Lalitpur and Bhaktapur. In 1991, it was estimated that the permanent population size of Kathmandu metropolis city alone stood at 421, 258 with an annual growth rate of 6 percent, which was one of the highest in the South-East Asia region. There were altogether 82076 households within the 35 wards of KMC. The average population density of KMC was 84-persons/ per hectare. Besides this, it was estimated that there were about 50000 floating population in the city during daytime from neighboring cities. It has been projected that within the prevailing situation the population of Kathmandu valley will reach to 20 million and will be double by the year 2020 AD and 2030 AD respectively. Introduction of appropriated measures to check the growing population has become one of the priority sectors for the KMC.

8.4.2 Centralized Opportunities

The centralized system of the government and its administrative bodies within the capital city has further attracted more people and opportunities in the Kathmandu valley. Presently, three District Development Committees, five municipalities and 99 Village Development Committees are located within Kathmandu valley. Apart from these there are several ministries and more than 15 associated Departments under the Government of Nepal, which functions within the valley.

With the opening of internal and international air and surface transportation system, Kathmandu valley has transformed itself into a tourism destination for both internal and external tourists. The centralized power structure has also attracted various organizations and ventures in the capital city. Decentralized power structure along with the relocation of economic opportunities to alternative centers may mitigate further encroachment in the valley and reduce the multidimensional man made urban hazards.

8.4.3 Income, Poverty and Unemployment

The recent publication of UNDP report on Human Resource Development has identified that around 52 percent of Nepalese household families fall under the poverty line. The Ninth Five-Year Plan book (1998-2002) has projected only 41 percent of households' families under poverty line. The aforementioned figures clearly indicate the grim picture of poverty and the number of increasing poor people in the country. For KMC 35.6 percent of the total population has been marked under the poverty line.

Availability of many economic opportunities has brought affluence to the city dweller of Kathmandu valley. The average family size was 5.07 persons/households while the average per capita income of city dwellers exceeded the average Nepalese per capita income of US \$ 210.00. In spite of the high level of per capita income the per capita expenditure of the city dwellers exceeded the level of income. As per the Household Budget Survey carried out by the Nepal Rastra Bank in 1995 – 96, the urban citizens of Kathmandu valley spent most of their income on services and facilities, food and housing.

The available records on the employment situation within the urban cities of Kathmandu valley shows that above 50 percent are employed in different sectors. Besides, this another one fourth of the urban population are self-employed and there is less than one fifth of the population who are unpaid family workers. KMC has projected only 7.8 percent of its population under the unemployed category. Absorption of labor force is 76.5 percent in the tertiary, followed by 12 percent in the secondary and 1.7 percent in the primary sectors respectively.

8.4.4 Education and Public Health

Being the capital city of the country, Kathmandu has been provided educational and health facilities for a long period. The establishment of Tribhuvan University (the only university of Nepal till 1990) for acquiring higher education has also pulled considerable benefits to Kathmandu valley. Presently within KMC, it has been recorded that there are 23 colleges, 98 higher and 50 lower secondary schools along with 236 primary and 110 pre-primary schools. The National Planning Commission, at the end of the Eight Five-Year Plan

periods, had estimated the average literacy rate nationwide to be 48 percent. The total literacy rate for the urban population of Kathmandu valley in 1995-96 was 78 percent with 88 percent and 67.3 percent for males and females respectively. The school enrollment of children for primary and secondary schools was 86.4 and 86.8 percent respectively.

Fifteen government and 21 private hospitals along with numerous polyclinics and nursing homes provide health services and health related facilities to the public in Kathmandu where the hospital beds available were 197/1000 person. The expenditure on medical care stood at Rs. 455/ per household. In spite of the high number of health facilities available in the capital city, they are out of reach of a large segment of the people belonging to the deprived communities. Many health hazards have sprung up due to the degradation of the environment and lack of food hygiene.

8.4.5 Urban Utilities and Services

The easy air and road transportation system for both internal and external services along with new opportunities of the 70s and 80s attracted more migrants to Kathmandu valley. This new phenomenon brought affluence to the valley, however, the unplanned use of land and housing system also brought many problems to the city. Shortage of drinking water, electricity, congestion of roads, unmanaged sewerage system along with the solid waste management problem has become hazardous both to human health and the environment.

It has been estimated that 99 percent of the houses are connected with electricity and 88 percent household has



access to telephone lines. Similarly, around 67 percent households are connected with the drinking water supply system and 42 percent households have access to the sewage system. The city metropolitan office collects 75 percent of the solid waste generated in the Kathmandu valley (about 600-m³/ day).

Similarly, the demand and supply along with the quality of drinking water shows a grim picture of the Kathmandu valley. The demand for drinking water in the valley was estimated to reach 213 MLD (million liters per day) while the current supply of NWSC estimated to be 120 MLD during the wet season and only 80 MLD during the dry season.

8.4.6 Road and Transportation

At present, Kathmandu valley has altogether 995 km (401 km pitched and 594 km rough road) of road network, which is about 10 percent of the road available for the whole country. In mid December 1999 the number of total vehicles was recorded at 243,017 and out of it 50 percent operated within the Kathmandu valley. The present trend in vehicle importation has been recorded as 13 percent/year, which almost chokes the available capacity of the roads.

8.4.7 Environment and Pollution

The ever increasing trends in the population along with other infrastructure and services in Kathmandu valley has a negative effect on the total environmental system. Increase in the vehicle fleets and other industries; i.e., brick kilns, cement and plastic factories, hotels and restaurants, nursing homes and street markets have

become a collective force in deteriorating the environment of the valley. It has been recorded that between the 80s and 90s there was a 200 percent increase in the establishment of brick kilns. This has resulted in the air pollution of the city exceeding the international standard (prepared by WHO guidelines). It has been estimated that each year about 20,000 people including 5,000 children fall victim to bronchitis and asthma respectively, which is a loss of Rs. 200 millions in monetary terms. Similarly, due to high air pollution the visibility in Kathmandu valley has also dropped tremendously. In the 70s the visibility of Kathmandu valley was 115 days during the months of November – February, which has now dropped to 20 days.

A survey carried out to measure the quality of water system of Kathmandu valley shows that most of the water body in the valley has a high degree of coliform counts (bacterial contamination), which is a health hazard to humans. The unplanned utilization of ground water has led to a fast decrease in the ground water level, which is estimated at 2.5 m per year.

8.4.8 Women and Children

The dawn of the democracy system in Nepal (1990) has allowed various public forums, NGOs and civic societies to raise their voices demanding basic human, women and children rights. In spite of much publicity and advertisement on those issues, there have been poor results and responses from the mass as a majority of them show indifference towards these issues. The government line ministries and departments have always tried to shift the responsibilities to the NGOs and INGOs sector. In the absence of enough resources and other prevailing difficulties, no serious research has been carried out so far on the pertinent social issues like gender, domestic violence, street children, child labor, drug addiction and the conditions of senior citizens.

Various studies carried out by the NGO sector indicates that girl trafficking is one of the biggest women related issues in Nepal. It has been estimated that there are around 200 thousand women and girls who have been trafficked and forced into prostitution in the Indian red-light districts. Among them 20 percent were under the age of 14 when they were sold. Similarly, it is also estimated that each year five to seven thousand girls are being trafficked to India from Nepal. The study carried out by UNICEF in 1997 has stated that though sex trade is illegal in





Nepal, it was found that more than 5,000 women prostitutes operated within the Kathmandu valley. The opening of many new massage centers along with dance restaurants within the very heart of the city has also come under severe criticism for promoting illegal sex trade in the valley. A majority of the city dwellers have developed a tendency to accept these social changes as a part of the modern society and have shown indifference toward the issue. Most of the time it is regarded as the part of government's responsibility to control such developments.

The situation analysis report 1996 on children and women of Nepal carried out by UNICEF has indicated that there were about 28,000 street children living in the urban cities of Nepal. Kathmandu being the capital city with relatively better opportunities have been facing increasing, concentration of these street children. A study carried out by the CWIN (1996) revealed that the number of the street children, employed was only 1200 in the Kathmandu valley. The present estimation shows that the number of off the street children has come down



to a range of 500 – 800 in the valley. Similarly, a household survey report carried out by WOREC has also found that 70 percent households involve children as domestic servants and a greater proportion of them are victims of various forms of exploitations.

8.4.9 Social Security and Safety

It has been observed that the introduction and availability of modern technologies in the urban areas not only automatically generates more opportunities, it will also affect the life of the city people in many ways. To cater for many of the services and goods to sustain the basic needs, urbanites have to work harder than their rural counterparts. People have to work under time pressure, which disintegrates the social and family structure of many people. A collapse in the socio-cultural norms and value system further leads to an increase in drug abuse, alcoholism, divorce and vandalism.

An article recently published in the Himal newsmagazine showed that within a span of 10 months in the FY 2055/056, altogether 518 cases of vandalism were registered in the valley. Similarly, the magazine had also reported that within the same time period 237 divorce cases were filed in the valley courts. Besides, these petty thefts and crimes Kathmandu valley also faced the challenge of severe social disorder in the form of vehicular accidents, murder, robbery and suicidal cases in increasing numbers. Thus, in trying to improve the status of "livability", the issue of public safety and security also needs to be tackled on a priority basis.

8.5 COMMUNITY DEVELOPMENT IN KMC

In spite of the increasing unfavorable conditions and challenges of city life, Kathmandu valley is still vibrant and is trying to preserve many of its socio-cultural norms and values. One can observe very distinctly that many forms of traditional and heritage pattern of community development initiatives are performed at various levels. Primarily, the local clubs, guthis, civic society, NGOs and INGOs along with users groups and committees are coming forward to carry out such activities. However, it has been observed that the lack of a systematic approach accentuated by problems of resource and coordination has constrained KMC from keeping proper records of these local events.

Within its present organizational structure, KMC has initiated the following community development activities under its Social Welfare Department:

8.5.1 Social Welfare Department

Presently under the existing organizational structure of KMC, 12 departments function to carry out various community development activities (refer Annex – b. for the organizational structure of KMC). The Social Welfare Department, which was established in 1996, is primarily responsible for dealing with community development activities. The multi dimensional aspects of the community development sector are further separated under different units like public health, public security, environment, communication and heritage, etc. Different sections are responsible for looking after these sectors. The Social Welfare Department operates its activities under three broad sections:

8.5.1.1 Community Development Section:

KMC is involved in different types of CD activities through its various departments. Although the community development program has been one of the prime components under the SWD, very few CD activities were being implemented under this particular department. It could be observed that there was still ambiguity in the CD process and concepts within KMC. There is CD activities also being implemented under other departments, i. e., infrastructure development, preservation of heritage and culture, education and



public health, etc. Many activities related to CD, i. e., environment, solid waste management, slums and squatters, street children, women and children rights, equity (Gender), impartation of skills for income generating activities, etc are also being implemented through local initiative. Under this broad section the involvement of many local users' groups, NGOs and INGOs can be identified. The absence of systematic recording and coordination among KMC, wards, users' groups, NGOs and INGOs can be observed as the main constraint. An awareness campaign on public health and operation of public health clinics in 17 ward committees in joint collaboration with the Public Health Department can be taken as another benchmark of CD activity.

8.5.1.2 Education and Sports Section:

Kathmandu being the capital city of the country is also the prime educational and sport center with well established facilities. The available record shows that KMC has a very low illiterate population (11.8%). The average school enrollment of children is 86.6% for the KMC. It could be observed that under the local initiatives and support from various NGOs and INGOs, many of the ward committees conduct their own adult literacy classes. Similarly, many NGO's working for children and women groups have also initiated their own educational programs at various levels and capacities. KMC has also initiated 50 children education program with the support of UNICEF.

Similarly, the Nepal Sports Council being the responsible organization for promoting various sport events, the role of KMC remains as one of a facilitating partner organization. The establishment of many national sport associations and local clubs to organize and perform different sports within the vicinity of the metropolis has also reduced the direct involvement of KMC in the arena of sports.

8.5.1.3 Disaster Management Section:

Kathmandu valley situated in the lap of the Himalayan range is determined to lie in the active seismic zone. In the past, Nepal has experienced many destructive earthquakes. The seismic record of the region dating back to 1255 AD suggests that high rector scale earthquakes shake Nepal approximately at 75 years interval. Kathmandu valley has experienced heavy destruction from large-scale earthquakes in the past:



1259, 1407, 1680, 1809, 1833, 1866 and 1934 AD. The last earthquake, which shook Kathmandu valley in 1934, alone, destroyed 20 percent and damaged 40 percent of the valley's building stock and took 4,296 lives. A study called the Kathmandu Valley Earthquake Risk Management Project (KVERMP) by the Nepal Society for Earthquake Technology – Nepal (NSET) and GeoHazard International has estimated that if an earthquake with a similar magnitude of 1934 takes place today, it will damage 60 percent of the total building structure in Kathmandu valley. In spite of the constant threat Kathmandu has not observed a significant natural disaster for many decades. Due to the lack of experience of natural calamities or disasters many of the city dwellers, belonging primarily to the new generation, do not treat it as a burning issue.

The old structured houses with narrow lanes and unplanned urban infrastructures could become a trap for mass destruction in any earthquake movement. The Disaster Management Section has undertaken various activities as a part of its disaster prevention and management course. Public awareness creation through training, workshops and publications along with initiating surveys for GIS mapping are some of the commendable efforts. However there is a need to conduct more courses on disaster prevention and management at the ward/ community level.

8.6 INFORMATION AND COMMUNICATION DEPARTMENT

Communication being one of the crucial parts of our social structure plays an important role for a healthy growth of an organization. The information and Communication Department, which was initiated in 1998 with three sections, primarily aims to improve the

public awareness campaign through information dissemination and strengthen the work efficiency of KMC departments by improving its overall information system.

8.6.1 Media and FM Section:

To disseminate vital information related on issues of public concern along with the regular activities of KMC is a prime requirement for initiating a good governance system. To accumulate support from the mass populace, subordinating sectors and stakeholders, transparent two-way communication becomes an integral part of institution development process. To achieve the aforementioned objectives, KMC has started its own Metro FM radio channel and newsletter publication under the Media and FM Section.

8.6.2 Information Section:

The Information Section primarily aims to upgrade its management information system (MIS), which is the basic foundation for initiating a systematic planning process within KMC. Research and dissemination of information through various communication media and establishment of Internet system are some of its prominent activities.

8.6.3 GIS Section:

The Geographical Information Section was created to develop and update the physical resource maps of the metropolis. The Kathmandu Valley Mapping Programme (KVMP) was initiated in 1998 under the grant assistance of European Community (EC).

8.7 ORGANIZATIONS INVOLVED IN CD PROGRAM

As discussed earlier, the community development process, being an integral part of the larger social system, encompasses all activities of human endeavors. The forms of various service deliveries to sustain the livelihood programs and progress of the mass populace are the prime concerns of many organizations. In a broader term such organizations could be placed into three categories.

8.7.1 The Government

The prime concern of the government remains to maintain political stability and prosperity of the country by providing necessary and basic services to its mass people. As discussed earlier, the history of social welfare program in Nepal reveals that many such activities were being provided through governmental initiations in different forms. The various forms of Guthis initiated under the ruling class can be identified as one of the most popular and spatially distributed institution to provide services to the public sector. Establishment of the Guthi Sasthan was initiated in 1964 by incorporating most of the Raj Guthis into one entity.

During the era of Nepal's unification, activities for social reforms and welfare were negligible. In spite of the dictatorial administrative structure of the Rana Regime, it can be noted that many government entities were formed to initiate and deliver different social welfare schemes. Establishment of KMC was also made during this period (1901) to initiate town-cleaning activities in the core city areas of the present municipality under the then Rana Prime Minister's directives of "Bhotahiti Sawal Jari."

At present, the line ministries and departments along with many other social entities under the bureaucratic structure are responsible for delivering different services to the public. Besides these line ministries and departments, the government of Nepal has also commissioned and established some prominent organizations to initiate various social welfare activities under the direct supervision and guidance of the bureaucratic structure (refer to Annex for the list of some prominent social welfare organizations). In the early 80s, by initiating the Ministry of Panchayat and Local Development (MPLD), the CD process was further geared towards local administrative units (DDC and VDCs). To coordinate the activities carried out by the international and national level NGOs operating within the country, the Social Welfare Coordination Council was established in 1977 under the Chairmanship of HM the Queen. Presently the number of affiliated NGOs and NGOs under the Social Welfare Council is 8,821 and out of it more than 30 percent are registered in Kathmandu city alone.

8.7.2 INGOs and NGOs

During the Panchayat period, due to its closed political system, the social welfare and community development activities were limited. Local youths and intellectuals were confined to initiating a few activities within the boundary of local, cultural and sports' clubs and libraries. After the dawn of democracy (1989), a lot of local initiatives were observed to form local NGOs. To some extent this trend has been highly influenced by the global phenomenon and the INGOs operating within the country. Many of the local initiatives, whether they are in the form of awareness raising campaigns or advocacy of violation of human rights have been geared towards bringing together to pressurize the government. A sense of collective effort and voices has emerged at all levels, which could be counted as a positive indicator for good governance. The emergence of a strong civil society may lead the country to exercise better democratic practices in the coming days.

Presently one can observe that there are many guthis, civil societies, users' groups and committees, NGOs and INGOs, who are working on different subjects and levels in the metropolis. Self-renewal and revival of some traditional guthis and association to preserve their culture and heritage could be one step forward in the direction of social mobilization. Many of these organizations are operating on their own by initiating a few activities and covering limited areas.

8.7.3 Private Sector

The involvement of the private sector in the community development activities can be separated broadly into two

Table 1 : Present Status of the NGOs and INGOs Affiliated With the Social Welfare Council.

S. No.	Sector	No. of NGO/ INGO	KTM based
1	Community Development	4,646	1,501
2	Child Welfare	202	95
3	Health Services	199	107
4	Handicapped & Disabled	125	52
5	Women Service	841	242
6	Moral Development	210	84
7	Environment	574	259
8	Education development	82	39
9	HIV/ AIDS	36	24
10	Youth Activities	1,906	278
	Total:	8,821	2,681

Source: List of NGOs and INGOs affiliated with SWC book

categories. One is the involvement of individuals or groups to initiate certain community development activities on the basis of charity for the benefit of mass population. The second one is their involvement as mass service providers on a commercial basis. The opening of the free market economy has led many private businesses, commercial groups and entrepreneurs to come up with new innovative ideas and projects to support the overall situation of the Kathmandu valley. The initiation of traffic island parks, market complexes, management of solid waste, public transportation services and vehicle parks can be cited as good examples that are contributing to the community development activities. Another good example can be observed on the part of the local initiative, which is carried out at various ward levels with people's participation to improve their physical facilities, services and public awareness campaigns.

8.8 PLANS AND POLICY FRAMEWORK OF THE GOVERNMENT

For the past many years community development approach has been initiated at different levels by both the government and non-government sectors. Time and again the two sectors have shown both cooperation and hostilities towards each other. The prime concern and aim of the NGO sector is in delivering basic services to the deprived communities and minimizing social exploitation. In actual sense the roles and functions of an NGO has been propounded to be that of a catalyst to bridge the development service delivery mechanism. To streamline both the government and NGO sectors in the overall development initiatives, the government of Nepal has recognized them, in the Ninth Five-year Plan and Self - Governance Act, as being development partners

8.8.1 The Ninth Five Year Plan (1998 – 2002)

The Ninth Five -Year Plan (1998 – 2002) has provided many basic elements and guidelines to improve many of the components, which are related to community development aspects. Though, the guidelines were developed on broader perspectives, they primarily provide strategic directions on a national level to attain a sustainable development process. They fail to address specific critical issues pertaining to KMC. However, those strategic directions provide ample guidelines to develop appropriate strategic and annual plans by incorporating the priority sectors.

Poverty eradication being the prime concern of the nation, the ninth plan has developed an integrated approach to reduce the poverty by 10 percent within the ninth plan period. Although, poverty was estimated to be 42 percent in the country as a whole, for Kathmandu valley it was projected to be 35.6%. This figure also provides a gloomy picture of the urban people and their living conditions.

Table 2 : Comparison of Some Selected Socio-economic Development Indicators for the Whole Nation and KMC (Planned for 9th Five Year Plan Period Within the Range of 20 Years Long-term Planning Perspectives).

S.No.	Indicators *	FY 2053 / 054	By 9th Plan	By 12th Plan	KMC at present
1	Per Capita Income	Rs. 7,673	-	-	20,939
2	Poverty	42%	32%	10%	35.6%
3	Population Growth	2.38%	2.0%	1.5%	6%
4	Unemployment	4.9%	4%	3%	7.8%
5	Semi-unemployment	47%	32%	10%	NA
6	Average life expectancy	56.1 yrs.	59.7 yrs.	68.7 yrs.	67 yrs.
7	Child mortality ('000)	74.7	61.5	34.4	NA
8	Children mortality (< 5 yrs/ '000)	118	102.3	62.5	NA
9	Fertility rate	4.58%	4.20%	3.5%	NA
10	Mortality of Mothers (100,000 LB)	475	400	250	NA
11	FP acceptors	30.1%	36.6%	58.2%	NA
12	Primary School Children	70%	90%	100%	86%
13	Higher Secondary School	45%	60%	100%	NA
14	Literacy rate	40%	70%	100%	78%
15	Available Drinking Water	61%	100%	100%	67HH
16	Electricity Facility	14%	20%	50%	99 HH
17	Telephone Service Line ('000)	10	25	150	88 HH
18	Districts with Road connection	56	66	75	all
19	Irrigation Facility for Agri. Land	60%	68%	95%	NA
20	Available Roads (in km)	11,714	13,564	18,114	995

Source: * Data collected from different sources.

The ninth plan also deals with various aspects of human development indicators to improve the livelihood conditions of all citizens. Reduction in population growth rate, illiteracy, child and mother's mortality rates, unemployment, fertility rates through health care and awareness activities are some of the priority sectors. The ninth plan has also recognized the capacity building process of the concerned development stakeholders by outlining the NGOs and GOs collective approach and decentralization process to deal with the poverty alleviation projects. Following are some of the highlights of the ninth five-year plan:

To reduce the present level of poverty (42%) by 10 percent within the plan period the government has set priority to various livelihood programs. By promoting various health and educational programs, the Plan aims to gradually bring down the population growth rate to 1.5 percent by the year 2017. By improving the qualitative educational, health and income generating activities it has projected an increase in the following living standard indicators:

Within the set development indicators, KMC already qualifies for many of these indicators due to its comparative advantage of being the capital city and the prime economic center of the country. However, the heavy growth in its urbanization process has also brought forward inadequacy in many of the development services and facilities provided to the city dwellers. Many of the factors and issues as discussed in the earlier chapter have put enormous pressure on the available resources and managerial capacity. To achieve the overall development objectives set by the 9th plan, thus, becomes the prime responsibility of all stakeholders.

8.8.2 Local Self-governance Act (1999)

The Local Self-governance Act (1999) was promulgated to ensure maximum participation of the local people and local government body (VDC, DDC and Municipality) is sought at a maximum level. The Local Self-governance Act has empowered the local government, to initiate different types of development activities, which are the prime concerns of the city dwellers. Primarily, these activities have been directed to address and uplift the living conditions of the mass populace:

8.8.3 Work, Responsibility and Authority of the Municipality

(A) Besides the implementation of the decisions taken up by the Municipal Board (Nagar Parisad), the municipality should also implement the following works and responsibilities on a compulsory basis:

(i) Relating to Finance:

1. To prepare annual budgets, plans and programmes of the Municipality and submit them to Municipal Council.
2. To keep the accounts of incomes and expenditures, and the documents pertaining thereto in an updated manner.
3. To expend the money to execute the decisions of the Municipality, subject to the limits of the approved budget.
4. To raise taxes, charges and fees etc. approved by the Municipal Council.

(ii) Relating to Physical Development:

1. buildings and rest houses.

(iii) Relating to Water Resources, Environment and Sanitation:

1. To preserve rivers, streams, ponds, deep water, wells, lakes stone water-taps etc. and utilize them properly.
2. In the events of necessity to carry out irrigation plans in the Municipality area, to make plans thereof and implement and cause to be implemented the same.
3. To control and prevent, or cause to be controlled and prevented the possible river cuttings, floods and soil erosion in the Municipality area.
4. To assist, or cause to be assisted, in environment protection acts by controlling water, air and noise pollution generated in the Municipality area.
5. To protect or cause to be protected the forests, vegetation and other natural resources within the Municipality area.
6. To carry out or cause to be carried out sanitation programmes in the Municipality area.
7. To carry out and manage or cause to be carried out and managed the acts of collection, transportation and disposal of garbage and solid wastes.

8. To generate and distribute or cause to be generated and distributed electricity in the Municipality area.

(iv) Relating to Education and Sports Development:

1. To establish, operate and manage pre-primary schools with own sources in the Municipality area and give permission to establish the same.
2. To extend support in the operation and management of schools being operated within the Municipality area and to make recommendations for the establishment and dissolution of such schools.
3. To assist in providing primary level education in mother tongue within the Municipality area.
4. To make arrangements for providing scholarships to the students of oppressed ethnic communities who are extremely backward on economic point of view.
5. To prepare and implement or cause to be implemented programmes on Municipality level adult education and informal education.
6. To open, operate and manage or cause to be opened, operated and managed libraries and reading halls in the Municipality area.
7. To prepare and implement or cause to be implemented, sport development programmes.
8. To develop or cause to be developed sports by constituting Municipality level sport development committee.

(v) Relating to Culture:

1. To prepare an inventory of the culturally and religiously important places within the Municipality area and maintain, repair, protect and promote, or cause to be maintained, repaired, protected and promoted, them.
2. To protect, promote and use or cause to be protected, promoted and used, archaeological objects, languages, religion and culture within the Municipality area.

(vi) Relating to Works and Transport:

1. To prepare plans of unpitched and pitched roads, bridges and culverts as needed within the Municipality area, except those roads which are under the responsibility and control of HMG/N, and construct, maintain and repair or cause to be constructed, maintained and repaired, the same.

2. To arrange or cause to be arranged for bus parks and parking places of rickshaws (three wheelers), horse-carts, trucks etc. within the Municipality area.
3. To prescribe the upper limit of push-carts, rickshaws, horse-carts etc. in consideration of transport requirement of the Municipality and register and provide number to them.

(vii) Relating to Health Services:

1. To operate and manage, or cause to be operated and managed, municipal level hospitals, Ayurvedic dispensaries and health centers.
2. To open, operate and manage, or cause to be operated and managed, health posts and sub-health posts within the Municipality area.
3. To formulate programmes relating to family planning, mother and child welfare, extensive vaccination, nutrition, population education and public health, and to implement or cause to be implemented the same.
4. To arrange, or cause to be arranged, for prevention of epidemics and infectious diseases.
5. To ban the public uses of such things and objects in the Municipality area as are harmful to the public health or remove the same.
6. To ban the sale, distribution and consumption of such type of consumer goods which may cause adverse effects on public health.

(viii) Relating to Social Welfare:

1. To arrange, or cause to be arranged, for cremation of heirless dead person, and to make arrangements for orphanages for helpless people, orphans and children bereaved of parents.
2. To carryout, or cause to be carried out, programmes relating to the interests and welfare of the women and children and acts relating to the control of immoral profession and trade.

(ix) Relating to Industry and Tourism:

1. To act or cause to act as a motivator to the promotion of cottage, small and medium industries in the Municipality area.
2. To protect, promote, expand and utilize or cause to be protected, promoted, expanded and utilized, natural, cultural and tourists heritage within the Municipality area.

(x) Miscellaneous:

1. To do plantation on either side of the roads and other necessary places in the Municipality area.
2. To determine and manage places for keeping pinfolds and animal slaughterhouse.
3. To protect barren and government unregistered (Ailani) land in the Municipality area.
4. To determine and manage crematoriums.
5. To act for the development of trade and commerce.
6. To frame bylaws of the Municipality and submit it to the Municipal Council.
7. To carry out necessary functions on controlling of natural calamities.
8. To maintain inventory of population and houses and land within the Municipality area.
9. To register birth, death and other personal events pursuant to the prevailing law.
10. To maintain inventory of helpless, orphan, and disabled children within the Municipality area and arrange to keep them in appropriate place.
11. To secure public interest by killing rabid and strayed dogs and specify the places to bury dead animals and birds into.
12. To have such trees cut and houses, walls etc. creating hazardous results demolished.
13. To up-date the block numbers of the houses in the Municipality area.
14. To arrange for animal slaughter houses.
15. To impound and auction strayed animals.
16. To arrange for lighting on the roads and alleys.
17. To grant approval to open cinema halls in the Municipality area.
18. To arrange or cause to be arranged for Haat bazaar, markets, fairs and exhibitions etc.
19. To operate and manage or cause to be operated and managed fire brigade.
20. To confer the honor of distinguished person of the town on any distinguished person.
21. To carry out or cause to be carried out other acts relating to the development of the Municipality area.
22. To render assistance for the development of cooperatives.
23. To evaluate the performance of the Secretary and forward it with recommendations to the authority.
24. To encourage or cause to be encouraged to carry out cooperative, industrial and commercial activities generating income to the Municipality with the investment of private sector as well.
25. To formulate various programmes based on cooperativeness and to carry out or cause to be carried out the same.

26. To carry out such other functions as prescribed under the prevailing law.

(B) In addition to the functions, and duties referred to in sub-section (A), the Municipality may also perform the following optional functions in the Municipality area:-

1. To make necessary arrangement for providing standard school education in the Municipality area.
2. To launch literacy programmes to eradicate illiteracy from the Municipality area.
3. To open and operate libraries and reading halls in various places within the Municipality area.
4. To control unplanned settlement within the Municipality area.
5. To make the structure and development of the town well planned through the functions such as guided land development and land use.
6. To arrange for the aged rest house and orphanages.
7. To arrange for the supply of electricity and communications facilities.
8. To arrange for recreational parks, playing grounds, museums, zoos, parks etc in the Municipality area.
9. In order to reduce unemployment, to collect the data of unemployed persons and launch employment-generating programmes.
10. To launch programmes to control river pollution.
11. To provide ambulance service to the municipality area.
12. To arrange for dead body carriers in the Municipality area.
13. To carry out preventive and relief works to lessen the loss of life and property caused from natural calamity.

(C) Consumer groups and other NGOs shall have to be encouraged for the development and construction works to be done in the Municipality area and such works shall have to be done through such groups or organizations as far as possible.

(D) The Municipalities shall exercise the powers conferred on it under this Act and Rules and Byelaws framed under this Act.

The Local Self-governance Act has identified and provided enormous authority and jurisdiction to the local government entities including the municipalities. Most of the specified activities stated under the jurisdiction

STRENGTHS

- Visionary and Capable Leadership
- Good Team Spirit
- Young and Energetic Managers
- Functional Departments
- Feeling of Ownership
- Increased Rapport Building & Coordination
- Good Public and Private Supports
- Initiation of innovative activities
- Good Support of the Donor Agencies
- Increased Faith and Trust of the People
- Revival of the CD Process

OPPORTUNITIES

- Capital and Administrative City
- Vast Economical Opportunities
- Historical and Cultural Center
- Politically Sound Atmosphere
- Potential Bankable Projects
- Interest of Funding Partner Agencies

EWEAKNESSES

- Political Bias among few members
- Lack of Systematic Planning Procedures
- Inadequate Exposure and Experiences
- Inadequate Infrastructures
- Limited Resources
- Indifference of the Mass people in CD
- Inadequate Coordination and Support
- Inadequate Documentation/ Records

THREATS / CONSTRAINTS

- Political Will of the Central Government
- Legal Status of the KMC
- Attitudes of the Line Ministries
- Intra-Organizational Capacity

of the municipalities focus on physical facilities and services, however, they are primarily aimed at improving the livability of the city dwellers and thus can be linked to community development works. The Local Self-governance Act has also laid great importance to the role, responsibilities and involvement of local users' groups and NGOs in carrying out development works. The unsuccessful experience of the development activities of the past decades to sustain themselves has been influential in generating the concept of partnering with the local communities, NGOs and INGOs to support CD initiatives.

8.8.4 Issues Related to the Policies and Plans

Municipalities come under great pressure to accomplish the huge tasks lay down under their jurisdiction. The following are some of the pertaining issues and limitations;

a. Legal Status of the Municipality:

In spite of the provisions made under the Local Self-governance Act, in many instances, the legal status of

the municipality still remains ambiguous. The most ambiguous part is the ownership issue of the various public properties and infrastructures, as there are many concerned line ministries and departments, who are responsible for managing and operating similar functions thus resulting in an overlap. Lack of coordination among the municipalities, line ministries, departments and other stakeholders has created a complex and confusing atmosphere to deal with many pertaining issues. It has been stated that the existing situation is like a boat with many people rowing at the same time with different strokes in different directions. Primarily the conflict is managed without proper solutions and by blaming each other.

b. Political Will:

An unstable government with hidden undercurrent waves of political disputes among the ruling and opposition political parties has also been blamed for the malfunctioning of the Local Self-governance Act. The frequent changes and reshuffling of the cabinet ministers, delays in the decision making process with its long bureaucratic procedures along with some hidden agendas are some of the critical phenomenon within the present

political environment of the country as a whole. The much-politicized issue on the disposal of solid waste can be cited as a good example.

c. Limited Resources:

The formidable task of generating financial resources has been one of the prime issues in all the municipalities. The abolishment of octroi (Chungi Kar) imposed on the vehicles and materials has brought certain setbacks on the financial status and overall work performance of the municipalities including KMC. In spite of the provision made under the Local Self-governance Act to impose and collect various taxes from the public many of the municipalities are overwhelmed trying to accomplish plans and programs under the constraints of resources (both financial and human resources). The indifference and resistance of city dwellers of KMC to pay taxes can be blamed partly on their inexperience and the habit of availing of free government services. The adverse attitudes shown by the mass public and their unwillingness to pay taxes to the government (Municipality) can be also blamed for the malfunctioning of the government in bringing about economic and development prosperity to the nation.

d. Organizational and Managerial Capacity:

Catering for all the services laid down by the Local Self-governance Act needs not only huge financial resources, it also demands for a larger and more complex organizational set up along with appropriate managerial capacity. Although, for the many past years KMC has been implementing many of the activities (formulated within the Local Self-governance Act) under its carrying capacities, it is highly constrained by intra-organizational capacity.

8.9 SWOT ANALYSIS OF KMC

Under the present environment, SWOT (Strengths, Weaknesses, Opportunities and Constraints) analysis has become a prominent managerial tool to assess the internal and external environment of an organization. The environmental scanning made at the surface level within the KMC organization reveals many of the

strengths and weaknesses along with the available opportunities and threats, which further need a systematic in-depth analysis.

Strengths:

The existing elected constituency of KMC body is led by visionary and capable leaders with adequate team approach in the decision making process. A majority of the constituency has shown a great deal of maturity and support inducing KMC to exercise many new innovative events. By restructuring its organizational set up KMC has tried to streamline its major areas of operation in an appropriate way, which has been supported by many young, energetic and capable managers. For the past few years, KMC has shown a greater degree of concern towards the community development process and has been able to muster public and private support to initiate some successful innovative projects and events. The trust and public response has increased due to its good efforts in rapport building and networking. Similarly, it has also been able to spread out its networking with many collaborating donor agencies to collect ample support to finance some commendable projects.

Weaknesses:

Inadequate experiences on systematic planning procedures to carry out its regular activities related to development and construction works has been one of the weakness within KMC. Most of the time the planning procedures were carried out at the central level. However, a gradual shift can be observed at the ward level where they are coming up with a planning process. They still lack the actual representation and ownership of the community people. Lack of proper documentation still constrains appropriate planning and projection. Lack of strong sources to generate financial resources has largely affected its operational activities. This has also constrained and limited its networking function.

Opportunities:

As discussed earlier KMC being the capital city possesses enormous potential for economic growth. The historical and cultural aspects of the capital city are also capable of pulling more international tourists as well as the business sector. Furthermore with its neutral stand on international and regional political issues it is at an advantage to develop as a buffer zone to organize various international conventions.

Threats / Constraints:

The decentralization process automatically demands shifting of power and authority to the lower segment. The political unwillingness of the central government and bureaucracy to devolve authority and responsibility has been observed as one of the prime hurdles to implement many of the activities in KMC, which were specified by the Local Self-governance Act. The existing intra-organizational capacity of the KMC is also regarded as one of the threats for absorbing and adapting to the Local Self-governance Act.

8.10 VISION, MISSION AND OBJECTIVES OF CD WORKS

The first stakeholders' workshop of the Kathmandu City Development Strategy was held in Kathmandu on 25th August, 2000. The prime objective of the workshop was to identify the most pressing issues affecting the overall development of the city. Preparation of a collective vision based on the outcome of different sectors was also one of the objectives of the workshop. While dealing with the CD aspects, many pertaining issues surfaced in the open plenary session. The general observation made was that although the people's development was the primary objective of all development efforts, intentionally or unintentionally CD was rarely accorded due importance. The concerned department under KMC is weak and the mass public remains indifferent toward this sector. Some of the major issues highlighted were street children and child labor, girl trafficking, empowerment of women, employment and income generation, education, basic health and family planning services along with raising awareness on disaster management (refer to Annex – c. for details).

Different working sub-groups in the workshop had identified their own visions for KMC, which are as follows:

- “Cleanest and healthiest city in Nepal.” – Environment and Solid Waste

Management sub-group.

- “Economically sound and managerially capable metropolis providing qualitative urban services and facilities.” – Financial Management sub-group.

- “Well Planned city and housing for all.” – Housing & Urban Planning sub-group.
- Capable organization and manpower to manage the service facilities and physical infrastructure of the city dwellers.” – Institutional Dev. and Strategic Planning sub-group.
- “Capable local government.” – Political Commitment and Self-government sub-group.
- “Well managed, safe transportation and healthy Kathmandu.” – Physical Infrastructure sub-group.

A consolidated vision for KMC could be constructed by accumulating all the spread out sectorial visions, which comes much closer to “A healthy, lively and sustainable society.”

8.11 FRAMEWORK GUIDELINES

On the basis of assessing the overall environment and outcome of the different studies and exercises, the following areas have been identified as the prime sectors to initiate and promote CD programs in KMC:

8.11.1 Area and Scope for Intervention in CD Works

As community development aspects encompass each and every segment of the human endeavor, they should be closely linked with all development process. However, in many of the development sectors the direct involvement of the community people is not necessary, but they need to have certain level of concerns in all matters. Communication being one of the strong tools to bring about human behavioral changes, KMC should try to build a consensus on such concerns with its mass populace. By upgrading its Communication and Information Department, KMC could disseminate its messages to the mass and specific communities alike. Many of the CD works at local level could be initiated by reviving the existing Guthis and users' groups. Similarly, the local NGOs and INGOs (including youth clubs and private associations) would be good assets to initiate various CD works within the municipality area. Feeling of ownership is one of the prime components in participatory development process to sustain the CD program, involvement of the concerned stakeholders should be guaranteed at each and every event.

8.11.2 Networking with the Concerned Partner Organizations

The respective departments constructed under KMC need to be mobilized to build up a close networking with many development partner organizations. Networking should get high priority by developing a close collaboration among the departments and KMC representatives (Ward members) as both intra-organizational components of KMC need to work collectively to achieve the overall goal of the KMC. By developing strong linkages with GOs, NGOs, INGOs and private sectors, KMC could muster enough support to maximize its carrying capacities of various developmental activities. Collective and joint venture, feeling of ownership, transparency and mutual trust are some of the foundation components to sustain the development initiatives.

KMC could strengthen and mobilize its Communication Department to play a lead role in establishing a community forum to discuss social, economic and environmental issues and follow-up action. Such mass media can be supplemented by forming listeners clubs at the ward levels to make the impact more development oriented.

8.11.3 Documentation

The process of planned change has been identified as one of the appropriate managerial leadership tools to a successful development endeavor. Such a planning process needs some basic input in the form of existing information and data. KMC should take necessary steps in formulating its information center to update the records of available data. KMC could mobilize its ward committees to accomplish this formidable job with support from the departments.

8.11.4 Structural Adjustment

Basically, KMC can be identified as a pro-public oriented organization where the successful implementation of the CD activities demands a close collaboration and support from different stakeholders. KMC has formed different departments to initiate various CD activities, which are linked with many departments, therefore without having a close collaboration among the concerned departments they will not be able to yield results at the expected level. To provide support, in initiating CD activities, to other departments along with Ward Committees there should

be major activity under the Social Welfare Department. Its support could also be vital for coordinating many of the major activities under different departments. A well-structured action plan for each department along with easy access to important events and their information will help to mobilize a collective effort to initiate and implement successful CD activities.

8.11.5 Human and Financial Resources

Resources, being scarce commodities are regarded as placing great constraints in any organizations. Efficient utilization of the available resources also becomes one of the prime concerns of an organization. The Local Self-governance Act has laid huge responsibilities on the municipalities by expanding their working areas. To accomplish these responsibilities, they need a lot of financial and human resources. However, on the part of CD, the involvement of many other stakeholders is a positive asset. Instead of direct involvement and duplication of job performance KMC could play a catalytic role in initiating CD activities. Ward Committees will have a greater role to play in such activities.

8.12 MONITORING AND EVALUATION

To carry out the monitoring and evaluation roles in CD activities, KMC should develop appropriate indicators. Support of the concerned departments and Ward Committees will be vital in this respect. By involving various stakeholders (GOs, INGOs and NGOs) KMC could develop collective action plans for CD programs along with appropriate indicators and division of job responsibilities.

Although, the collaboration with concerned stakeholders' is difficult and time consuming, it is one of the vital components to bring a collective effort for a sustainable development process. All social entities operating to achieve certain specific goal and objectives have to adapt to this principle.

8.13 SUMMARY CONCLUSION

Community Development processes being an integral part of society has a long historical background. The

well being of men should remain as the central issue of all developmental efforts. KMC has a long historical CD tradition. Presently, the CD component has grown into a much larger sector by encompassing all development endeavors. CD also demands a collective effort from all stakeholders. Many of the development efforts carried out in the past decades have proved that development cannot be sustained without the involvement of the local communities.

The decentralization process and Local Self-governance Act (1990) has entrusted a great deal of roles and responsibilities on the local government body. Collective effort of all stakeholders' is the prime key for the successful implementation of the Act.

It has been closely observed that KMC has its own constraints and limitations along with many good opportunities to spearhead its community development activities. First of all KMC should identify its roles and responsibilities to enter into various community development sectors. With its present structure and capacity, KMC will certainly face constraints to achieve the overwhelming activities, which fall under the CD boundary. By mobilizing the ward committees, KMC could obtain and develop a good resource pool of these partner organizations. Developing a strong networking and linkages for resource mobilization and sharing information with local, private and public agencies involved in CD activities, KMC could achieve tremendous success in developing a strong civic society within its vicinity.

Note:

The City Diagnostic Report for KMC has been developed separately into ten chapters. This specific report focuses primarily on the community development aspect, which has also a cross cutting role in other sectors and has to be dealt accordingly.

Table 3: Community Development Issues and Implications

ISSUES	IMPLICATIONS	ACTORS
Street Children and Child Labor	Unhealthy & unproductive society with insecure city life and damaged international image	UNICEF, CWIN, SWC and other INGO/NGO involved in the child focused programs
Girl Trafficking	HIV/AIDS epidemic	UNICEF, UNDP, SWC, GOs, Bi- and multi-lateral organizations Ward Committees, NGO, INGO (Maiti Nepal, WOREC, etc.)
Empowerment of Women	Unrealistic and Gender biased development process	INGO, NGO, SWC, MCWSW, and donor agencies
Employment and Income Generation	Anarchy, social unrest and lowered economy	GOs, INGOs, NGOs, Private industries, business entities and skill providers (CTEVT)
Education Sports	Unemployment leading to social unrest and anarchy	GOs, INGO, NGOs Parents, schools, Pvt. Forms and industries
Health Services	Unproductive and unhealthy mass city dwellers	MOH, UNICEF, INGO, NGO and Health Clinic (ward)
Senior Home for Old Age Citizens	Insecure and destitute life for Senior Citizens	GOs, INGOs, NGOs, Ward Committees and other donor agencies.
Social Security for the Citizens	Unsecured city life	GOs, INGOs, NGOs, Ward Committees, Police and concerned Departments of KMC
People's Participation	Sustainable development process will not be achieved	GOs, INGO, NGO, Ward Committee, User's groups, Clubs, Guthis, and donor agencies
Natural and Manmade Disaster	Loss of lives and materials	GOs, INGO, NGO, Ward Committee, Guthis, Clubs, etc.

Stakeholders' Map

STAKEHOLDERS	INTEREST IN KMC	EXPECTATIONS	POTENTIALS
Department of KMC	<ul style="list-style-type: none"> <input type="checkbox"/> Well coordinated functional and resourceful departments within KMC to cater maximum services to the communities 	<ul style="list-style-type: none"> <input type="checkbox"/> Support and linkages among various concerned departments, partner organizations, Ward representatives and the communities. <input type="checkbox"/> Availability of required basic resources. <input type="checkbox"/> Formulation of comprehensive internal policies and plans for KMC 	<ul style="list-style-type: none"> <input type="checkbox"/> Good and efficient service delivery to the target groups by minimum duplication of works <input type="checkbox"/> Good linkages and support for resource mobilization <input type="checkbox"/> Capable and well functioning Ward Committees and civic societies (pro-active) to response to the community development process. <input type="checkbox"/> Delegation of more power and authority to the Ward Committees.
Ward Committee Members	<ul style="list-style-type: none"> <input type="checkbox"/> Well coordinated functional and resourceful Ward Committees to cater maximum services to the communities 	<ul style="list-style-type: none"> <input type="checkbox"/> Availability of required basic resources and support from the departments and stakeholders to initiate sustainable community development programs at their respective wards. 	<ul style="list-style-type: none"> <input type="checkbox"/> Capacity building at the ward level for initiating resource mobilization and networking for CD initiatives with minimal duplication of works
Social Welfare Council (GO)	<ul style="list-style-type: none"> <input type="checkbox"/> Enough room to establish close cooperation and coordination to initiate various CD activities 	<ul style="list-style-type: none"> <input type="checkbox"/> By formulating its comprehensive policy and action plan on CD, KMC should support SWC in monitoring and regularizing the NGOs and social groups by mobilizing its Ward Committees 	<ul style="list-style-type: none"> <input type="checkbox"/> Control of duplication work and funding CD activities along with easy access to monitor and regularize documentation system <input type="checkbox"/> A collective and effective mechanism to initiate urban CD program
NGO	<ul style="list-style-type: none"> <input type="checkbox"/> Cooperation and assistance from KMC and other stake holders: <input type="checkbox"/> Initiation, coordination, rehabilitation for street children <input type="checkbox"/> Positive attitude towards the deprived communities and gender sensitivity <input type="checkbox"/> Appropriate resettlement programs for the slums and squatters. 	<ul style="list-style-type: none"> <input type="checkbox"/> KMC should formulate its comprehensive policy and action plan for CD programs <input type="checkbox"/> KMC should initiate close coordination with prominent stakeholders for resource mobilization and cost sharing in a transparent way <input type="checkbox"/> Involvement of Ward Committees and stakeholders in the implementation of CD programs 	<ul style="list-style-type: none"> <input type="checkbox"/> Collective effort to address the CD related issues (i.e. street children, child labor, social security and services, gender, slums and squatters, etc). <input type="checkbox"/> Feeling of responsibility and accountability on CD issuesm by all <input type="checkbox"/> Strengthened organizational capacities to deal with the community development process
Judge Panel Members (Reviewers of CD Diagnosis Report)	<ul style="list-style-type: none"> <input type="checkbox"/> Integration of social mobilization process within KMC to create awareness and active participation of civic societies. 	<ul style="list-style-type: none"> <input type="checkbox"/> KMC should formulate its comprehensive policy and action plan for CD. 	<ul style="list-style-type: none"> <input type="checkbox"/> More responsive and pro-active organizational settings to initiate effective and efficient community development programs.

ANNEX - 2

People Consulted

- Mr. Keshab Stapit, Mayor, KMC
- Mr. Padma Sundar Joshi, Coordinator, KMC / CDS
- Mrs. Hari Devi Ranjitkar, DH, SWD, KMC
- Dr. Babu Ram Gautam, DH Health Department, KMC
- Mr. Bishnu Singh Basnyet, DH, Security Department, KMC
- Mr. Shankar Raj Kandel, DH, Communication & Information Department, KMC
- Mr. Ganesh Dhoj GC, DH Legal & Litigation Department, KMC
- Mr. Yogendra Kumar Shrestha, Chairperson, Ward No. 1, KMC
- Ms. Tara Gautam, Elected Women Ward Member, Ward No. 2, KMC
- Ms. Lajana Manandhar, Director, Lumanti
- Mr. Shiva Hari Maharjan, Director, EDHAG
- Dr. Shaket Bihari Thakur, Alliance for Social Mobilization
- Prof. Santa Bahadur Gurung, Director, DEVA
- Mr. Madhav Pradhan, Program Coordinator, CWIN

BIBLIOGRAPHY

1. Baudhik Sanshar Sampadan Samuha, Directives on the Local Self-governance Act (Nepali), 2056.
2. CWIN, Far Away from Home, Survey study on child migrant workers in Kathmandu Valley.
3. KC Rajendra, Development Management of NGO (Nepali), REDA, Kathmandu, July 1999.
4. KMC, Kathmandu Metropolitan City at a Glance.
5. KMC, First Stakeholders' Workshop Proceeding Report, CDS, August 2000
6. KMC, Kathmandu – Nepal, City Data Book, RETA 5846, City Profile: Kathmandu.
7. KMC, Mahanagar Bulletin, Volume 2 No. 1, April 1999 and Volume 2 No. 3, July 2000.
8. KMC, Social Welfare Department, Brochure on Human Resource Information & Promotion Center.
9. KMC, Social Welfare Department, Brochure on Disaster Management Section.
10. Kamana Group of Publication, Sadhana Family Digests issues 36, 59, and 72.
11. Lumanti et all, The Water Supply and Sanitation Situation of Urban Poor in Kathmandu Valley, July 2000.
12. Nepal Heritage Society, Preparedness, Response and Recovery Strategy for Heritage and Cultural Sites in Kathmandu Valley
13. National Planning Commission, HMG/N, Ninth Plan (2054-2059) Ashar 2055.
14. N.Shrestha, Laws on Local Self-governance Act (Nepali), Pairabi Publication, Kathmandu, 2055.
15. NSET-Nepal and GeoHazards International, USA (GHI), The Kathmandu Valley - Earthquake Risk Management Action Plan, January 1999.
16. Social Welfare Council, List of Non-governmental Organizations Affiliated with Social Welfare Council, Volume – I and II, September 1999 and May 2000 Kathmandu.
17. Thapa Sabitri, Nepalma Samajsewa (Nepali), Sajha Prakashan, 1976.
18. Upreti NP et.all, An Outline History of Nepal, Ekta Books Distributors Pvt. Ltd., Kathmandu, 1994.

ENVIRONMENT

Surya Man Shakya
ENVIRONMENT SPECIALIST

LIST OF ABBREVIATIONS

AQG	Air Quality Guidelines (WHO)
B.S.	Bikram Era
CEDA	Center for Economic Development and Administration
CDS	City Development Strategy
CPC	City Planning Commission
DANIDA	Danish International Development Agency
DOR	Department of Road
DDC	District Development Committee
DOI	Department of Industries
DCSI	Department of Cottage and Small Industries
EPC	Environment Protection Council
EEC	European Economic Commission
EIA	Environment Impact Assessment
ENPHO	Environment and Public Health Organization
FNCCI	Federation of Nepal Chamber of Commerce and Industries
HMS	Hydrology and Meteorological Services
HMG	His Majesty's Government
HAN	Hotel Association of Nepal
KVDA	Kathmandu Valley Development Authority
KVDC	Kathmandu Valley Development Council
KVMP	Kathmandu Valley Mapping Program
KVVECP	Kathmandu Valley Vehicular Emission Control Program
KMC	Kathmandu Metropolitan City
LDO	Local Development Officer
MLD	Ministry of Local Development
MSW	Municipal Solid Waste
MOI	Ministry of Industry
MOPE	Ministry of Population and Environment
MLD	Ministry of Local Development
MI	Ministry of Industry
NEPAP	Nepal Environment Policy and Action Plan
NESS	Nepal Environmental and Scientific Services
NWSC	Nepal Water Supply Corporation
NGO	Non Government Organization
NHS	Nepal Heritage Society
NBS	Nepal Bureau of Standards
NPC	National Planning Commission
NCS	National Conservation Strategy
RONAST	Royal Nepal Academy of Science and Technology
SWMRMC	Solid Waste Management and Resource Mobilization Center
SWMB	Solid Waste Management Board
SWMNC	Solid Waste Management National Council
SSNCC	Social Services National Co-ordination Council
TSP	Total Suspended Particles
TA	Technical Assistance
USAID	United States Agency for International Development
UNDP	United Nations Development Program
UNICEF	United Nations Children Fund
VDC	Village Development Committee
WB	World Bank
WHO	World Health Organization

TABLE OF CONTENTS

List of Abbreviations	284
Table of Contents	285
List of Tables	286
List of Maps	286
9. ENVIRONMENT	287
9.1 Introduction	287
9.1.1 Kathmandu's Deteriorating Environment - The Background	287
9.1.2 CDS and Environmental Objectives	289
9.2 Environmental Status And Linkages	290
9.2.1 Urbanization and Environment	290
9.2.2 Kathmandu Valley and KMC, as Environmentally One Single Unit	290
9.2.3 KMC's Emerging Environmental Problem- New Dimensions	291
9.2.4 Environmental Constraints to Growth	291
9.2.5 High Social Costs of Environmental Disruption	292
9.2.6 Impacts of Urbanization on Environment	292
9.3 Sectoral Situation Analysis	292
9.3.1 Solid Waste Management	293
9.3.2 Air Pollution	295
9.3.3 Industrial Pollution	302
9.3.4 Water Pollution	308
9.3.5 Noise Pollution	315
9.4 Anylysis of Policy and Legislation	316
9.4.1 Relevant Policies	316
9.4.2 Sectoral Policies and Legislation	317
9.4.3 Existing Legislation and Their Enforcement	318
9.4.4 Concluding Remarks	319
9.5 Institutional Framework, Responsibilities	319
9.5.1 Parliamentary Committee	319
9.5.2 National Planning Commission	319
9.5.3 The Environment Protection Council (EPC)	320
9.5.4 Kathmandu Valley Development Council (KVDC)	320
9.5.5 Line Ministries	320
9.5.6 Local Governments	321
9.5.7 NGO Sector	322
9.5.8 Potential Groups (Stakeholder)	322
9.5.9 Institutional Capability at National Level	322
9.6. KMC As an institution in Environment Sector	323
9.7. Findings, Opportunities and Challenges	323
9.7.1 Findings	323
9.7.2 Opportunities	324
9.7.3 Challenges	324

9.8. Recommendations	324
9.8.1 Activities to be Addressed	324
9.8.2 Institutional Development	326
9.8.3 Mechanisms of Coordination	327
9.8.4 Justification	327
9.9 Overview	327
Bibliography	330

LIST OF TABLES

Table 1:	Sources of Solid Wastes
Table 2:	Characterization of Kathmandu's Solid Waste
Table 3:	Ambient Air Quality in Various Areas of Kathmandu Valley
Table 4:	Liquid Fuel Consumption in Kathmandu
Table 5:	Fuelwood Consumption, Kathmandu Valley
Table 6:	Coal Consumption in the Brick and Cement Industries
Table 7:	Ratios Between PM ₁₀ and TSP
Table 8:	Main Emission Sources in Kathmandu (1993)
Table 9:	Water Quality of Public Taps in Kathmandu
Table 10:	Fecal Coliform in the Water Sample of Kathmandu City
Table 11:	Chemical and Bacteriological Characteristics of Kathmandu City Ground Water
Table 12:	Water Quality Parameters of Different Treatment Plants and Reservoirs
Table 13:	Bacteria Levels in Kathmandu Drinking Water
Table 14:	Noise Levels in Different Sites in Kathmandu
Table 15:	Environmental - Issues and Implications

LIST OF MAPS

Map 1:	Analysis of KMC's Challenges
Map 2:	Major Air Pollution Areas
Map 3:	Water Polluting Industries
Map 4:	Major Extraction of Ground Water
Map 5:	Existing Water Supply System

9.

Environment

The notable symptoms of urbanization induced environmental problems of Kathmandu became perceptible following the political revolution of the 1950s. The preparation of the Master Plan for Kathmandu (1962) and the Tourism Master Plan (1972) which embodied provisions for basic infrastructure, sanitation improvement, waste disposal etc. testify this fact. The vagaries of government policies spanning industrial development of the sixties, rural development of the seventies, and urban development as a support to regional development of the eighties, have all contributed to the evolution of an urbanization pattern, and resultant environmental problems in Nepal.

9.1. INTRODUCTION

9.1.1 Kathmandu's Deteriorating Environment - The Background

Among the multitude of factors contributing to the increased momentum of urban growth in the valley are the inordinate concentration of decision-making and development functions in the valley owing to its being the political and economic capital of Nepal. While in countries like India or Pakistan the political capital and the financial capital remain more or less as separate entities, both these roles have tended to reinforce each other in a single region, i.e., the Kathmandu Valley, in Nepal. As a result, Kathmandu Valley has become the focal point of public sector employment in the country, besides being the major center of private sector employment catering to an increasing population, for whom proximity to the centers of decision-making and development functions is most vital.

The valley had historically sustained urbanization through an extremely productive agricultural base and sustainable management of natural resources. This base has gradually been eroded by new developments. By virtue of being the center of political and economic power, the valley offers locational advantages that no other settlement system in Nepal can offer. It is the singular pole in the hill region to spontaneously attract capital and skills. The rapid growth of the manufacturing sector in the valley owes exclusively to this locational

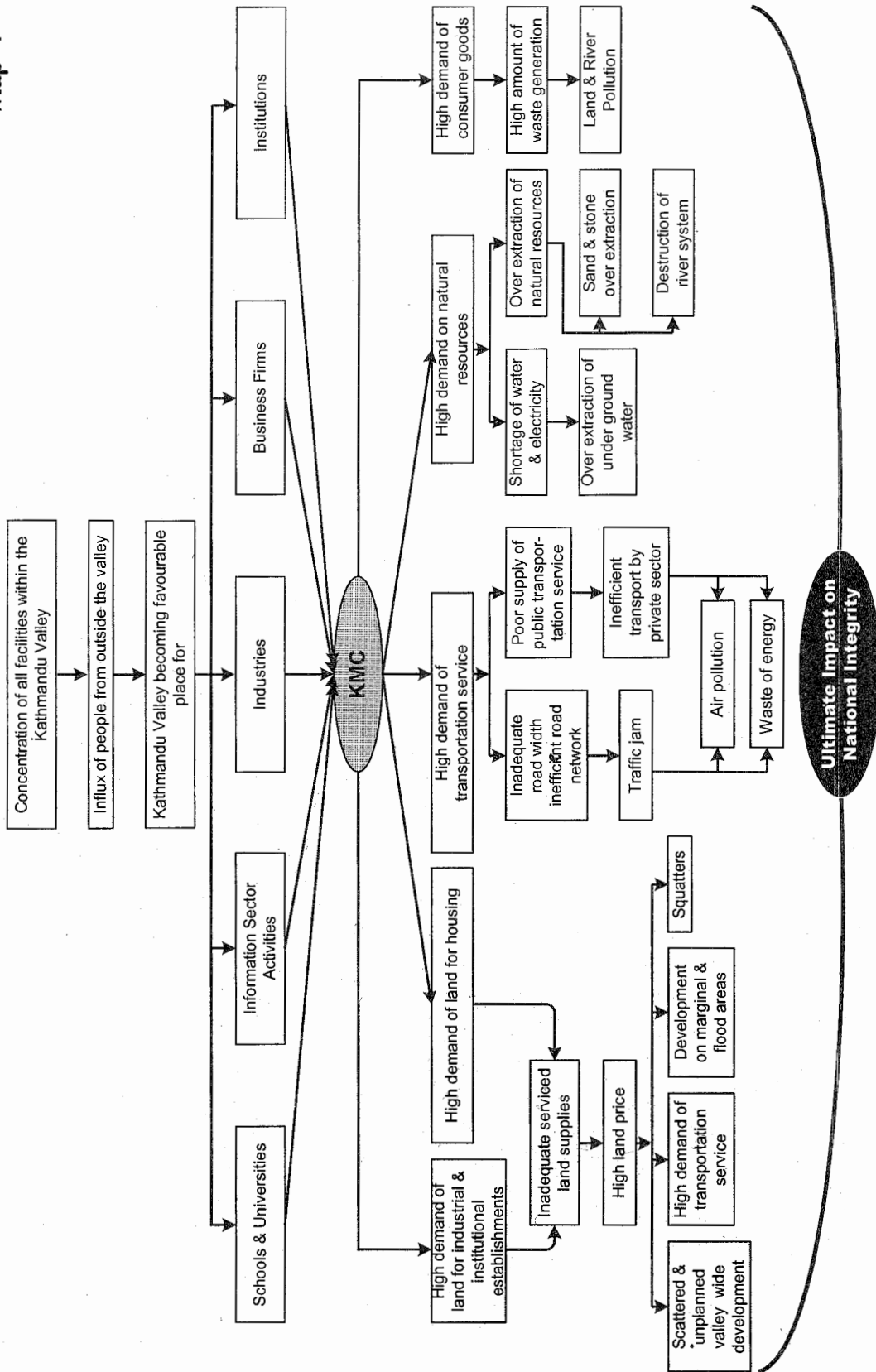
advantage, the economic and political dimensions of which are obvious. This agglomeration of activities has gained a momentum of its own, has provided an alternative basis to strengthen the economic base of the valley, and has accelerated the process of labour migration to the valley towns. It has also impinged on the fragile environment of the valley and could also imperil tourism, another vital economic base of the valley towns.

What emerges quite clearly in the first instance is that the KMC cannot be considered only with reference to the Kathmandu Valley, and that its roles and functions transcend the limits of the valley, encompassing the entire country. The growth in population and changes in man-land equations in the hill-region in general over the last three decades, the gradual saturation of the Tarai as a destination for land-hungry migrants, and the changes in the social attributes of population (increased literacy in particular), and the lack of the development of alternative spatial locations providing avenues for off-farm opportunities have all contributed to the growth of the Kathmandu urban region.

Secondly, more than any other settlement system in Nepal, the major concern in Kathmandu is not with respect to attracting off-land economic activities per se. The concern is more regarding the type of economic activities in juxtaposition to the environment. Because of the unique physical setting of the valley and unplanned urban sprawl, there are serious constraints to the provision of essential services like drinking water, sewerage and drainage while at the same time, the levels

Map 1

Analysis of KMC's Challenges



of river, ground water, air and noise pollution are tending to reach precarious levels. This is resulting in rapid degradation of the natural as well as built-environment, jeopardizing the very basis upon which sustainable growth and development depend.

Thirdly, while the functions and activities have multiplied in the Kathmandu Valley over the years, there has been a conspicuous and relative decline in the institutional capacity to handle these functions. The build-up of the local, municipal and district capacity to deal with problems arising from rapid urbanization have been inhibited and hampered by political exigencies and pressures exerted by the imperious presence of the central authority. There is in effect, an “operational vacuum”, and the total lack of an institutionalized system to visualize the future of the valley, and the means and mechanisms to move towards that vision.

The following chapters in this volume discuss the major eco-environmental issues in the Kathmandu Valley with focus on the KMC area. The analysis has focused on a synthesis of the major studies, evaluation and plan programmes that have been undertaken for the Kathmandu in the past few years. Rather than focus on the details, only the problems and their varied dimensions have been examined.

9.1.2 CDS and Environmental Objectives

Economic activities have made important demands on Kathmandu’s environment, both built and natural. The World Bank’s assistance in developing a CDS for Kathmandu has environment protection as one of the major objectives. The World Bank Guidelines on CDS Stresses four main themes and they are Livability, Bankability, Competitiveness and Good Governance. The principal aim of the environment component of CDS therefore, is to seek practical solutions at the local level for the above themes holding the following environment protection objectives:

- (i) to analyze the acute environmental problems in the KMC;
- (ii) to formulate an environment protection strategy and environment assistance program ;and
- (iii) to improve urban living conditions and quality of life by efficient utilization of available resources in the environment sector.

As a result of the CDS exercise for Kathmandu, it is expected that KMC will develop a long-term partnership with the government and donor agencies for the effective and sustainable implementation of the assistance programs.

The Kathmandu CDS exercise also gave due importance to “stakeholders’ participatory approach” in the planning process. The planning process and the development of various strategies was thus made transparent, and this report which is based on a consensus among the stakeholders at various levels serves as the best example of such transparency. The stakeholders meeting which were held on the 25th August ‘2000, and 17th January 2001 played an important role in identifying key issues and prioritization of problems.

The diagnostic report for the CDS and the environmental analysis have been carried out under the assumption of such a political and institutional capacity that in the near future, KMC will assume its responsibilities as a fully operational local self-government. The decentralization policies of HMG will arrive at a viable mature state in the near future, and in such a situation, it is assumed that the “Local Self-Governance Act, 1999” will be the key legislation which will enable KMC to implement the plans and programs recommended in the final CDS. This diagnostic report on environment is an outcome of efforts of the various stakeholders, and concerted discussions and deliberations on the subject.

This report outlines many issues pertaining to environmental problems of Kathmandu. These issues cannot be dealt with simultaneously and will have to be done in stages. KMC will require substantial external help to organize the needed programs, to develop its institutional capacity, and to effectively change the quality of life of Kathmandu’s residents. However, the most fundamental source of change must emerge from the collective efforts of the local people and their communities. A long part of the valley-wide issues in environment cannot be resolved without the active participation of the central government and the donor communities. Similarly, for many of the environmental problems in Kathmandu, fundamental changes in conventional approaches are needed to decrease cost and increase effectiveness, such as public private participation programs. Much greater emphasis is needed on decentralized solution, based upon active participation of local organizations supported by adequate institutional and financial support from other

line agencies including private sector and funding agencies.

9.2. ENVIRONMENTAL STATUS AND LINKAGES

9.2.1 Urbanization and Environment

The current pace of urbanization and real changes in urban environment are areas of concern for KMC. KMC is willing to urgently take effective intervention actions to address the urbanization-induced environmental problems. However, there are many practical questions regarding the implementation of plans and programs developed in the past, including emerging ideas concerning the protection of environment in cities like Kathmandu. The City Development Strategy being formulated with the technical and financial assistance of World Bank is an important initiative towards finding solutions in implementing plans and programs for the KMC.

The main objectives of the CDS Environmental study are to identify the major components of sustainable development of KMC and the extent to which the existing and proposed development plans and policies support or conflict with the progressive achievement of KMC's vision.

Kathmandu is a city of enormous potential and opportunities in the whole nation and its unique quality in itself is a threat to its sustainability. By virtue of its unique topographical setting and productive potential, it is one of the biggest cities in Nepal that has witnessed a long, uninterrupted and rather rich history of the evolution of urban development. The basis of urban growth, till the first quarter of the present century was the entrepot function of the Kathmandu in particular and valley towns in general. This basis had virtually ceased to exist by the 1950s. Urbanization of the valley witnessed after 1950s, and the momentum it has picked up particularly since the 1970, is a result of inter-related factors that have transformed both the nature and the basis of urban growth in the valley. It is this basis, and the imperatives created by this basis, that have to be diagnosed and addressed in dealing with urbanization related issues in Kathmandu vis-à-vis the environmental implications and its impacts on its residents.

In the context of environment of the Kathmandu metropolis in particular and the entire valley in general,

it is important that carefully drawn development strategies are to be developed and bold environmental protection measures are to be initiated at the earliest possible. Kathmandu serves as the main engine of economic growth as well as the fulcrum of social, cultural, spiritual, scientific, political and administrative advancement. Failure to take effective measures to improve its environment now, will result in disastrous consequences. More over, effective management of Kathmandu's environment and holistic and balanced development of the valley as a unit can help in advancing the national development objectives.

9.2.2 Kathmandu Valley and KMC, as Environmentally One Single Unit

It is truism that Kathmandu's degrading environment is the result of many factors including the concentration of opportunities in the valley. The neglect of natural and man-made environment in Kathmandu is immanent owing to rapid economic growth, which is not in tune with the growing demands for institutional infrastructure, and other life-support systems. Kathmandu is oversteering on its economic goals without compatible investments on infrastructure and this is happening at the cost of environmental disruption to the extent of threatening all its potentials such as cultural assets and tourism potentials.

Due to its strategic location and high level of economic opportunities, economy and the environment are closely linked. The experience of the past 30 years of development in Kathmandu has clearly shown that neglect of the environment is detrimental to economic fruition and efflorescence in the long run. In many respects, the future development potential of Kathmandu will be greatly facilitated if natural and built environment of the city and its surroundings are better managed. At the same time, if resources and environmental quality are allowed to deteriorate further, it will severely constrain its development potential. Environmental problems such as air, water and soil pollution, solid waste management, loss of greenery, lack of effective infrastructure etc. are the tangible and evident characteristics of big cities in a developing nation. In the Kathmandu context, such occurrences are posing seemingly insurmountable problems in the absence of futuristic strategies and plans. The state of the environment in Kathmandu has been a subject of discussion at all levels, yet efforts by the government and other support agencies are considered inadequate.

These problems are not confined to KMC alone, and hence underscores the need to treat the whole valley as one single environmental unit.

9.2.3 KMC's Emerging Environmental Problem- New Dimensions

The shape and character of the KMC's future environmental problems will be different from the past experiences. Firstly, during the early years till the 1970s, the process of urbanization and industrialization was in its infancy, the magnitude of the problems were well within control, and the concerned Ministries and Departments including the KMC, were able to keep pace with the changing trends. The development activities in the later decades have caused considerable and consistent escalation of environment-related problems, for which technological solutions action plans must be sought at the earliest lest Kathmandu and the KMC will be compelled to bear the brunt of the most irredeemable national crisis. The need for a gargantuan transport system to cater to the thousands of commuters everyday, serves as a good example in this context. All such essential services are no longer of local purport and substantially draws upon the nations resources. The pattern of living of Kathmandu's residents have led to of air-noise pollution, traffic congestion and dearth of space. What is more important, the conflicts arising between the traditional and emerging human environment and the rapid changes in the basic urban system have disrupted the ecological balance.

It is clear from the past experience that the parallel growth of urbanization and commerce is inevitable, and hence, the priority of the KMC will be to create a city where economic opportunities are abundant. The effect of such an emphasis on the shape and character of the city's environment can be very serious and permanently damaging if adequate attention is not paid to the city's environmental concern. The search is, therefore, for a new pattern or system which can bring about a balance between urbanization on the one hand and environment on the other.

At present, the KMC is burdened with a number of serious constraints, including limited financial resources, inadequate administration machinery, shortage of trained manpower for development planning, and the need to produce immediate results and benefits. The process of consolidation of different development facets within the KMC is still underway, most of its time being invested

in the task of accommodating the ever-growing population with low investment per capita and per unit area. The Central government reserves the right to exercise control over the KMC's administration, which has caused serious setbacks to its effective functioning. For instance, the chief executive officer is appointed by the MLD and not by KMC due to which, the administrative machinery is more loyal to MLD rather than KMC. During exigencies which brought the KMC and the MLD in conflicting terms, the administration has supported MLD rather than KMC.

Thus, in discussing urbanization and environment in the context of KMC and the valley as a single unit, the situation may be summarized in the following terms:

- (i) The existing environmental conditions and projected future presents a very dismal picture and massive interventions are needed to redeem the situation.
- (ii) The ambitious economic development plans for the city needs to be supplemented by the simultaneous incorporation of bold steps to protect the environment.
- (iii) Further development of economic activities in the valley will lead to further urbanization which calls for defined and stratified plans to annul adverse effects on the urban environment, cultural environment and natural environment. These possibilities have been dealt with in other chapters on the development of CDS for the Kathmandu Valley.

9.2.4 Environmental Constraints to Growth

It has been a matter of serious debate among planners and policy makers to define the pattern of future growth of the Kathmandu City. However, it can be conclusively said that Kathmandu's development cannot be modeled on the pattern of big metropolitan cities like Bombay, Delhi and such other cities of South Asia, for the chief reason that both natural and financial resources of the valley and the nation at large, are limited. Unlimited expansion of Kathmandu may lead to serious resource-population imbalance pertaining to land, air, water etc., as much as to exhaustion of resources. Water resources have already become precariously scarce necessitating its import from outside the valley. The Melamchi scheme has become the only alternative though it weighs heavily on the nation's exchequer. It is most unbecoming that Kathmandu has become not only Nepal but South Asia's



Ceremonial roads in KMC are well maintained

model city of lopsided planning and management, where the population-resource ratio has reached critical proportions. Hence, the financial limitations on the one hand, and the need to conserve the environment of the cities like Kathmandu should be amply reflected in a balanced manner in the nation's development agenda.

9.2.5 High Social Costs of Environmental Disruption

The present system of Kathmandu's development plan is primarily based on production, commerce, tourism and administrative functions. New functions are emerging in the valley such as education, defense, security, health and export based industries. Instead of allowing all these to cluster and suffocate in one limited core area, it is more exigent to look for alternative locations, in the overall interest of the environment, as these are likely to strain the existing infrastructure. The wrong location of industries, even in the middle of settlement areas, have led to high social costs incurred in addressing the adverse impacts. There has been no quantitative analysis of the social costs as this is absorbed in the total cost of social services, medical subsidies, environmental improvement, conservation etc. While this process, to a certain degree can be ignored in some smaller cities, the case with Kathmandu, in terms of social costs and inadequate resources cannot be ignored. The increasing loss of cultural heritage assets and serious setbacks to the Melamchi water supply scheme, just to mention a few, are examples of the high cost that the city and the people are already paying. The tourism potential of the city should not suffer on account of environmental hazards stemming

out of promotion of misplaced and miscalculated economic functions.

9.2.6 Impacts of Urbanization on Environment

The process of urbanization will continue to accelerate its pace, and reach its zenith sooner than expected, If the random proliferation of industrialization is not discouraged in the Kathmandu Valley. The dual blow of urbanization and industrialization will severely affect the environment both man-made and natural. Irreversible damage will be inflicted upon its cultural assets which are the nation's pride and subject of global concern and

speculation.

Urbanization has also undermined and endangered the natural resources of Kathmandu. Large-scale sand mining in the rivers of Kathmandu has led to a total transformation of the physical contiguity of the rivers, leaving its ugly marks on the cultural landscape along the rivers. Juxtaposing the urbanization activities with environmental degradation in order to find pragmatic solutions, has never been attempted or accomplished so far. This must be embodied in the CDS report for Kathmandu, in addition to sectoral issues such as solid waste management, pollution of air, water, soil etc. The question of priority will arise. Will environment protection for Kathmandu at all costs be important or will commercialization and urbanization at a slightly lower level but with preservation of eco-systems be more important? Once again long-term social costs will have to be brought into focus, and the KMC will have to make a very critical choice to achieve the short-term needs and yet ensure KMC's long-term prosperity.

9.3. SECTORAL SITUATION ANALYSIS

The population growth, land use changes, and the economic scenario must be seen in the context of KMC's environment. The basic infrastructure in the Kathmandu are intrinsically related to its environmental quality. While many of the environmental problems faced by the valley have been contributed by inappropriate, inadequate and substandard infrastructure, there is mounting pressure on the existing infrastructure and is likely to deteriorate further.

Table 1: Sources of Solid Wastes

Source	Typical facilities, activities or locations where waste is generated.	Types of solid waste
Residential	Family dwellings	Food waste, paper, plastics, textiles, yard waste, glass, household hazardous waste
Commercial	Store, Restaurants, markets, office buildings, hotels, printshops, service stations, autorepair shops, etc.	Paper, cardboard, plastics, food waste, glass, metal, hazardous waste, etc.
Institutional	Schools, hospitals, government centers	As above in commercial
Construction and demolition	New construction sites, road renovation sites, etc.	Concrete, dirt, etc.
Industrial	Construction, fabrication, light manufacturing, etc.	Industrial waste, scrap materials, etc
Municipal solid waste	All of the above	All of the above

(Source, Surya M. Shakya)

9.3.1 Solid Waste Management

9.3.1.1 Background

Historically, waste management in the Kathmandu Valley dates back to B.S. 1958 corresponding to 1901 AD, when the first "Safai Adda" (cleaning office) was established. With the changing times and increasing urbanization, the proportion of solid wastes increased and so did its management problems. After a long period of localized solid waste collection, disposal and traditional recycling experimentation, a modernized concept of solid waste management evolved in B.S. 1960.

The concept of organized solid waste management was initiated on the basis of a report prepared by the World Bank dated 11th December 1970 (Flinhoff Report), concerning refuse collection in the Kathmandu Valley. Till then, besides street cleaning services, no proper refuse-disposal exercises had been envisaged or initiated. Wastes were thrown into the streets or collected in courtyards known as *Sagaal* (fertilizer ponds). There was no controlled landfill site and the entire refuse removed from the streets were tipped at the nearby riverbank.

Following the Flinhoff Report (1970), Prof. O. Tabasaran in 1976, studied the recommendations of the Flinhoff report and prepared another report entitled "Reorganization of Waste Management in the Kathmandu Valley", revised and specified for implementation of a definite project. On the basis of this report, a waste management concept was outlined which represents the foundation for the project agreement of 29th June 1979 between the Nepalese and German governments. GTZ, having been awarded the contract by BMZ, initiated the first organized solid waste management activities under the aegis of the Solid Waste Management

and Resource Mobilization Center (SWMRMC), Ministry of Local Development of His Majesty's Government.

B.S. 1995 witnessed major changes in solid waste management when a "Solid Waste Management National Council" was formed under the aegis of MLD and the role of SWMRMC diminished significantly after the formation of this national council.

Table 2: Characterization of Kathmandu's Solid Waste

Component	Year Percentage of Waste (By Weight)				
	1976 ¹	1981 ²	1985 ³	1988 ⁴	1995 ⁵
Organic Material	67.6	58.2	67.5	57.8	52.2
Paper	6.5	19.3	6.0	6.0	6.0
Textile	6.5	5.3	2.7	2.0	5.0
Metal	4.9	3.4	2.2	0.4	4.8
Glass	1.3	3.4	4.0	1.6	3.6
Plastic	0.3	3.6	2.6	2.0	5.4
Rubber/Leather	0.0	0.0	0.0	0.4	2.3
Wood	2.7	1.6	0.0	0.5	4.4
Bones	0.2	1.8	0.0	0.3	2.5
Batteries	0.0	0.0	0.0	0.1	0.6
Inert Materials	10.0	3.4	15.0	28.9	13.2

(Source: KMC)

9.3.1.2 Existing Situation

(a) Source, Types and Composition

With a volume of about 460m³/day and generation of 0.45kg per person everyday, solid waste is being managed through the method of dumping in sanitary landfill sites. Composting of solid waste is planned for the future and it is an encouraging step not only for extending the life of the landfill sites but also for minimizing the problems of leachate, surface water pollution and olfactory pollution.

(b) Hazardous Waste Suspected in Municipal Waste

In recent year, concern over the disposal of industrially derived hazardous wastes has spread significantly. In addition, there is a growing concern over the disposal of hospital waste, which may contain serious hazardous matter. This has further resulted in concern over the municipal waste, which is a virtual confluence of industrial and hospital waste. What is unknown is the fate of hazardous matter found in municipal solid waste (MSW) when products such as compost are produced from MSW or when MSW is placed in landfills that are not properly designed. The long-term effects, if any, on public health and the environment from the presence of these matter are yet to be ascertained and established.

landfill site for Kathmandu owing to the fact that the current landfill site at Gokarna is already closed. Efforts for identifying and developing a new site in the past few years have resulted in the consideration of many sites. However, frequent disruptions in the proposed landfill sites due to obdurate resistance from the local residents has caused serious setbacks.

A few years ago, HMG in close collaboration with KMC initiated the process of identifying potential landfill sites within Kathmandu Valley. In December 1998, the Ministry of Local Development (MLD) formed a task force to make a preliminary study of various sites, mainly Ramkot and Syuchatar. The Government selected Syuchatar, based upon the recommendations of the task force report. This site is also facing problems of protests by local residents.

9.3.1.4 Major Problems

Lack of Sanitary Landfill Site:

Choosing the correct location for a sanitary landfill in Kathmandu has been a time consuming process. The need has been long felt for the development of a new

Other problems include, but not limited to are

- Lack of Skilled manpower,
- Lack of legislative provisions to implement the national policies on solid waste management,

9.3.1.3 Response by Various Organizations

(i) Sanitary Landfill Site:	MLD is in the process of finding a proper landfill site within or outside the Kathmandu valley. Previous efforts to find a site within the valley has not yet been successful. MLD has also initiated the process of privatizing the solid waste management. For this, a committee has been formed and the private companies are being shortlisted.
(ii) Collection, Transportation and Final Disposal	KMC plays key role in collection, transportation, and recycling and final disposal. KMC's efficiency in solid waste management is being hampered by lack of sanitary landfill site.
(iii) Street Cleaning	KMC is active in cleaning the streets, public places and other historical settlements. For effective management, KMC has divided the city area into 5 sectoral areas. These areas are classified as (i) City core area, (ii) City area, (iii) Western city area, (iv) Eastern city area and (v) Northern city area. Necessary manpower and resources are allocated in accordance with the needs of these sectoral areas.
(iv) Sanitation Service	The drainage/sewerage maintenance is being partially carried out by KMC. For this, KMC has four jet machine vehicles. KMC generates some revenue from its services to private parties.
(v) Septic Tank Cleaning Service	KMC is engaged in cleaning the septic tanks from which substantial amount of revenue is generated. It is estimated that there are 34 thousand septic tanks in the valley. The collected waste is treated in Teku transfer station. Some private companies are also involved in this activity.
(vi) Public Toilet Service:	There are altogether 14 public toilet systems in KMC. The solid waste management department has contracted out 5 of them to private parties. From this alone, KMC earns Rs.1,34,101/- per month. Remaining toilets are being run by ward offices.
(vii) Manpower and Resource Mobilization	To manage the solid waste and other sanitation services, KMC employs 1300 staff at different capacities. There are in total 56 units of machinery comprising of tractors, tippers, road broomers, and water tanks. KMC has 12 containers for waste collection, 10 units of suction and jet machines and 3 vehicles for monitoring activities. KMC spends Rs. 13.5 crores annually in this department out of which Rs. 7.5 crores are spent on management and Rs. 6 crores are spend on infrastructure and maintenance.



Solid waste management is suffering due to lack of sanitary landfill site

- ❑ Lack of institutional development,
- ❑ Lack of space for maintenance of equipment, tools and vehicles,
- ❑ Lack of adequate number of transfer stations,
- ❑ Generally depreciated and obsolete equipment whose efficiency is less than 60%.

9.3.1.5 Conclusion

Solid waste management in the Kathmandu Valley involves four major activities and they are collection, transportation, recycling and permanent disposal. It is germane at this juncture to make an accurate assessment of the Kathmandu Municipality's successes and failures with respect to the landfill site at Gokarna. The achievements in terms of motivating and galvanising the public and managing the Gokarna Sanitary Landfill Site despite serious deficiencies in certain politically sensitive areas, deserves to be lauded. This good reputation of the Kathmandu and the Lalitpur municipalities, should be judiciously utilised as a radiant example of effective and efficient management of sanitary landfill sites under extreme adverse conditions.

To achieve this objective, it is vital to acquire the needed landfill sites at the earliest. In this context, HMG in general and the MLD in particular, must be requested to consider the following observations.

Introduce a long-term recycling plant:

MLD needs to provide for an effective site preparation, infrastructure development, development of effective social, political and legal tools and soliciting adequate funds.

A composting plant, which has been recommended as a necessity prerequisite for effective solid waste management on economic, technical and environmental grounds, can be established by KMC. The only task remaining is to fulfill the land requirement, which is approximately 200 ropanies. The pilot nature of the compost plant, as an integrated package for improved solid waste management, will have significant implications for future projects of this type in other municipalities, especially at Bhaktapur, Biratnagar, Birgunj, and so on.

9.3.2 Air Pollution

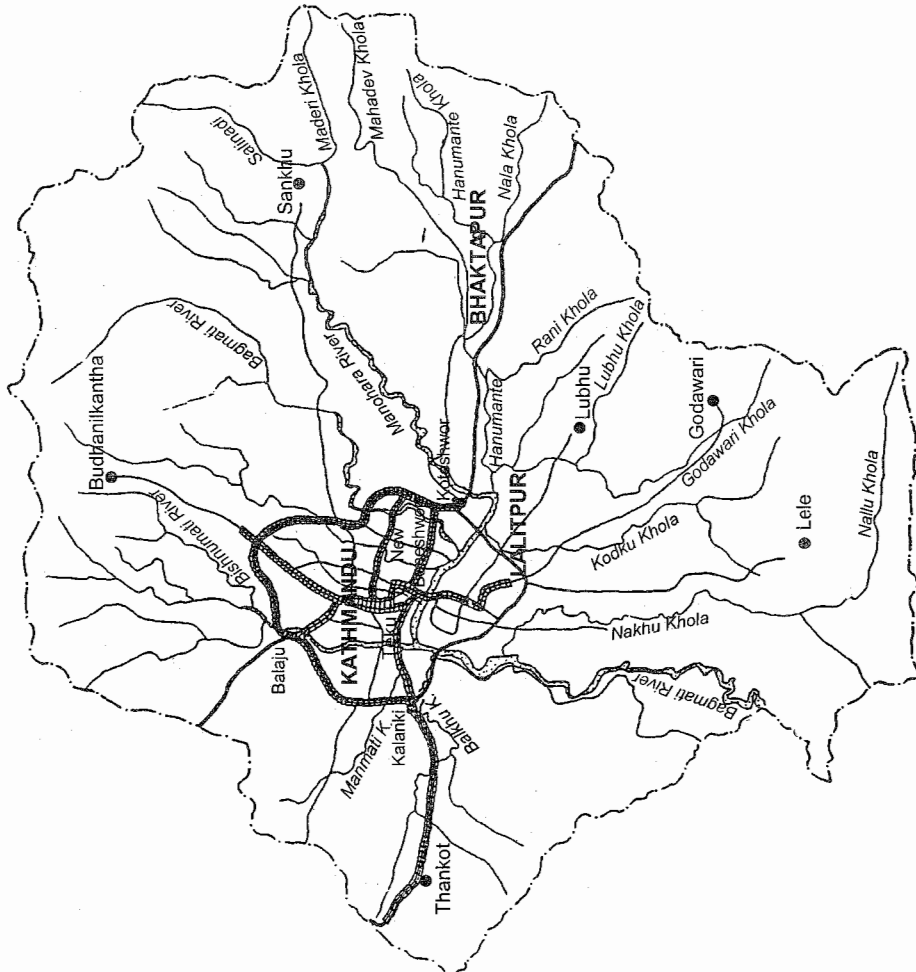
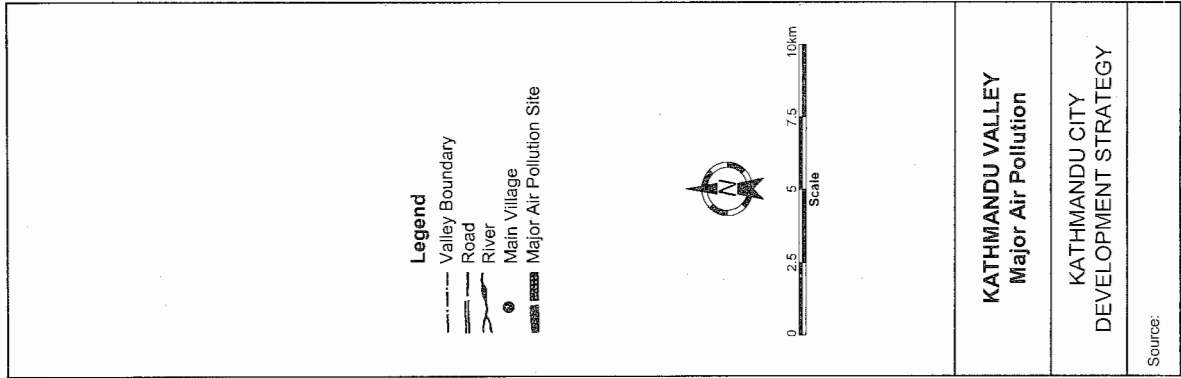
9.3.2.1 Background

The physical setting of the valley which has been aptly likened to a structural trough surrounded by the Mahabharats, that approach 2,000-2,500m, betrays a lack of what might be termed "natural ventilation" and the phenomena of "temperature inversion" that traps pollution particularly during the winter months. As a result, the capacity of the valley's air circulation to absorb and "blow away" pollutants released in the air is extremely limited.

Past three decades have seen a tremendous increase in air pollution mainly caused by the rapid increase in population accompanied by rise in number of vehicles, number of registered kilns and air polluting industry like the Himal Cement Plant. With the growth in the number of vehicles and industrial expansion, the consumption of coal and automotive fuel too has increased.

The comprehensive and systematic baseline data on ambient air quality is virtually absent for Kathmandu. The past studies were confined only to record the highest pollution level on high traffic roadside, industrial state and residential areas of Kathmandu. Another weakness of these studies was the limitation of data on various air pollution parameters, and extremely short-duration of the study, which is not enough to assess the magnitude and extent of air pollution of an entire year, and to obtain information on seasonal variations. Hence, the lack of information makes it difficult to present an actual status of ambient air quality. However, the existing information indicate that several pollutants frequently exceed the level which are considered safe for human health and the perceived ambient air quality is presumed to be rather

Map 2



**KATHMANDU VALLEY
Major Air Pollution**

**KATHMANDU CITY
DEVELOPMENT STRATEGY**

Source:

Table 3: Ambient Air Quality in Various Areas of Kathmandu Valley

Area	Particulate				NO ²		SO ²	
	TSP (Total Suspended Particulate matter)		PM10		24 hr. average	8 hr. average	24 hr. average	8 hr. average
	24 hr. average	8 hr. average	24 hr. average	8 hr. average				
Commercial Areas								
1) Heavy Traffic Areas								
Singh Durbar	303	532	142	144	37	45	49	72
GPO Area	380	682	137	157	11	24	37	33
2) Medium Traffic Areas								
Ratnapark	187	300	67	74	32	27	18	19
Lainchaur	228	367	103	100	19	25	17	38
Kalimati	391	734	135	154	19	35	77	71
Residential Area								
Maharajgunj	191	93	72	49	12	15	19	13
Naya Banesewor	200	50	113	31	13	14	25	62
Jaya Bageswori	228	341	112	116	49	38	29	119
Industrial Area								
Balaju	108	109	40	40	15	17	31	34
Himal Cement Factory (surrounding)	430	-	166	-	38	-	57	-

(Source: Urbair, 1996)

serious in Kathmandu Valley with significantly horrendous changes over the last decade.

9.3.2.2 Situation Analysis

Atmospheric visibility data from Kathmandu's Airport analyzed onwards from 1970 show that there has been a very substantial decrease in the visibility in the Valley since 1980. The number of days with good visibility (greater than 8,000 meters) around noon has decreased in the months from more than 25 days per month in the 1970s to about 5 days per month in 1992/93.

A World Bank study on air pollution in Kathmandu Valley (Urbair, 1996) show that particulate pollution is the most significant problem in Kathmandu Valley. Total TSP emissions per year amounts to 16,500 tons. PM₁₀ emissions are 4,700 tons/year. The main sources of particulate pollution are the brick industry (25% PM₁₀, 31% TSP); domestic fuel combustion (25% PM₁₀, 14% TSP); the Himal Cement Plant (17% PM₁₀, 36% TSP); vehicle exhaust (12% PM₁₀, 3.5% TSP); and resuspension of the road dust (9% PM₁₀, 9% TSP). WHO air quality guidelines (AQG), for TSP and PM₁₀ are often substantially exceeded. There have been measured 24-hour TSP concentrations above 800 mg/m³, while the WHO, AQG is 150-230 mg/m³.

Road traffic is an important source of air pollution in Kathmandu because of exhaust emissions, and the re-

suspension of particles from dust and refuse on the roads. A substantial portion of the vehicle fleet is in poor condition, overloaded and produces large amounts of visible emissions. Road traffic is quite dense from the city center to the ring road, about 3 kilometers from the center.

While agriculture is the primary mainstay of the people, substantial parts of the flat valley floor are used for brick production. There are more than hundred brick production facilities in the Valley, many of them situated in areas immediately south and east of Kathmandu City, within a radius of 5 to 10 kilometers from the city's center. Coal and other energy sources are used to fire bricks in these industries, creating significant air polluting emissions.

A cement plant is situated on the banks of the Bagmati river, about 6 kilometers south of the Kathmandu City center. The emissions from this plant affect the air quality in its neighborhood and may contribute to overall air pollution in the city, especially when there are southerly winds during the monsoon season. Domestic emissions from cooking, heating, and refuse burning also contribute to the pollution.

9.3.2.3 Fuel Consumption

Data are not available for every category of fuel consumed in the Kathmandu Valley. Motor diesel (HSD)

CITY DIAGNOSTIC REPORT

and kerosene (SKO) by volume are the most used liquid fuels in Nepal, followed by gasoline (MS) and fuel oil (FO).

The quality of liquid fuel is governed by established specifications. Maximum -allowed sulfur contents are : 4 percent in fuel oil, 1 percent in motor diesel, and 0.2 percent in 93-octane gasoline. Maximum lead content is 0.56 g/l in 83-octane gasoline, and 0.80 g/l in 93-octane gasoline. The actual contents of sulfur and lead are not known, and may be considerably less than the maximum allowed.

Fuel-wood consumption data for Kathmandu Valley is given in Table 5. Because of diminishing resources, fuel-wood consumption has declined by close to a factor of 2 between 1983 and 1990. Increased use of kerosene and agricultural waste has replaced fuel-wood as the major domestic fuel.

Coal has replaced fuel-wood in the brick industry. In the early 1980s, fuel-wood and coal were almost equally used in the local brick industry. At present the ratio between coal and fuel-wood consumption is about 7 to 1 (NESS, 1995).

Table 5: Fuelwood consumption, Kathmandu Valley.

Year	100 t/yr	Year	100 t/yr
1983/84	35.9	1987/1888	21.2
1984/85	40.0	1986/1989	23.7
1985/86	23.7	1989/1990	20.0
1986/87	29.3		

(Source: Devkota, 1992)

Brick and cement industries use mainly coal. Table 6 shows the available data on coal consumption. The dominant coal consumer in the Valley is the Bull's trench kiln industry. Although data for past coal consumption in the Bull's trench kilns are not available, coal consumption has most likely increased substantially, especially since it has almost completely replaced fuel-wood.

9.3.2.4 Industrial Emissions

Industrial growth has been very strong in Kathmandu Valley, especially in the last decade. In 1991/92, there were approximately 2,200 industrial establishments with more than 10 employees as compared with 1, 504 industries in 1986/87.

Table 4: Liquid fuel consumption (100 kl/yr) in Kathmandu.

Years	Gasoline MS	Motor diesel HSD	Kerosene SKO	Light diesel oil LDO	Aviation fuel	Fuel oil FO	LPG
1975/75	10.5	30.8	32.2	9.4	11.2	1.8	0.6
1980/81	11.5	57.3	37.3	10.3	16.8	3.0	0.7
1985/86	20.4	80.4	62.2	8.3	23.2	15.8	2.6
1990/91	24.6	135.6	97.7	3.0	19.0	6.3	7.4
1992/93	28.3	156.9	131.1	0.3	28.1	20.3	?
Change (%)							
1980-93	+146	+174	+247	+100	+67.3	+576	>

(Source: Gautam, 1994).

Table 6: Coal consumption in the brick and cement industries, Kathmandu Valley (tons/yr)

	Bull's trench kilns	Chinese (Hoffman) Kilns	Himal Cement factory
1975/76		2,950	
1970/71		3,300	
1975/76		2,950	
1980/81		1,690	6,400
1985/86		2,200	5,860
1990/91		2,440	7,980
1992/93	21,000	41,000	17,100
1993	43,800		
1994	54,800		

Sources NESS, 1995

Devkota, 1992 Shrestha and Malla, 1993

Brick and cement industries are the main industrial polluters. The number of registered Bull's trench kilns has increased markedly from 102 in 1984 to 305 in 1993. The rise in the number of smaller industries represents an increase in the combustion of such fuels as fuel oil, HSD and agricultural refuse, as well as some process emission. The exact amount of increase in such industrial combustion and process emissions is not known. It is believed to have less significance for general air pollution than the brick and cement industries, but it has led to increased pollution exposure.

9.3.2.5 Road Vehicle Fleet

(Details in Transportation Section)

9.3.2.6 Air Pollution Measurement

Non-scientific observations, especially in the dry season, indicate the following significant air pollution problems:

- very high roadside air pollution, especially particles and odor, due to high emission from vehicles of all types, and re-suspension of street dust and litter;
- black smoke plumes from brick kilns;
- generally low visibility, especially before noon, and
- one large point source, the cement factory, has highly visible particle emissions.

The air pollution concentrations have only recently been directly measured. The shortness of measurement periods at each site limits the accuracy of the measurements. It does, however, provide a picture of the variation in space and time. In 1996, measurements were taken by the Environment and Public Health Organization (ENPHO), (Karmacharya et al., 1993), the KVVECP study (Devkota, 1993), the Hydrological and Meteorological Services (HMS) (Shrestha, 1994), and by NESS (1994).

(a) TSP concentrations

The ENPHO measurements showed a maximum of 555 mg/m³ and an average of 308 mg/m³ at 9 sites representing Central Kathmandu City air. At 11 roadside sites, the measurements showed a maximum TSP of 2,258 mg/m³ and average of 1,397mg/m³. These values are based on a 9-hour average and only one sample was taken at each site. The 2,258 mg/m³ maximum in the

ENPHO measurements represents an estimated 24-hour average value of about 1,100 mg/m³.

HMS measurements indicate an annual average concentration around 180 mg/m³ at Babar Mahal, 15 meters above ground level. This is more than twice the WHO AQG. At more exposed sites, such as heavily trafficked area and around the Himal Cement Factory, the annual average would be much higher. At KVVECP stations, the WHO AQG values of 150-230 mg/m³ are exceeded by 70 percent for the lower limit, and by 50 percent for the higher limit. No measurements have been taken in the brick kiln areas. These measurements are pointers to a severe TSP pollution problem in the Kathmandu Valley, and in Kathmandu City in particular.

(b) PM₁₀ concentrations. PM₁₀ measurements taken by NESS representing one-hour average samples during daytime at 9 sites, revealed values up to 2100 mg /m³ with an average of 800 mg /m³. The ratios between measured PM₁₀ and TSP are given in Table 7. The ratio 0.70 is in the range typically found at sites that are not exposed to a high degree of re-suspension. The low PM₁₀ ratio for the sites (0.4-0.5) indicates that the re-suspension pollution is high.

(c) SO₂ concentrations. Results from the KVVECP measurements indicate that SO₂ concentration between September-December 1993 were low. The Kalimati (traffic site) and the Jaya Bageshwori (residential) are exceptions where the SO₂ concentration was found to be 225 mg/m³. KVVECP measurements indicate that although SO₂ concentrations do not plague the Kathmandu area, the point sources may create high local concentrations. No measurements have been made in areas exposed to brick kiln emissions.

Table 7: Ratios between PM10 and TSP

KVVECP	Based on	
	Average Concentration	Max. Concentration
Traffic sites	0.39	0.34
Residential sites	0.48	0.48
Industrial sites	0.47	0.51
Himal Cement site	0.39	0.35
Tribhuvan University	0.70	0.52
(Background sites)		
ENPHO		
Traffic sites	0.21	0.18-0.25
General sites	0.29	0.23

Source: KVVECP, ENPHO.

(d) NO₂ concentrations. KVVCEP measurements indicate that NO₂ concentrations were generally low, and well below the 24-hour WHO AQG (150 mg/m³). The Jaya Bageshwori site had elevated NO₂ and SO₂ concentrations pointing to a local source.

(e) Visibility. Observations point to a clear decline in visibility in Kathmandu Valley in the dry season (November-March). In the monsoon season, visibility appears to be unaffected. Visibility reduction is mainly caused by particles (aerosol) of the size range comparable to the wavelength of light, e.g. 0.2-0.5 m.m. diameter. These are combustion aerosols and contains hygroscopic particles, such as particles containing sulfate (SO₄), condensed organic compounds, etc. Thus, the morning fog in Kathmandu is caused by water vapor absorbed in the hygroscopic aerosol.

The relative humidity in Kathmandu Valley is on an average, over 70 percent throughout the day in the monsoon period (June-September). Even so, day-time visibility is not reduced in these months, indicating that the concentration of hygroscopic aerosol is rather low in the monsoon season.

During the winter months, the relative humidity falls below 70 percent between 9:00 to 10:00 a.m.. However, visibility is reduced throughout the morning. It improves gradually until 12:00 to 1:00 p.m. at which a typical urban aerosol absorbs water vapor gradually from a relative humidity of 30-40 percent. Sulfate particles have a deliquescence point of 72 percent, which means that the relative humidity must approach 72 percent before such particles grow substantially and cause visibility reduction. Therefore sulfate particles may be a part of the visibility-reducing aerosol. But other types of aerosol, e.g. organic aerosol, make substantial contributions.

(f) Total emissions. An emission inventory covering all source categories was worked out for Kathmandu

Valley. It contained TSP and PM₁₀, which is presented in table 8. The inventory covers main source categories. The emissions from road vehicles are relatively reliable and are based on fuel consumption, traffic activity, and emission factors. Emissions from industrial and commercial activities, other than brick combustion, are based on figures and emission factors provided by Shrestha and Malla (1993). Emissions from Bull's trench brick kilns have been estimated by NESS (1995). Chinese kiln emissions are based on coal consumption and on estimated emission factors. The Himal Cement factory too has added emission figures which are exceptionally high. (Bhattarai, 1993).

9.3.2.7 Air Pollution Impacts

The damage caused by air pollution has many ramifications: human health, physical material, vegetation and crops, buildings and monuments, visibility reduction and tourism. In theory, the extent of these damages can be assessed. In practice however, the absence of empirical dose-effect relation makes this assessment difficult.

Cost estimates of morbidity are more reliable than the estimates for mortality. These consist of foregone wages and costs of medical treatment. The costs of morbidity resulting from PM₁₀ were assessed specifically for Kathmandu Valley. Morbidity costs are valued at about NRs 180 million, and total health damage at NRs 210 million (with lost salary as the value of statistical life). This valuation of damage approach to human health tends to be underestimated, as suffering due to illness or premature death is not included.

An analysis of the marginal impacts of emission-increase and reduction by source categories, showed that the health impacts are mostly affected by developments in the transport sector, while domestic sources and brick manufacturing rank second in this respect.

It is difficult to value the damage to Kathmandu's cultural assets such as its temples and monuments. However, there is a good reason to believe that tourism has been negatively affected by pollution. The annual revenue from tourism is US\$ 60 million. If we assume a reduction of 10 percent, and if the reduction in terms of its impact on tourism is proportionally of the same magnitude, the total economic loss related to pollution can be estimated at roughly Rupees 0.5 billion.

Table 8: Main Emissions Sources in Kathmandu (1993)

TSP		PM ₁₀	
Himal Cement	36%	Brick industry	28%
Brick industry	31%	Domestic fuel	25%
Domestic fuel combustion	14%	Himal Cement	17%
Road resuspension	9%	Vehicle exhaust	12%
Vehicle exhaust	3.5%	Road resuspension	9%
Others	6.5%	Others	9%

Source: Urbair, 1996.

9.3.2.8 Response

There has been a growing public awareness concerning air pollution problems. The various activities that have been undertaken by various organizations are listed below.

9.3.2.9 Institutions Involved

Presented below is a list of the institutions responsible for air pollution control.

(i) Coordination

- ❖ HMG/National Planning Commission (NPC)
- ❖ Environment Protection Council (EPC)

Agency	Program	Impact	Remarks
H.M.G.	Various policy directives and action programs such as Umbrella Legislation, formation of EPC and MOPE etc.	Significant	H.M.G's efforts in dealing with air pollution problems are considered significantly result oriented.
EPC	Vehicular Emission Control Program 1995-1997	Significant	Nepal's first environmental standard in the form of emission standard was implemented. The standard was 3% CO for petrol vehicles and 65% H.S.U. for diesel vehicles
MOI	Industrial emission standards, industrial location policies, EIA guidelines for industries.	Significant	Valley has been benefited from these policies.
Dept. of Road	Road extension and maintenance	Less significant	Road conditions are extremely poor and no extension works have been carried out for past many years.
KMC	Road widening and overhead bridges in core-areas	Significant	Successfully implemented road widening project and overhead bridges construction in Tundikhel area.
MOPE	EIA implementation, displacement of Vikram Tempos, vehicle import policies, emission standards for vehicles etc.	Significant	Import of vehicles without meeting emission standards have been completely banned including 2 stroke motorcycles
NPC	Various plans have been addressed in 9 th plan	To be seen	9 th plan emphasises or pollution control measures, specially for Kathmandu valley
Donors	World Bank-Urbair (1996) USAID-Electric Vehicle Program UNDP-Vehicle Emission Control Program(1995) DANIDA-Electric Vehicle Program and Cleaner Production Program for Industries (only notable programs are listed)	Significant	Most of the multilateral and bilateral agencies have shown high interest in air pollution control program for Kathmandu Valley.
Home Ministry	- Vehicle inspections - Enforcement of emission Standards	Significant	Bold steps have been initiated in import policies regarding cars and motorcycles.
Dept. of Transportation	- Banning of imports of polluting vehicles	Significant	Polluting and old vehicles are prevented from imports.

(ii) Monitoring

- ❖ Department of Hydrology and Meteorology
- ❖ Royal Nepal Academy of Science & Technology (RONAST)
- ❖ HMG/Bureau of Standards

(iii) Emissions Inventories

- ❖ Department of Hydrology and Meteorology
- ❖ Department of Transport Management
- ❖ Royal Nepal Academy of Science & Technology (RONAST), Naya Baneshwor, Kathmandu
- ❖ Ministry of Population and Environment

**(iv) Legislation**

- ❖ HMG/Ministry of Law

(v) Enforcement

- ❖ Department of Traffic Management
- ❖ Kathmandu Valley Traffic Police
- ❖ Ministry of Population and Environment

9.3.2.10 Conclusion

Despite some notable achievements in coping with air pollution problems, the overall progress has been slow. A number of constraints are responsible for this slow progress, of which the most important are as follows:

- ❖ Lack of information and comprehensive data on existing air pollution problems and their effect on health and the ecosystem,
- ❖ Lack of environmental law and inadequate sectoral legislation for air pollution control including administrative procedures,
- ❖ Lack of perspective plan in order to manage air pollution problem,
- ❖ Lack of trained manpower and facilities including laboratory equipment to deal with air pollution problem,
- ❖ Lack of programmes to facilitate people's participation,
- ❖ Lack of comprehensive land use policy and plan,
- ❖ Lack of industrial emission standard and vehicular emission standard of pollutants other than CO, and smoke,

9.3.3 Industrial Pollution**9.3.3.1 Introduction**

Management of industrial environment in Kathmandu Valley deserves close attention not only because it has been neglected so far, but also because of the fact that industries will continue to grow in the coming years. The small-scale industries such as carpets and garments will grow unhindered if not checked in time. The growth of these small industries however can be quite unpredictable as they depend upon many factors. For instance, there was a 300 percent growth of carpet industry inside valley between the year 1987 and 1991.

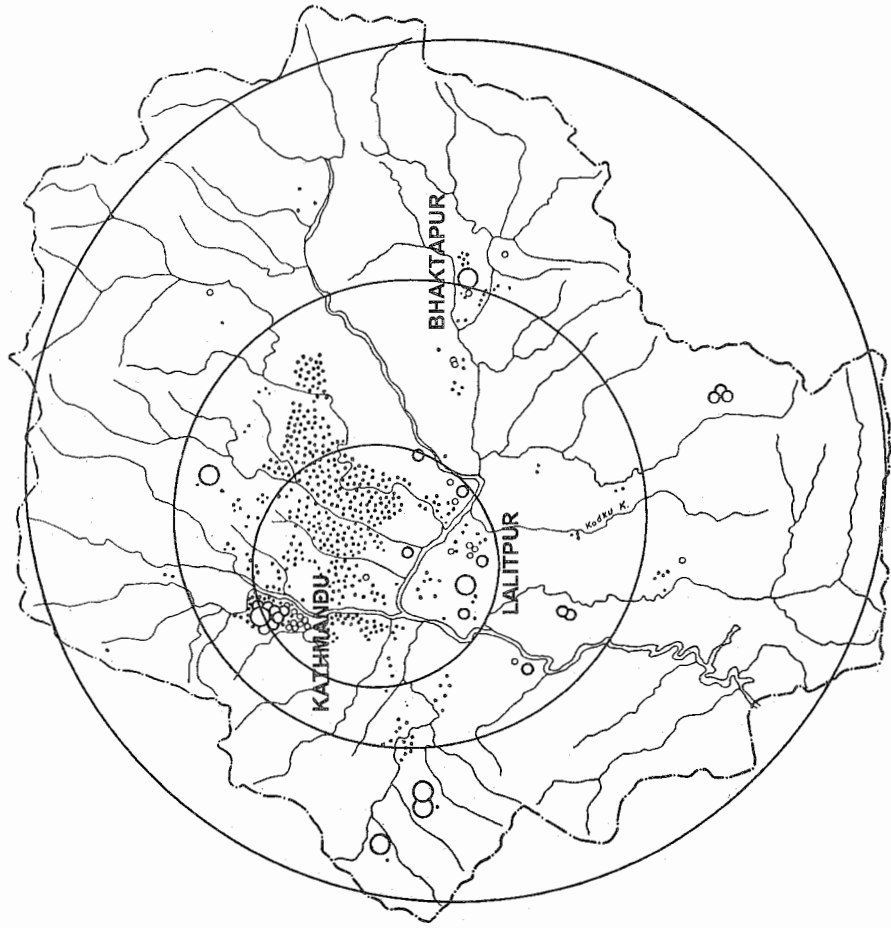
The environmental problems stemming out of these industries, irrespective of their sizes, will assume unmanageable proportions as they proliferate over the years. Till date, there are no guiding principles to monitor these industries in terms of their location, outputs and effluent. There is no effective national environmental policy with an intrinsic doctrine for industrial pollution control which has resulted in a total dearth of pollution control and monitoring mechanism.

The problem now is one of striking a balance between industrial development and natural and heritage conservation. Unregulated growth of industries in a haphazardly growing urban environment is likely to take a heavy toll of the valley's natural and cultural assets. As such, the rivers are highly polluted and urban growth has almost completely inundated the heritage

Map 3: Water Polluting Industries

Map 3

<p>Legend</p> <ul style="list-style-type: none">• Carpet Industries○ Moderately Water Polluting Industries○ Highly Water Polluting Industries○ Less Water Polluting Industries	
KATHMANDU VALLEY Water Polluting Industries	
KATHMANDU CITY DEVELOPMENT STRATEGY	
Source:	



monuments. While industrial growth is not solely responsible for this pathetic state of affairs, it has severely impacted the urban housing and related services. The time is drawing near when the overall environmental deterioration and degradation in the valley will adversely affect tourism, which is one of the major economic activities in the valley. The issues are highly inter-related because the location of one industry attracts another, and the dumping of effluents by one industry encourages another to follow suit.

The future can be safeguarded only by coming to terms with the changing environmental reality, and striking a reasonable balance between development and the valley's limited natural resources. The promotion of economic and social objectives, and imposing regimentation to protect the environment, must be made the bedrock of future imperatives.

9.3.3.2 Existing Industrial Development Situations

(a) Concentrated Growth

Concentration of industries within a limited space with limited natural resources is indeed a matter of grave concern. The booming carpet industry in the small-scale sector, in the Kathmandu Valley, has demonstrated a high degree export-orientation. Even Lalitpur and Bhaktapur are of lesser relevance as compared to Kathmandu where the entire industry is concentrated. There is need to disperse some of these small-scale industries to other parts of the country, so that pollution loads and premiums from these industries are shared by other regions too. This would ease the valley from the pressure of population growth and would also reduce the pressure on environmental resources. Industries such as metal craft and wood craft, based on skilled labor might be difficult to disperse to other areas, but other industries which are resource based and are operating through imported raw material do not have to be located in one particular place. Obviously the government will need to plan the support systems and transportation facilities needed for such industries in well stratified industrial areas in other parts of the country.

(b) Lack of Location Guidelines

To date, there are no guidelines regarding location of industries. One finds industries operating in the middle of high-density urban areas, tourist spots, commercial areas and even on prime agricultural land. Convenience of the owner has become the single most important factor for location. It is therefore becoming apparent that

because of their economic dependence, the people are left with no options but endure the burden and adverse impacts since relocation or stringent control might tantamount to closure or loss of job.

(c) Magnitude of Industrial Pollution in Kathmandu

The magnitude of pollution in terms of level, pollutants, and areas of impact are difficult to assess mainly due to lack of both qualitative and quantitative data on emission levels of individual industries.

It has been observed that the effluent volume from most industries are not large but the concentration of pollutants are remarkably high. The pollution of Bansbari Khola (river), Bishnumati and Bagmati rivers are notable examples of river water pollution from point source of industrial wastes.

Air polluting industries include Chobhar Cement, Godavari Marble, Brick and Tile kilns. The effect of air pollution on human health can be seen from the prevalence of high frequency of respiratory diseases among factory workers.

The detailed impacts of industrial noise pollution among the factory workers are difficult to assess. However, workers of garment, cement and metal craft industries have reported gradual impairment of hearing power.

Industries as point sources of pollution contribute significantly in the overall deterioration of environmental quality inside the valley. A survey of some of the industrial plants in the three major urban centers in Kathmandu Valley shows the following major problems associated with industrial pollution.

- ❖ H. M.G. has not yet formulated "standards of industrial discharges" which are important for controlling point source of industrial pollution.
- ❖ No effective zoning regulations and hence industries can be located anywhere at the convenience of the owners.

Due to these existing administrative and institutional inadequacies, following problems are prevalent in industries. Such as:

- ❖ Lack of waste treatment plants/devices in operation
- ❖ Inadequate management of drainage and dumping facilities
- ❖ Inadequate provision of physical facilities to control indoor/outdoor pollution

Other findings:

- ❖ Medium and large scale industries are dominantly the point source of pollution
- ❖ Most of the industries are found to be manufacturing types, followed by a few processing types. Therefore, higher chances of pollution by manufacturing industries as these industries are relatively more liable to cause environmental pollution.
- ❖ Industries as point source of pollution is drawing much more attention due to the fact that every body can readily react to its ill effects. The various problems of urban environment in Kathmandu, such as unmanageable solid wastes, polluted river systems unsuitable for aquatic life, and unhealthy air in the atmosphere has been evidently increasing with the industrial growth since the 1960s. The reason for linking industries with environmental pollution is to a great extent reasonably valid due to increased demand on transportation, energy and natural resources. Industrial sector, hence, is to be considered more seriously as this sector is the point source of pollution.

9.3.3.3 Effects of Industrial Growth**(a) Effects on the Natural Environment**

Industrial development in the Kathmandu Valley is causing environmental degradation in the following manner:

- ❖ Worsening water quality in Bagmati and its tributaries
- ❖ Bad odors and degrading air quality
- ❖ Excessive mining of construction materials
- ❖ Loss of agricultural land
- ❖ Soil pollution from industrial and household wastes etc.

Apart from these general issues, effects of industrial wastes on the natural environment of Kathmandu valley are other concrete cases of pollution, which are continuing as a result in the absence of proper environmental management and administration.

(b) Energy Consumption

The industrial development and environmental issue is much wider and deeper because, it involves the fundamental rearrangement of energy use patterns by industries. A better understanding of new technologies which are less polluting and are more energy efficient is needed. Industrial growth will have to be examined in a broader perspective based on various parameters which support the functioning of an industry. For example, the

impacts of fuel-wood consumption inside the valley on air quality. Hence, the importance of analyzing energy requirements and consumption within the framework of specific socio-economic parameters which are valley specific in addition to the perspective from regional and national supply capacities become important.

High per-capita energy consumption inside Kathmandu Valley compared to other cities in the country is mostly from the industrial sector. The dominant pattern of economic growth inside Kathmandu Valley is inter-linked with its disproportionate consumption of energy and environmental resources. In general, Kathmandu Valley's industries are dominantly resource based and not skill-based.

9.3.3.4 Major Issue**Carrying Capacity and Industrial Growth**

Given the condition that Kathmandu will continue to adopt a liberal policy towards industrial growth, the increase in small and medium size manufacturing units, if not large-scale industries, will almost double in the next 20 years. The growth of these industries is a threat to normal life in the Valley and hence underscores the need to raise the following vital questions.

- ❖ How much can H.M.G. invest in infrastructure development in the next twenty years?
- ❖ What are the solutions to the water supply needs bearing in mind that Melamchi alone is the solution at present?
- ❖ Does KMC want to maintain the environmental integrity of the capital city? If in the affirmative, who sets the standards?
- ❖ What is the better option for Kathmandu's development, a mixed economy or prioritized tourism economy?

In a situation, where the existing basic facilities for normal urban life (by Nepalese standards) are not adequately available, if population and industries continue to increase, the conditions of urban services and urban quality of life in Kathmandu are likely to deteriorate even further.

9.3.3.5 Realistic Approaches Towards Future**(a) Environmental Management Long Term Perspective**

Because of various reasons, including the presence of "agglomerate economies" and the absence of economic alternatives such as, tourism and agricultural potentials

which have not been fully considered, environmental concerns received very little attention in the past. The interest was directed towards employment opportunities which Kathmandu could generate through unhindered industrial expansion. As is evident today, the impact of deteriorating environment has been mostly heaped on the poor and hence the need to manage the environment for the benefit of the poor is crucial.

The essential task is to relocate the industries outside Kathmandu in areas where they are most suited. This must be achieved because, Kathmandu Valley's development must be brought into line with its ecological reality.

(b) Improvement of the Industrial Infrastructure as Groundwork for Development in Relocating New Industries

First of all, for future industrial development outside Kathmandu, appropriate sites need to be identified for locating polluting and such other industries which are likely to be detrimental in the environmental interest of the valley. After identifying such sites considering the long term environmental impacts, and availability of natural resources such as water, construction materials, land for future expansion etc., roads and drainage facilities including other support systems need to be developed. The cost of such initial development activities could be far less than the cost of remedial measures to combat environmental problems and loss of natural resources on account of industrial growth and resultant environmental degradation. In addition, creation and improvement of hydropower in such new industrial sites could help in effective utilization of energy which at present is heavily dependent on biofuels and fossilfuels.

The advantages of relocation of industries are tremendous, such as:

- ❖ Water needs can be improved inside Kathmandu;
- ❖ Population pressure will be reduced;
- ❖ Exploitation of natural resources could be redirected from Kathmandu's diminishing sources to fresh and under utilized sources;
- ❖ Dispersion of pollution and profits to other areas of the sub-region;
- ❖ Quality of life and hence tourism could both improve.

(c) Land-Use Plans and Zoning Regulations

In the absence of an effective land use regulation and necessary legal provisions, new industries will continue to congregate in core areas and will remain unguided.

To avoid such situation, land use regulations and legal provisions should be introduced.

(d) Pollution Control

The most urgent need in industrial management plan will be to identify existing industries with high pollution loads near the residential areas as the first step in pollution control process. Pragmatic and practicable pollution control measures need to be developed without requiring major treatment facilities. Major polluting industries inside Kathmandu have not received due attention both in terms of socio-economic parameters and specific environmental parameters. The lack of socio-economic and environmental perspective runs through all the industries.

(e) Sectoral Responsibilities and Limitations of KMC

There remains a serious lack of collective efforts in environmental administration although a lead agency in the form of MOPE exists. Individual agencies are responsible to a large extent for the management of industrial environment such as Nepal Water Supply Corporation for assessing water demand and supply potentials, MLD/KMC for solid and liquid waste management, Department of Roads for assessing road network etc. The National Planning Commission should not only provide appropriate guidelines and formulate government policies towards industrial development, it should also be responsible for designating appropriate responsibility to appropriate sectoral agency with time-bound and result-oriented plans and programs. Once an appropriate policy and legal framework has been established to formalize the individual sectoral agency's role and responsibility, a campaign should be launched to enhance awareness among the public, the municipality employees, local NGOs etc. If the sectoral agencies are unable to meet these targets, they should be made accountable for their failure, and necessary actions could be taken forthwith.

As stated earlier, in the absence of collective responsibility, mandated to manage the overall environmental problems of the valley, responses to environmental issues have remained undefined. The actual cost for meeting the Industrial resource demands have not yet been assessed. The municipalities are totally incapable of specifying even basic ordinances such as its own anti pollution requirements.

In such a situation, lead govt. agencies such as MLD, DOI, MOPE, etc., must come together and assess the industrial environment. Municipal authorities can only

lend their cooperation to other central government agencies in implementing their policies. Municipalities on their own are not equipped with manpower and financial resources to make significant contribution to proper industrial management.

Since the sectoral agencies are expected to nurture and foster industrial management, they will need to create an entirely new system based on the aforementioned observations. This new system will need to take into account many parameters for allowing new industries to operate, such as:

- ❖ Location and its intended use (based on recommended land-use categories by previous studies on Kathmandu Valley, even if they are not legally binding at present)
- ❖ Availability of natural resources such as water, land, construction material etc.
- ❖ Amount of waste that are expected to be generated and its management capabilities at present and future possibilities.
- ❖ Consumption and availability of energy etc.

These parameters, including the socio-economic impacts should be studied through an EIA process.

(f) EIA Procedures

The development of EIA guidelines for establishing new industries in the country, being undertaken by MOPE, provides an excellent institutional step in industrial management and pollution control, if implemented successfully. The problem of pollution being handled by the MOPE is likely to improve pollution control. The Department of Industry should actively support industrial pollution control through EIA procedures.

(g) Shifting Priority from Industry to Tourism

Almost everybody knows the importance of tourism to Kathmandu's economy. The gradual loss of tourist attractions which are equally evident is a matter of serious national concern. But, under existing conditions of free industrial development and host of other support activities to run the industries, tourism development and its future potentials have been totally marginalised. Hence, Kathmandu is becoming more and more disorganized, filthy and polluted, and less tourism-friendly. Industries and tourism cannot coexist in the same place if the infrastructure is not reshaped in a planned manner. Unless immediate remedial and redemptive actions are taken, both the sector will eventually suffer.

Shifting priority from industry to tourism makes much sense because, the tourist and cultural values extant in Kathmandu today, which took several hundred years to develop, can never be replaced by industrial development. The simple logic is, the cultural monuments of Kathmandu which have stood the ravages of time, cannot be replicated at any other place in their pristine grandeur and splendour. Comparatively, industrial establishments can be easily shifted to any other location without incurring any kind of loss to the nation. The tourism potential of the city must be tapped and enhanced properly to ensure better economic growth in the country.

(h) Sustaining Over-Consumption by Industries

Industrial management in the Kathmandu Valley requires rationing of the limited natural resources. The forests and river water plays a significant role in bearing much of the ambient pollution loads. Hence, preservation of forests in surrounding hills in addition to reforestation efforts are expected to become very important.

Kathmandu Valley, with roughly ten percent of the country's population, consumes an incredible amount of energy and resources compared to the other urban centers. The valley's unplanned industrial growth has generated so much congestion, pollution and population density that the environmental condition is dismal in most of the core areas. Kathmandu's share of resource consumption is evidenced from the number of vehicles plying inside the Valley compared to the national average. Resources that could not be imported at reasonable cost are being extracted locally, and forest products are being brought from outside the valley. Mining of stones and sand is rampant because the entire landscape is now dotted with buildings of all shapes and sizes. But the prevailing situation both in terms of environmental management practices and investment requirements will not suffice in future for artificial compensation of natural resources.

The water resources of the valley have suffered tremendously in the past 20 years. It is likely that during the coming years, the situation will further deteriorate and the valley will face severe water shortages. The condition of other natural resources such as air and soil which have otherwise been perennial and permanent have suddenly become effervescent. The need therefore is to adopt a holistic environmental perspective in industrial development. The current management challenges lie in the

regeneration of these resources through various measures which are feasible.

9.3.3.6 Conclusions

The following conclusions have been drawn from the present situation which is characterised by industrial growth and environmental degradation.

(a) Large Scale Industries

Kathmandu Valley is not suited for large-scale industrial establishments because -

- ❖ Water supply is limited;
- ❖ Air circulation is not sufficient;
- ❖ Limited carrying capacity of existing infrastructure;
- ❖ Limited natural resources and space.

Hence Industrial management and development strategy should be based on promoting small scale, high value added and non-polluting industries. Highly polluting industries should be discouraged and gradually phased out in the next 20 years. They must be located where environmental costs are minimum and have less negative impact on local population.

(b) Medium Scale Industries

The industries which require larger space and which rely heavily on environmental resources and intend to expand further, should be discouraged, and ways to relocate them outside the valley initiated.

(c) Small Scale Industries

Small-scale non-polluting industries should be encouraged inside the valley. Ideally suitable are cottage industries which are skill-based and labor-centric. Establishment of industrial zones to suit the environmental and urban characteristics of Kathmandu is a major challenge.

9.3.4 Water Pollution

9.3.4.1 Introduction

The Status of Water pollution as available from studies done so far revealed the poor state of Kathmandu valley's environment. The pollution of municipal piped water supply in terms of bacterial parameters is uniformly higher than WHO recommended standards. In some

cases the situation of chemical pollution is within acceptable limits except of heavier iron concentration in some reservoirs and treatment plants. Ground Water quality in stone spouts, dug wells and tube wells is also poor with varying levels of bacterial contamination. Surface water is both chemically and biologically polluted. Researches have proved that this is mainly due to raw sewage, industrial effluent and solid waste.

9.3.4.2 Existing Situation

(a) Tap Water

In case of tap waters, total coliform count in most of the samples is high, which indicates contamination at the distribution level. The studies carried out in three sections of Kathmandu city show that pollution levels vary with sources of water supply. The different levels of pollution levels are shown section-wise in Table -9.

(b) Stone Taps

Stone taps play a very important role when there is scarcity in the piped water supply in Kathmandu City. It has been found that the average conductivity values of all stone taps are higher than permissible value of 400 ms/cm except in few isolated cases. The pH, hardness, chloride, iron content etc, are also not in conformity with WHO standards.

The Nitrate iron concentration of most of the samples measured in the past have shown higher than permissible values. The higher values in nitrate iron concentration may be due to the excessive use of chemical fertilizers. Leachate from solid wastes may also have increased the concentration of nitrate. A study made by ENPHO/DISVI (1989-1990) on some stone taps of Kathmandu city also shows higher concentration of nitrate iron in most of the stone taps. The total coliform count in most of the stone taps are higher than the permissible value.

If a comparison is made between quality of water from stone taps and piped water supply system, it will be found that both are polluted in terms of coliform count. If chemical parameters are compared, iron concentration in the water from stone taps are not as high as in piped water, whereas concentration of nitrate iron is much more higher in the water from stone taps.

(c) River and Groundwater Pollution

This is the most serious environmental problem in Kathmandu. The major causes of river and groundwater pollution are discharge of very large volumes of untreated domestic sewage and industrial effluent into

Table 9: Water Quality of the Public Taps in Kathmandu City.

SECTION 1 (Kalimati Area)				
PARAMETERS	NO.OF SAMPLES	MAXIMUM Mg/l	MINIMUM Mg/l	AVERAGE Mg/l
Chloride	39	89.9	2.5	6.86
Hardness	139	133.5	7.2	42.76
N-NH ₃	125	32.6	<0.05	0.615
N-NO ₂	125	0.48	0.01	00.06
N-NO ₃	125	1.45	<0.10	0.38
P-PO ₄	125	0.77	<0.10	0.15
Iron	71	4.8	<0.25	1.22

SECTION 2 (Baneshwor, Bagbazar Area)				
PARAMETERS	NO. OF SAMPLES	MAXIMUM Mg/l	MINIMUM Mg/l	AVERAGE Mg/l
Chloride	84	86	3.8	6.4
Hardness	84	32.6	3.9	22.64
N-NH ₃	84	1.96	<0.05	0.91
N-NO ₂	84	0.62	<0.01	0.06
N-NO ₃	84	1.22	<0.10	0.23
P-PO ₄	70	1.16	<0.10	0.12
Iron	43	3.80	<0.25	1.63

SECTION 3 (Lazimpat Area)				
PARAMETERS	NO.OF SAMPLES	MAXIMUM Mg/l	MINIMUM Mg/l	AVERAGE Mg/l
Chloride	75	10.3	3.0	5.35
Hardness	75	4704	4.1	28.74
N-NH ₃	75	1.66	<0.05	0.33
N-NO ₂	75	0.25	<0.07	0.02
N-NO ₃	75	0.86	<0.10	0.16
P-PO ₄	75	0.59	<0.10	0.06
Iron	52	7.8	<0.25	1.01

Source: Bottino et al. 1991

Table 10: Fecal Coliform in the Water Samples of Kathmandu City

No of fecal coliform/100 ml.	Percentage of Samples
0	50
1-10	13
11-100	23
>100	14

Source: ENPHO/DISIVI (1991-1992)

Table 11: Chemical and Bacteriological Characteristics of Kathmandu City Ground Water

Composition	WHO Standard	Tube well (Bhotahity)	Well (Bhimsenthan)	Spout (Dallu)	Well (Hyumat Tole)
Temperature 0C	-	18	17	17	16
pH	6.5-8.5	7.2	7.4	6.8	7.5
DO, mg/L	Not less than 6	4	5	4	3
BOD, max, mg/L	5.	5	4	4	12
COD, max, mg/L	30.	9	7	6.8	18.2
N-NH, max, mg/L	1.	0.3	0.54	0.6	0.2
N-NO, mg/L	45.	53	56	55	50
P-PO, mg/L	0.25	<0.1	<0.1	<0.1	<0.1
Cl, max, mg/L	200.	900		720	680
Chromium, max, Mg/kg	0.05	-	-	-	-
Total coliform	Less than 10/100 ml.	0	20	460	4800
Fecal Coliform	Less than 10/100 ml.	0	15	75	460

Source: CEDA, 1990

the river systems; chemical and biological pollution of shallow ground water through septic tanks and industrial waste; variable meteorological conditions and reduced "flow" of natural drainage systems during dry periods due to multiple use of river water.

Studies show that water quality of rivers is good before these enter the dense urban areas. Bagmati remains highly polluted between Dhobi Khola and Chobhar. Bishnumati is highly polluted downstream of Balaju. The pollution levels of Manohara and Hanumante increase after the sewage from Bhaktapur and the Bhaktapur Industrial Areas are added to them. Dhobi Khola and Tukucha are so highly polluted that the term river or stream has become a misnomer. Domestic sewage and industrial effluents entering the river systems remain completely untreated. As a result, there is a high concentration of organic, bacterial, chemical and nutrient components. The use of pesticides and which is on a steady rise could become a major problem in river and groundwater pollution in the future. Although authoritative studies are lacking, the mushroom growth of carpet dyeing and washing is reported to be contributing both to ground and river water pollution as a result of toxic chemicals used in these processes.

Extreme degradation of the aquatic biological community due to pollution, most notably in the Bagmati river, is in the process. River flow and water quality, particularly after the Thapathali area, resembles that of an open sewer, and bad odor emanating from it particularly during the summer has reached unbearable levels.

As indicated earlier, the chief contributors to the destruction of the aquatic ecosystem of the Bagmati are

untreated sewage of Kathmandu and Patan, and untreated industrial effluents discharged directly into the Bagmati river. These processes contribute to the deterioration of the self-purification capacity of the river. Clearly, the ecological balance of the Bagmati within the urban area and down stream has reached a breaking point.

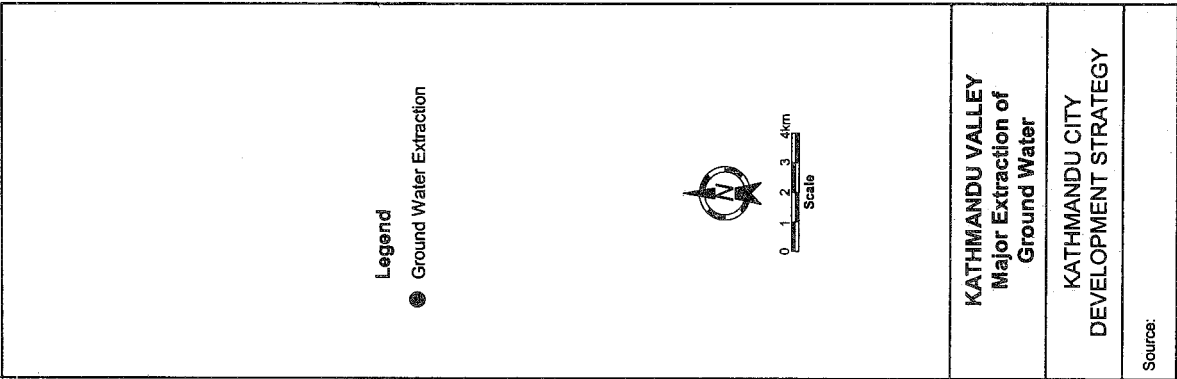
Although quantitative information are not available, the incidence of water borne diseases such as dysentery, diarrhoea and typhoid are reported to be high in Kathmandu urban areas. Cholera outbreaks are reported each year and the infant mortality rate is quite high. The high level of contamination of the reticulated water supply used by almost 94 percent of Kathmandu population by sewage reflects the extremely critical health hazard situation. Studies on urban basic services made for MLD and UNICEF in selected wards indicate a total lack of physical environment conducive to healthy living (resulting from problems of drainage, solid waste collection, and water supply) in the densely populated core areas.

9.3.4.3 Response

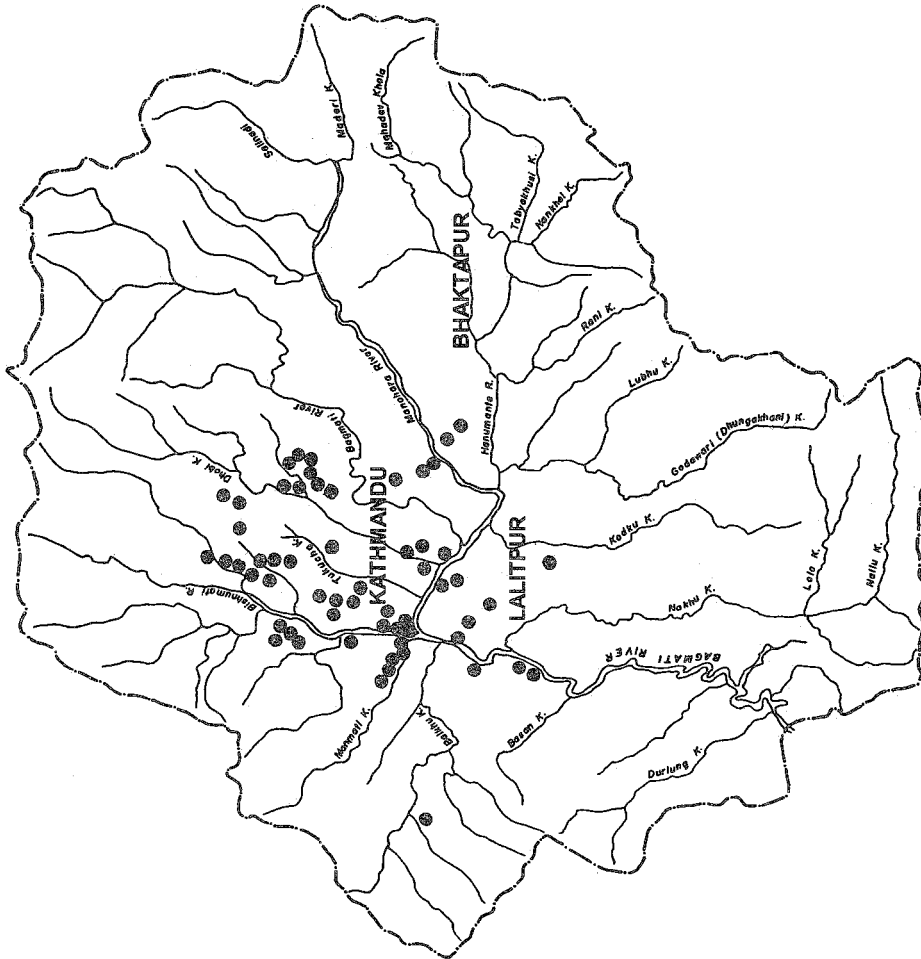
Compliance with drinking water quality standards, based on WHO guidelines, should provide assurance that the water supply is safe. However, it must be recognized that at present even adequate monitoring is not being carried out by concerned authorities, let alone introducing standards. There are many potential situations - some of which can arise very quickly - that could cause a potentially hazardous situation to develop.

Many potential problems can be prevented by safeguarding the integrity of the raw water source and

Map 4: Major Extraction of Ground Water



Map 4



CITY DIAGNOSTIC REPORT

Table 12: Water Quality Parameters of Different Treatment Plants and Reservoirs of Kathmandu.

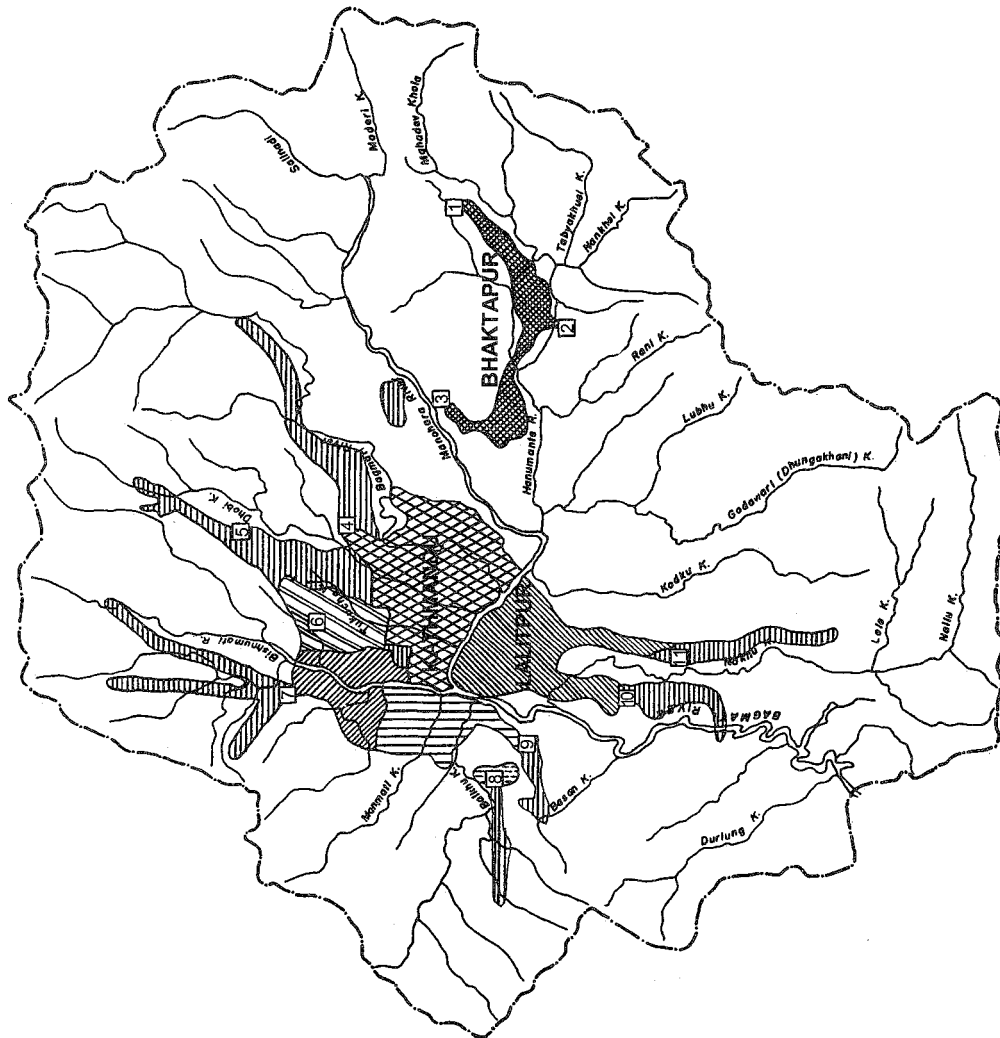
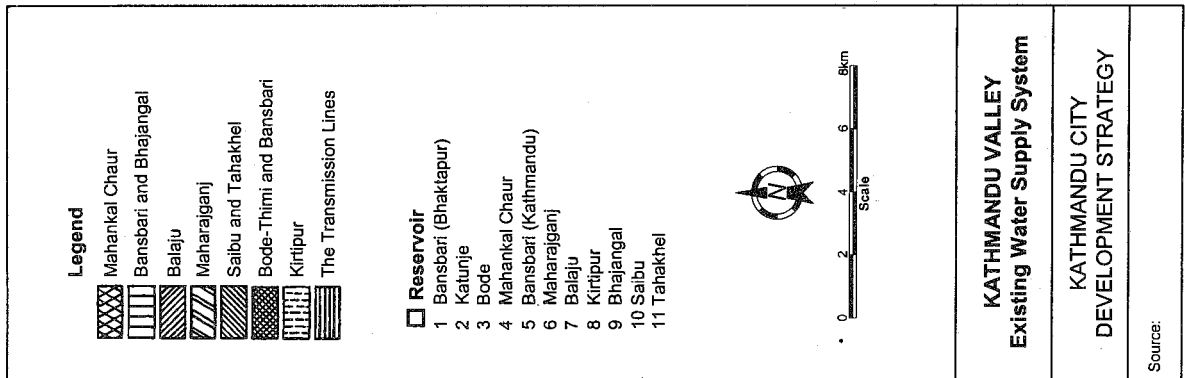
	T.P.1	T.P.2	T.P.3	T.P.4	T.P.5	T.P.26	T.P.7
Conductivity							
Average mS/cm	383	32	42	127	128	164	180
Minimum Value	205	26	30	33	32	132	132
Maximum Value	570	46	78	154	322	189	187
Hardness							
Average Mg Ca Co ₃	147.9	6.0	8.3	38.5	44.6	36.3	33.4
Minimum Value	106.5	3.3	3.9	6.5	22.0	29.6	33.9
Maximum Value	204.3	9.9	16.0	50.0	144.0	45.9	54.0
Chloride							
Average Mg/L	56.0	4.5	4.5	7.3	6.4	7.4	4.7
Minimum Value	3.1	3.0	2.5	4.9	3.1	4.1	2.8
Maximum Value	113.8	6.4	7.1	10.4	42.5	10.1	7.8
Nitrogen Nitrate							
Average Mg/L	0.75	0.04	0.01	0.07	0.21	0.01	0.01
Minimum Value	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Maximum Value	2.17	0.62	0.10	0.65	0.52	0.10	0.10
Introgen Nitrate							
Average Mg/L	0.967	0.002	0.000	0.004	0.009	0.008	0.001
Minimum Value	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Maximum Value	5.025	0.033	0.000	0.023	0.130	0.022	0.011
Nitrogen Ammonia							
Average Mg/	1.46	0.00	0.16	0.24	0.29	1.36	1.04
Minimum Value	<0.05	<0.05	<0.05	0.05	0.05	0.55	0.07
Maximum Value	5.85	0.00	0.70	0.63	0.93	3.20	1.51
Iron							
Average Mg/L	0.00	0.27	0.37	0.73	0.70	3.30	1.68
Minimum Value	0.25	<0.25	0.25	<0.25	<0.25	0.56	0.00
Maximum Value	0.00	1.50	1.42	1.60	1.62	8.10	2.76
Phosphorous As Orthophosphate							
Average Mg/L	0.027	0.000	0.005	0.089	0.225	0.275	0.173
Minimum Value	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Maximum Value	0.33	0.00	0.10	0.25	0.20	0.68	0.52
Total Coliforms							
Average org/100 ml	154	3	2	9	51	0.1	1
Minimum Value	0	0	0	0	0	0	0
Maximum Value	1500	80	50	90	400	2	7

No. of Samples was between 20-25, except for iron, where no. of sample was in the range 10-15.
Source: Bottino et al. (1991).

T.P.1 Sundarighat Treatment plant
T.P.2 Sundarjal Treatment Plant
T.P.3 Mahankal Chour New Reservoir
T.P.4 Maharajgunj Reservoir
T.P.5 Balaju Treatment Plant
T.P.6 Mahankal Chour Old Reservoir
T.P.7 Bansabari Reservoir

Map 5: Existing Water Supply System

Map 5



its watershed by proper maintenance and inspection of the treatment plant and distribution system, and by consumer education. KMC at present has virtually no role in quantity and quality of water supply in its municipality. It is essential that water suppliers and KMC should be made responsible for the following activities:

- a) Periodical reassessment of water supply to ensure that conditions that could affect the quality of water have not changed;
- b) Periodic maintenance
- c) Repairs and renewals of systems,
- d) Revenues collected are substantially reinvested in water supply systems.

A discussion of these important facts of water supply is outside the scope of CDS, but it must be noted here that KMC should be made an important collaborator in water supply improvement programs and cannot remain isolated from NWSC.

At present, there is acute deficiency of water supply in Kathmandu Valley, though there are enormous resource potential of water outside the valley. Some of the ongoing and proposed projects for quality improvement, reduction of leakage and increase in supply, may solve the problem partially. The Melanchi water supply scheme is a major solution and is in the process of mobilizing funding sources.

In the case of stone taps, some control measures or treatments are necessary to be undertaken to preserve and protect the sources of these taps from pollution and extinction.

The water quality of rivers in Kathmandu Valley is deplorable due to various reasons. In the present context, one of the serious cause for the pollution of the river water is due to the absence of proper collection and disposal of domestic wastes and discharge of effluent without treatment. Proper disposal sites have not been finalized in Kathmandu City yet. In order to avoid further deterioration of river water and aquatic life, solid waste management will be a good beginning, followed by introduction of effluent management and enforcement of basic standards.

9.3.4.4 Conclusion

The primary aim of the KMC is safeguarding and protecting public health. Water supply plays an important role in realising this primary goal. It must be emphasized here that KMC should initiate the process of demanding

minimum recommended limits of water quality standards from NWSC. In order to define such limits, it is necessary that KMC initiates an agreement with NWSC, considering the local, environmental, social, economic, and cultural conditions.

The main reason for not promoting the adoption of standards for drinking-water quality is the inability of suppliers to implement the standards. In such a situation, feasible and simple standards, to begin with, can be initiated. Considerations of policy and convenience of the suppliers should never be allowed to endanger public health, and the implementation of some respectable standards and regulations should be the top priority of KMC and suppliers alike. It certainly will require a fair degree of commitment on the part of HMG to provide suitable facilities and expertise as well as the appropriate legislative framework.

Water is essential to enhance the quality of life in KMC, and satisfactory and sufficient supply must be made available to consumers. Every effort should be made to improve the quality of drinking-water. Protection of water supplies from contamination is the first line of defense. Secondly, contamination at the distribution system should be prevented through immediate treatment. A potentially hazardous situation should be immediately corrected, specially in the distribution system.

Microbial contamination is another important issue and must never be compromised. The assessment of risks associated with variations in microbial quality is difficult and controversial because of insufficient epidemiological evidence, the number of factors involved, and the changing interrelationships between these factors. In general terms, the greatest microbial risks are avoided by continuous and consistent monitoring. Though Microbial risks can never be entirely eliminated, it can always be minimised.

The health risk factors due to toxic chemicals in drinking water has not yet been thoroughly studied. The fact that chemical contaminants are not normally associated with acute and immediate effects, places them in a lower priority category than microbial contaminants, the effects of which are usually widespread. Therefore it can be reasonably argued that chemical standards for drinking water are of secondary consideration in juxtaposition to severe bacterial contamination.

KMC can and should legitimately demand drinking-water limits or standards from its suppliers. However,

Table 13: Bacterial Levels in Kathmandu Drinking Water

Locations	Coliform Bacteria/ 100 ml Water		
	May/June Summer	July/Aug Rainy	Nov/Feb Winter
WHO Standard	<1 Coliform per 100 ml		
Ashan	11	460	0
Balaju Park	0	0	0
Bhimsenthnan	9	15	3
Bhimsenthnan (Well)	20	15	0
Baneshwor Chowk	0	0	9
Bag Bazaar	15	15	3
Bhotahity	3	75	15
Bhotahity tubewell	0	0	0
Chhetrapati Chowk	15	20	0
Chikamugal	75	15	43
Dallu	150	240	9
Dallu (Spout)	75	460	43
Dharahara	3	3	0
Dilli Bazaar	9	3	0
Ganabahal	20	75	15
Gyaneshwor	0	3	0
Gyaneshwor Well	15	43	0
Hyumat Tole	240	75	75
Hyumat Tole Well	460	4800	20
Kamal Pokhari	15	15	0
Kalimati	240	75	9
Lainchaur	0	0	0
Maruhiti	15	15	0
Naradevi	20	240	9
Naradevi well	240	460	3
Naxal Chardhunga	15	9	0
Om Bahal	93	75	3
Paknajole	15	9	9
Thaihity	0	3	0
Thahity (well)	0	3	20
Tripureshwor	93	75	3
Wotu	0	3	0

Source: CEDA 1990

“Enforceable standards” are the key to its implementation. Because NWSC, is severely limited in resources, both human and financial, it is even more important to establish priorities, and this should be done by considering the impact on health in each case. Many parameters will have to be considered while assessing water quality of KMC such as, source, treatment efficiency and reliability, and protection of distribution network (e.g. corrosion control). The costs associated with water quality surveillance and control must also be realistic.

9.3.5 Noise Pollution

9.3.5.1 Introduction

Noise pollution in the Kathmandu City is reported to be on a steady rise. The major sources being vehicular traffic, air traffic and industries that are inappropriately located (in school or residential areas). In areas such as Ratna Park, Bir Hospital, Thapathali and Teku, noise levels during heavy traffic hours exceed 100 dBA. Noise control measures neither exist nor are reinforcing mechanisms in place. In the absence of regulatory mechanisms and controls, noise pollution will remain an environmental hazard in the Kathmandu Valley.

9.3.5.2 Transport Noise

Of all present sources, surface transportation is the most pervasive source of noise pollution and is likely to become worse as the number of vehicles increase. Among these vehicles, power tillers, buses, heavy trucks and three wheeler tempos are significant contributors to the high noise level in built-up areas of Kathmandu. In addition, aged and poorly maintained automobiles have aggravated the noise problem. Table-14 shows the various noise levels at different sites in Kathmandu. On the busiest roads around the city, noise levels sometimes exceed 100 dBA. (Shrestha and Shrestha, 1985; Manandhar et. al.1987). Noise level in front of the Tri-Chandra Campus, for instance, is twice the accepted standard (40-50 dBA) for residential area.

The excessive noise level is the result of inadequate mufflers being fitted to vehicles, the large number of noisy two-stroke vehicles and heavy traffic congestion in the city. There is no vehicle maintenance regulation in Nepal and older vehicles tend to produce more noise causing significant health hazard. The study of the Road Transport Industry reflected that 38 percent of trucks and 45 percent of buses plying on urban areas are older than 15 years (KVVECD, 1993). All these have aggravated noise pollution.

Aircraft produces very high level of noise, although variable and intermittent. Aircraft noise in the vicinity of the airport has not been measured and its impact on people's health has not been examined so far.

9.3.5.3 Industrial Noise

The growth of industries inside the valley in general, have resulted in considerable increase in noise pollution. Some studies carried out in the past reveal that the major noise polluting industries include garment, steel workshop, saw mills etc.

Different industrial machines and processes produce varying levels of noise. Sporadic studies conducted in some of the industries give some indication that indoor noise pollution levels are fairly higher than outdoor noise. In Textile, metal and saw mills, the workers are directly exposed to the hazard of indoor noise pollution. But in the factories like metal craft industries, besides factory workers, the local people are also adversely affected due to indoor as well as outdoor noise pollution. The reluctance of workers in using earmuff as noise control measure and the operation of machinery in high pitch further compound the problem of pollution. Technically, noise reduction can be achieved at the source by technically modifying the machines and by introducing "damping device" (earplugs or muffs). However, much quantitative works are still required to manage noise pollution and to control the occupational hazards.

9.3.5.4 Community Noise

In Nepal, there is very little information on the extent of disturbance from community or neighborhood noise. However, the recorded noise level (73-80 dBA) at the market area of Asan indicates that the noise level is high exceeding the limit for community noise in residential area. Acceptable level is regarded as 49-50 dBA for residential areas and 50-60 dBA for residential area near shops and factories. There are no regulations dealing with community noise pollution in Nepal.

9.3.5.5 Efforts and Achievements

Though there appears to be no specific policy regarding noise pollution before the formulation of the Eighth plan (1992-1997), a number of general policies and strategies covering environmental management could be interpreted as relevant to noise pollution. They are:

- (a) to set national pollution standard (Seventh and Eight Plan),
- (b) to minimize the effects of environmental pollution while establishing, expanding and diversifying industry (Industrial Policy, 1992),
- (c) Zone industries to minimize the effect of industrial pollution in urban areas (Industrial Promotion Committee, 1989),
- (d) to minimize industrial noise through control measures and standards (Industrial Policy, 1992) etc.

Specific concern with noise pollution was first articulated in the Eighth plan (1992-97) with the following policies:

- ❖ The existing condition of noise pollution will be investigated and analyzed to prepare indicators, standards and guideline;
- ❖ Causes of noise pollution will be investigated through "on the spot observation" and management plan will be formulated to control pollution and
- ❖ Environment protection will be ensured in urban areas enacting laws for prevention and control of noise pollution.

9.4 ANALYSIS OF POLICY AND LEGISLATION

9.4.1 Relevant Policies

Several national policies address the issue of Kathmandu Valley's environmental pollution. However, these policy

measures have yet to be implemented adequately. Some of the Kathmandu Valley specific and recent national policies addressing environmental pollution include the following:

- ❖ Recently, on the occasion of UN Conference on Human

Table 14: Noise Level in Different Sites in Kathmandu.

S.N.	Locations	Noise level(dBA)	Year	Remarks
1.	Trichand Campus	80-90	1985	Educational area
2.	Amrit Science Campus	75-85	1985	Educational & Residenteal area
3.	Ratna Park	72-91	1985	Bus park & Market
4.	Bir Hospital	90-95	1985	Hospital area
5.	Teku	85-100	1985	Business locality
6.	Jochhen *	82-100	1985	Business locality
7.	Lazimpat *	80-98	1987	Market & Residential area
8.	Putalisadak *	82-98	1987	Residential area
9.	Ashan	73-80	1985	Market area

Source: Shrestha, C.B. & Shrestha, G.B. 1985; * mansundhar, M.S. et.al., 1987

Settlements (Habitat II), the (then) Ministry of Housing and Physical Planning (now Ministry of Physical Planning and works) prepared a draft action plan for managing Kathmandu's development. The proposed activities for the duration (1996-2000) enlists some issues such as:

- (i) Need for effective linkages of environmental policies;
- (ii) Mitigation actions such as:
 - a) air pollution monitoring system
 - b) disposal practices of hazardous and infectious waste and
 - c) prevention of pollution of surface and ground water
- (iii) Institutional/regulatory framework related to
 - a) inadequate legislation
 - b) institutional strengthening; and
 - c) interventions for environmental improvement in Kathmandu Valley focusing on better water management of the Bagmati river system, air quality management and industrial location policy.
- ❖ Another development is the formation of a high level Kathmandu Valley Development Council with 49 members, most of whom are ministers and secretaries from various ministries. The Council was formed to coordinate development efforts in Kathmandu and work out integrated plans for the valley as a whole.
- ❖ Apart from these, the policy area coverage may be briefly stated as follows:
 - I. reduction of population growth, (Industrial relocation)
 - II. improve quality, coverage and delivery of urban water supply; (Melamchi scheme)
 - III. Improving institutional arrangement, functional coordination and entrusting responsibilities to local level decision makers; (Local Self Governance Act, 1999)
 - IV. provide legal measures to prevent and control air/water pollution; (EIA made mandatory for various projects)
 - V. integrate environmental consideration with development objective as well as economic incentives to encourage environmentally benign activities. (9th Plan, 1997-2002)

9.4.2 Sectoral Policies and Legislation

9.4.2.1 Solid Waste Management

One of the main problems regarding the management of solid waste in Kathmandu is the question "why is the

central government incapable of providing land for a much needed recycling plant?". This problem has been perceptible in the Kathmandu Valley since past five years. The participatory inputs of the individual, group, industrial units, NGOs, Social institutions are expected at the local level and they are supportive. However, in the absence of a final site for recycling and disposal of residual material, all the efforts are being aborted.

Solid Waste Management National Policy has been formulated specifying the five major objectives:

- ❖ Make waste management simple and effective;
- ❖ Minimize pollution and control effects of waste on public health;
- ❖ Mobilize waste as a resource;
- ❖ Privatize waste management;
- ❖ Raise public awareness and initiate participation.

The policies enumerated are:

- ❖ Promote skill among local agencies in the management of solid waste;
- ❖ Initiate extensive awareness campaigns to avail peoples' participation in cleaning activities;
- ❖ Engage non-governmental and social organizations;
- ❖ Develop the concept of cleanliness based on appropriate technology that are applicable locally, promoting social ethics and considering economic aspect;
- ❖ Manage the site for final waste disposal considering the nature and amount of the solid waste;
- ❖ Transform solid waste into resource through re-use and treatment of the waste;
- ❖ Develop an economically self-contained management system;
- ❖ Continue privatization of solid waste at various stages;
- ❖ Encourage self-reliance in cleaning activities;
- ❖ Initiate local agencies to implement cleaning activities in a prioritized manner and ;
- ❖ Act effectively to minimize solid waste.

The strategies to be adopted are:

- I. Initiate people's participation
- II. Develop simple but effective technology;
- III. Mobilize the waste as the resource; and
- IV. Encourage privatization of solid waste management

The National Council for solid waste management has been constituted under the Chairmanship of the Minister for Local Development, with representations from relevant ministries and agencies. The Joint Secretary of the MLD functions as member secretary of the Council.

Critical Appraisal

- ❖ It is not clear whether the policy is focused on the management of domestic waste only or on domestic and hazardous waste emerging from hospitals, industries and such other sources.
- ❖ Although the policy mentions public participation and the involvement of NGOs in managing waste, the relevant modus operandi is not stated.
- ❖ The policy does not mention incentives for promoting recycling.
- ❖ The policy calls for the formation of a new central agency with waste management functions but it does not elaborate on the need to strengthen the municipalities, apart from manpower development.

9.4.2.2 Air Pollution:

The main sources of air pollution in Kathmandu are vehicular emission and emissions from industries such as Himal Cement and the brick Kilns. Except the vehicular emission control regulation, there are very few legislative measures to regulate pollution from sources other than vehicles.

9.4.2.3 Industrial Pollution

The Industrial Policy, 1992 and Industrial Enterprises Act, 1992 list air pollution prone industries (such as cement, brick and stone crushing) as “industries affecting public health and environment” and require them to obtain permission for their establishment, extension and diversification.

The National and Industrial Sector EIA Guideline, which have been endorsed by HMG and are now being implemented, require EIAs for large cement and brick industries.

The 64th meeting of the Industrial Promotion Board on Jesth 29, 2046 (11 June 1989) categorized industries into two groups on the basis of the pollution created by them. Industries in category “A”, which will not be allowed to be located in the Kathmandu Valley includes the cement industry.

Although the above mentioned measures may be effective in preventing industries which cause significant air pollution due to their location in Kathmandu, they do not address the need for abating the pollution caused by the existing industries. This requires effective enforcement of emission standards and encouragement of waste minimisation practices.

9.4.2.4 Water Pollution

The important policy and legislation regarding water pollution in Kathmandu are:

- (i) National Conservation Strategy (NCS),
- (ii) Nepal Environmental Policy and Action Plan (NEPAP),
- (iii) Aquatic Animals Protection Act, 2017 (1960),
- (iv) Solid Waste Management and Resource Mobilisation Act, 2044 (1987), Regulation 2046 (1989),
- (v) Pashupati Area Development Trust, 2044 (1987),
- (vi) Kathmandu Valley Development Authority Act, 2045 (1988),
- (vii) Nepal Water Supply Corporation Act, 2046 (1989),
- (viii) Water Resources Act, 2049 (1992), and
- (ix) Industrial Enterprises Act, 2049 (1992),
- (x) Local Self Governance Act, 2000

The Pashupati Area Development Trust Act 2044-Sec.14 provides for sewerage management through pollution control measures and by managing water supply, watercourses and sewerage system etc. The Act is limited to the protection, conservation and management of the environment of only a small part of the Bagmati River. Functional duplication with the municipal, NWSC, SWMRMC and KVDA responsibilities are major obstacles in the Act.

9.4.2.5 Noise Pollution

There is no specific legal and administrative mechanism to deal with noise pollution. However, the Civil Aviation Act 2015 (1958) contains provisions for the control of sound from aircrafts and the Explosives Act 2018 (1961) also provides for the control of noise from the use of explosives. There is no legislative provision to control or mitigate excessive noise from vehicles and industry and to limit noise at the sources (Joshi, 1991).

Due to the lack of clear-cut policy guidelines and standards regarding noise pollution, no specific programme has been implemented so far.

9.4.3 Existing Legislation and their Enforcement**9.4.3.1 Environment Protection Act, 2056 (1996)**

Recognising the need for overall environmental protection legislation, the parliament has ratified an Environmental Protection Act, which is an umbrella Act in the environment sector.

9.4.3.2 Motor Vehicle and Transport Management Act, 2049 (1993)

Pursuant to Section 23 of the Act, HMG specified the following standards for diesel and petrol engine vehicles on 1st August 1994:

- ❖ Smoke emitted from diesel-engine vehicles should not exceed 65 HSU (Hartridge Smoke Unit)
- ❖ Carbon monoxide emission from petrol-engine vehicles should be limited to 3% of total volume.

9.4.3.3 Solid Waste Management and Resource Mobilisation Act, 2044 (1987) amended 2049 (1992)

This Act is formulated primarily to manage the waste generated in the cities, and to promote recycling of the waste. Ensuring public health safety and maintaining the city free of solid waste are the major objectives.

9.4.3.4 Industrial Enterprise Act, 1992 and Industrial Policy, 1992.

Both the policy and the Act emphasize the need to develop traditional cottage industries in Kathmandu. The environmental protection measures are discussed but detailed regulations have not yet been formulated.

9.4.3.5 Nepal Water Supply Corporation Act, 1989

This Act established the Nepal Water Supply Corporation (NWSC) as the legal authority, giving it enhanced powers to set and enforce water fees, prosecute illegal connections and prevent misuse of drinking water within 12 towns including the KMC, which also falls within its jurisdiction. It assigns responsibility to the NWSC for providing urban water and sanitation, controlling water pollution and, empowers and directs the NWSC to build and maintain urban sewerage systems.

9.4.4 Concluding Remarks:

Beyond the consolidation of the disparate and fragmented laws into a consolidated form which

constitute a national Policy and regulatory framework, there is an immediate need to:

- a) provide a legislative basis for KMC's representation in EPC.
- b) strengthen municipal taxation and revenue generating powers to KMC;
- c) classify jurisdictions of KMC over water supply, sewerage, roads, solid waste etc. in tune with its acceptance of full responsibilities of these areas of activities;
- d) classify MLD's jurisdictions to avoid overlapping;
- e) initiate land use planning and zoning regulation by KMC, in association with central govt. agencies.

9.5. INSTITUTIONAL FRAMEWORK, RESPONSIBILITIES

9.5.1 Parliamentary Committee

The Lower House of Representatives have a Committee on Natural Resources and Environment which looks after legislation pertaining to natural resources and environment before it is submitted to the parliament.

9.5.2 National Planning Commission

The National Planning Commission (NPC) formulates overall national policies, development plans and strategies for environmental protection. A member of the NPC has been given special charge of updating environmental policy and sectoral coordinated planning.

It plays an important role in achieving sectoral coordination in development planning and in integrating environmental concerns into the development process. In reviewing sector plans, it ensures that environmental impacts are assessed as part of the national plans. The NPC Secretariat has a Population and Environment Division, headed by a joint Secretary, to provide the necessary technical inputs and coordination.

The NPC's role in coordinated consultations with various agencies in the sphere of legislative formulations, institutional updating, and mobilizing resources for implementation is crucial. Furthermore, its primary responsibility is to ensure sectoral programme implementation, which are related to the regional and national development targets.

The Council for Kathmandu Valley Integrated Development has reposed the collaborative and relevant environment protection responsibilities to the NPC in the following manner:

- (i) Land use planning for the Kathmandu Valley;
- (ii) Avail essential institutional services to help in relocating the industrial establishments outside Kathmandu;
- (iii) Work out appropriate incentives for relocation of industrial establishments from Kathmandu Valley;
- (iv) Improvement and extension of essential services such as:
 - ❖ Melamchi Drinking Water Programme implementation; and
 - ❖ Construction of sewerage services for greater Kathmandu.

9.5.3 The Environment Protection Council (EPC)

Seventh Five Year Plan addressed the need for an institution which is competent to coordinate and lead the multi-sectoral centres. The Environment Protection Council (EPC) was constituted in March 1995 and with the emergence of MOPE, the nature and scope of its responsibilities have been recast into a high level policy enunciating body mandated to execute policies. The EPC which has representations from relevant ministries, the RONAST and experts who are involved in environmental activities, is chaired by the Rt. Hon'ble Prime Minister, with the Secretary of MOPE as its Member Secretary. The scope and nature of its responsibilities are enunciation of policies and legislation covering areas such as:

- ❖ Population pressure
- ❖ Haphazard settlement
- ❖ Negative impacts of developmental activities
- ❖ Environmental Planning/Legislation/EIA/ Pollution control
- ❖ NGOs and coordinate linkages
- ❖ Environmental information and
- ❖ Capacity building

The Secretariat of the EPC remains now with the Ministry of Population and Environment availing the developing facilities contained therein.

9.5.4 Kathmandu Valley Development Council (KVDC)

The major objective of the KVDC is to make creative contributions to the urbanisation process in the

Kathmandu Valley, to ensure healthy and productive development at the national, regional, urban and village levels through management procedures involving existing agencies and beneficiaries. The Council is stewarded by the Right Hon'ble Prime Minister with a Member Secretary drawn from the MPPW, and is represented by ministers, the NPC, Municipalities, District Development Committee and FNCCI.

From the standpoint of infrastructure, this Council is more potent and influential. It is expected to emerge as a viable and competent institution, and obtains authority through the mobilisation of legislative instruments as demanded by diverse situations from time to time.

9.5.5 Line Ministries

9.5.5.1 Ministry of Population and Environment (MOPE):

As per HMG decision (November, 1995) MOPE has the primarily responsibility of :

- ❖ Formulating and implementing policies, plans and programs;
- ❖ Preparing Acts, Regulations and Guidelines;
- ❖ Conducting surveys, studies and research;
- ❖ Disseminating information and carrying out publicity;
- ❖ Monitoring and evaluating programs;
- ❖ Developing human resources; and
- ❖ Acting as a national and international focal point in the domain of population and environment.

The scope of work of the Ministry has been divided into two domains and they are Primary and Supportive functions. Primary functions are executed at the Ministry's own initiative with the co-operation of other agencies as required. Supportive functions constitute cooperation and help to be extended to other ministries and agencies in executing their programs and activities.

9.5.5.2 The Ministry of Local Development (MLD)

Its primary mandate is integrated rural development through local bodies at the district, municipal and village levels. Resource management, environmental concern, waste minimisation and pollution control are being incorporated in the programmes and activities of the local bodies through its coordinated mandate.

9.5.5.3 Ministry of Industry (MI)

The Ministry plays a pivotal role in the formulation of pollution abatement policies and coordination. It has a separate cell for "Environment and Technology Transfer" which looks after all the policy related works of industrial pollution control. The Department of Industry (DOI) and the Department of Cottage and Small Scale Industry (DCSI), have such environmental cells.

The functions of these cells are:

- (i) to enforce the discharge standards;
- (ii) to critically examine EIA and IEE;
- (iii) to issue permit to the industries; and
- (iv) to monitor the discharges.

The Nepal Bureau of Standards (NBS) is the technical arm of the pollution control mission. It is responsible for standard setting, laboratory testing and examining/supervising the audit reports. NBS also has a separate Environmental Analysis Cell. The DCSI district offices also act as a focal point to receive public complaints locally.

The Kathmandu Valley Development Council has been allocated responsibilities such as:

- (a) Selection of appropriate sites for relocating industries of the Kathmandu Valley and to work out required facilities as incentives to such industrial establishment which are being relocated outside Kathmandu;
- (b) Management of brick/tile factories existing in the valley; and
- (c) Regimenting the use of plastics and bottles.

9.5.6 Local Governments

9.5.6.1 Village Development Committee (VDC)

There are scores of village development committees surrounding KMC, which are the grassroots level local government bodies.

9.5.6.2 The Municipality

The Municipalities of Kathmandu, Patan, Bhaktapur, Kirtipur and Thimi are the major areas of the valley's urban environmental concern. The valley

municipalities are loosely organized, generally along functional lines such as tax and revenue collection, building permits, planning and engineering, sanitation, administration and accounts, litigation, and inspection.

The major activities of the Municipalities include: street cleaning; waste management; maintenance of water supply pipes; clearing mud and blockages in sewer lines; approving septic tanks; minor surface drain construction; street lighting; city management; granting building permits; and some other health and sanitation related activities.

Under the local self-governance Act, 1999, the responsibility assigned to the municipalities can be put in the following categories:

- ❖ Protection of monuments and public places
- ❖ Urban planning and development
- ❖ Health and sanitation
- ❖ Birth and death registration
- ❖ Construction and transportation
- ❖ Social welfare
- ❖ Drinking water and electricity
- ❖ Environmental health and improvement
- ❖ Administrative and miscellaneous

The Kathmandu Valley Development Council has reposed the following responsibilities to the municipalities:

- ❖ Delineating the boundaries of rivers and water ponds to thwart encroachment on public land;
- ❖ Delimiting further fragmentation of the land holdings. While transacting land, the size of the plot must be at least one-fourth of a ropani and construction in such a small plot should not exceed 50 per cent of the area.

9.5.6.3 District Development Committee (DDC)

The Kathmandu DDC has 9 members, one each from nine Ilakas (a political boundary within the District), headed by a Chairman, and a Vice Chairman who officiates in his absence. They are indirectly elected by the VDC leaders. The DDC Secretariat is headed by the Local Development Officer (LDO), who is deployed by the MLD. The LDO executes local development activities and coordinate other local development bodies. The DDC includes a Chief District Officer (CDO) who is an appointee of the Home Ministry.

9.5.7 NGO Sector

NGOs have been functioning in Nepal since the early 1960s in the form of welfare associations such as Family Planning Committees, Nepal Red Cross Society etc. More coordinated activities of the NGOs started only after the constitution of the Social Service National Coordination Council (SSNCC), and the subsequent promulgation of the Social Service National Coordination Council Act in 1977 by His Majesty the King. The SSNCC consisted of six sub-committees, spanning Health Service, Handicapped Service, Child Welfare, Community Service, Youth Activities, and Women Service. All the social/voluntary organizations were to be registered in the council.

A number of non-governmental organizations are working as interest and pressure groups for enforcement of discharge standards and relocation of some industries from Kathmandu Valley.

9.5.8 Potential Groups (Stakeholder)

The different interest groups involved in the environmental programme are mentioned below:

- ❖ The public at large, who provide input during plan formulation and subsequent implementation;
- ❖ Private sector project proponents;
- ❖ General government professional and administrative staff who provide support through provision of information;
- ❖ Department planners who play the major role in screening and ensuring completion of each project component;
- ❖ ministry/NPC planners and MOPE coordinators who provide overall technical advice and make resources available;

9.5.9 Institutional Capability at National Level

The institutional orientation has been sectoral and the need for coordination has been felt for the past many years. However, conscious participation on the part of the actors from the various sectors to evolve collaborative prescriptions for coordinated implementation is yet to emerge. In the sphere of environment, the jurisdictional role of related agencies and institutions are quite extensive. The specific objectives of developing institutional capacity are as stated below:

(a) Coordination and communication:

The institutions, which are involved in governing, planning, and servicing, operate at the national, regional, district, municipal and village levels. The levels of operation, organisational limitation, priorities and concern, jurisdiction and authorities are variegated, mutually overlapping and contradictory. Therefore, there is urgent need to stimulate and/or enforce the agencies to integrate their efforts and commitments to work out a cohesive and pragmatic plan of action.

(b) Clarity in roles and responsibilities:

The major role to be played by a particular agency, collaborative obligations of the other sectors as well as the extent of responsibilities must be clearly defined. The problems that arise at the implementation level on account of the overlapping of jurisdiction and authority between the concerned Ministries, cause severe setbacks and hindrances to the actual performances of the national and local agencies.

(c) Need for effective national policies:

There is need for Water Resource Conservation and Management Policy, Industrial Location Policy as well as Urban Industrial Development Strategy, to ensure proper urban management and population distribution, planning of the industrial locations and devising meaningful measures for pollution control.

(d) Framing of standards and codes:

Standards, Codes and Guidelines are the basic requisites for promoting urban management and pollution control. These serve as the basis for local regulation and procedures leading to enforcement. It has to keep pace with the emerging requirements of the management.

(e) Clarity and consolidation of various laws:

Laws related to pollution control are fragmented and related to various agencies without designating any particular jurisdiction to the right and competent agency. Simplicity and enforceability ought to be the cornerstone of any legal framework.

(f) Mobilisation of local concern:

Local and community involvement has been much harped about since ages though practically it is yet to materialise. Involving and motivating the local people, inspiring them to realise their responsibilities needs to be encouraged. There is dire need to inform the public, mobilise local concern and proactively support community initiatives in developing the municipalities. It is an undeniable fact that services are best delivered

by operational echelons that are close and responsive to the consumers. Furthermore, local governments are better suited to ensure equitable service delivery, and equitable fee setting and enforcement.

9.6. KMC AS AN INSTITUTION IN ENVIRONMENT SECTOR

(See Details in the Chapter on Institution)

One of the major issues that needs to be addressed is KMC's institutional capability in environment management and planning. The following realities clearly emerge in this context:

- (i) The KMC is technically weak, and also suffers from an inefficient organizational infrastructure and dearth of qualified manpower. It is not empowered to exercise autonomous discretion to settle the multitude of problems besetting it. Furthermore, the central level agencies are hardly encouraging about KMC role in finding solutions to the environmental problems of the Kathmandu Valley.
- (ii) While institutional development at the KMC level has been completely neglected, the capacity of the central level institutions such as, the Ministry of Local Development, and the Department of Housing and Urban Development, has been further extended and enhanced. Due to lack of appropriate legal and institutional changes needed to create an effective urban planning system, the planning process has remained ill-defined and often arbitrary, depriving the local people from participation in the planning process.
- (iii) The municipal financial state of the KMC is extremely inadequate. This is partly due to lack of institutional capacity, since KMC on its own, cannot collect direct taxes; and partly due to lack of linkage between revenue collection and provision of services. The capacity of KMC to make the most of available resources, therefore, remains seriously constrained. The need to check and reorient the disproportionate growth in most of the KMC areas (irrespective of their diminutive sizes) requires the sustainable and consistent development of its physical, financial, and investment planning capability. Decentralized delegation of power and responsibilities to the local governments should go hand in hand with enhancement of institutional capacity for urban management and planning.

Therefore, strengthening the institutional capabilities to achieve the environmental standards is a key factor. The planners should not deviate from the following key requirements:

- ❖ Enhancing capabilities for framing administrative procedures
- ❖ Resolving organisational conflicts
- ❖ Regulating a sound mechanism for linkages with relevant agencies
- ❖ Building up essential technical and managerial capabilities required for institutional functioning in the context of pollution control
- ❖ Urban and industrial management

In the context of its Integrated Development approach, the KMC needs to be provided with legislative support and functional validity to developing effective programs and to implement them.

9.7. FINDINGS, OPPORTUNITIES AND CHALLENGES

9.7.1 Findings

In recent years, KMC successfully garnered substantial public support for environmental improvement of Kathmandu. Several donor agencies and individuals are willing to involve themselves in areas such as drinking water, pollution control, solid waste management, clean transportation etc. However, the following areas can have a marked impact on KMC's overall environmental improvement possibilities:

- ❖ Solid waste management
- ❖ Industrial pollution control
- ❖ Infrastructure services
- ❖ Basic sanitation and cleanliness
- ❖ Water supply and sewerage
- ❖ Pollution of water, air and soil
- ❖ Cultural and Social environment

Among these, the first stakeholders' meeting considered solid waste management to be the most promising and others were given subsequent priorities. The initial findings suggest that the city's cleanliness and its physical appearance is extremely important and should be KMC's utmost priority. Hence, solid waste management plays a key role in gaining support and confidence of the public.

9.7.2 Opportunities:

Strategic Planning Exercise

The reports and action plans related to KMC's environmental management efforts prepared by various consultants over the last five years indicate that significant amount of work has been accomplished in the area of studying major issues and identifying potential projects for future implementation. Concrete programs at the field level have been delayed mainly due to shifting government decisions. For example, KMC has prepared a detailed plan of action for solid waste management. The plan could not be implemented for sheer want of suitable land. Through the CDS exercise, broad sector-wise projects are being identified and planned, and KMC should now encourage the relevant governmental agencies, donors and NGOs, to undertake important projects in close collaboration with the stakeholders. The CDS exercise will define the priorities and roles of KMC, based on the common consensus of the stakeholders, and will thus specify the goal, objectives, outputs, indicators, activities, and priorities of all development related activities to be conducted by KMC within the valley.

9.7.3 Challenges

CDS Implementation

Probably the most important aspect of the CDS is to ensure the implementation of major recommendations by it. There are many instances in Nepal where plans are formulated but implementation suffers largely due to lack of adequate funds. The CDS recommendations should not only be technically excellent, but feasible and functional too. In order to ensure that the CDS is implemented, KMC will have to accord due priority to some of the more affordable projects.

The environmental problems as a process, are less influenced by the policies pursued, than by the combined effects of sectoral activities. Unless urban development policies are complemented by and harmonized with sectoral policies, KMC can have very little control over the environmental problems. In Kathmandu, the environmental problem will remain contingent upon the efforts of the central government. Hence, the central government has a major role to play in establishing the control mechanisms.

9.8. RECOMMENDATIONS

9.8.1 Activities to be Addressed

Keeping in view the environmental objectives of KCDS, which is to enable KMC to deal with environmental programmes, the following broad activities have been adopted.

- (a) Planning, management, and control of urban pollution for environmental quality;
- (b) Environmental aspects: Land and water
- (c) Cultural and Natural Heritage
- (d) Identification and control of industrial pollutants of broad valley-wide significance (KMC- lead agency)
- (e) Educational, informational and research aspects.
- (f) Technical Assistance
- (g) Donor assistance and action programs

Accordingly, the recommendations of the first stakeholder meeting are also examined and the prioritized activities are listed below:

9.8.1.1 Pollution : (Planning, Management and Control)

This group comprises Solid Waste Management, air, water, noise and land pollution. In this group of environmental problems, most of the solutions lie with the administrative and legislative power of the central government, and KMC can only individually act as a supporting agency. However, KMC can initiate various programs and functional activities such as monitoring, dissemination of information, and providing support to national programs for identification and control of pollutants.

Most of the action required in this group would involve identification of manageable standards for persistent pollutants and adoption of national measures to limit the release of such pollutants into the environment, and would have to be initiated and sustained at the national level.

There is also an urgent need to build up an inventory of information and to proceed systematically to fill gaps in knowledge of both KMC and the central government. This, for the most part would call for the building up of technological capability of KMC and MOPE. KMC can also benefit from various studies being carried out by NGOs. The environment department of KMC plays a critical role in updating information and creating awareness, not forgetting the need to develop projects.

A general lack of technological capability is a concomitant of municipalities, and to this extent much of the action in this field could and should be organised in collaboration with the private sector, NGOs and specialised institutions. Some actions, on the other hand, to cooperate with national programs and to attain the capability to prescribe control measures, and enforce, will depend on KMC's commitment and will therefore, lie at the KMC level.

9.8.1.2 Land :

Being one of the Nation's most heavily populated cities, land is at a premium in KMC. Not only does steady increase in population mean less land per capita, but the accompanying pressure on infrastructure leads to further degradation of quality of life.

In so far as land is concerned, a management policy of "appropriate location for appropriate function" has to be pursued. Land inventories have already begun in KMC (KVMP / EEC project) and comprehensive land use within KMC is expected to result at the end of the project. To ensure continued productivity of land resources, the application of "sound economic zoning" principal is important. Land ownership of KMC should be improved by acquiring public land and securing them for public or other economic utilization. KMC will need to acquire as much land as possible within and outside the KMC's political boundary. Land will be the key factor for the future growth of KMC. If need be, KMC's boundaries should be expanded and it should accommodate the neighboring areas for future growth.

9.8.1.3 Water:

Surface water pollution is a serious problem inside the valley. Exploitation of water and sand within the valley will have to be stopped with the concurrence and cooperation of the DDCs. The sand in the rivers are fast diminishing and this is affecting the rivers. This problem deserves to be accorded the highest priority.

Specific national action on the part of the Government has to be appreciated in recent times. Melamchi water supply is gaining support and is likely to materialize. Sand mining has been discouraged and private sector



initiatives are being promoted. There are many other initiatives being undertaken to clear the river systems which needs to be given more momentum and support.

9.8.1.4 Cultural and Natural Heritage:

On the basis of the recommendations which emerged from the first Stakeholder Meeting, KMC should take steps to protect and preserve its cultural and natural heritage, develop historical sites and recreational parks, and conserve representative samples of its most important biological communities. In this respect, KMC should gain ownership of such areas and maintain effective conservation of such resources.

9.8.1.5 Industrial Pollution:

Industrial population is an extremely important issue for KMC. The perils of environmental pollution might turn

out unfavorable to the owners of Industries and might also affect the economic activities within the valley. Nevertheless, with the creation of a better and conducive environment the tourism industry will definitely improve. All these call for national and collective action on the part of the municipalities and the government.

Threats to and opportunities for developing the tourism industry must be identified. To compensate for the loss of employment and job opportunities due to decrease in industrial enterprises, other economic activities such as health care, tourism, education etc., must be encouraged

The environmental concern should not be interpreted as a move to dampen the industrial sector. On the other hand, high value added and clean industries could be promoted. Only large and medium scale industries and pollution prone industries even if they are small, should be discouraged or relocated elsewhere. The costs and benefits of relocation of such industries in relation to other accruing benefits have to be closely examined.

The principal objective suggested by the Nepal Environmental policy and Action plan (NEPAP) for industrial pollution in Kathmandu is "help to ensure that environmental pollution from industries do not have adverse effects on tourism".

9.8.1.6 Educational, Informational and Research Aspects.

Public Education

In view of the fact that the actions of individuals have a significant impact on the environment, KMC should try to promote a sense environmental ethos among the people through the media, and through environmental education programmes at the ward levels (dealing with basic hygiene and sanitation), for creating public awareness.

9.8.1.7 Information:

KMC should set up an information centre in its city head quarters. This centre, in addition to providing document retrieval and referral services, should develop data banks pertaining to every relevant discipline. This centre will cater to other agencies and donors regarding their queries about the environmental activities of KMC, and act as a resource and information bank for the media and other agencies. With the help of the government and non-governmental agencies, KMC should work to make this information centre functional and well equipped.

9.8.1.8 Research:

KMC should initiate action oriented research projects which will assist in the decision-making. The water treatment initiatives in Bishmunati river serves as a good example. Assistance should be sought from international agencies, municipalities of developed countries and local scientists. Provision of resources can be solicited from interested and willing donors.

9.8.1.9 Technical Assistance:

The donor agencies should promote and finance technical assistance programmes. Such assistance should be so structured in a manner that the development of internal capacity of KMC is not discouraged. A comprehensive directory of the expertise available within the country should be compiled. Likewise, a directory of institutions willing to help KMC should also be prepared for exchange of technical expertise.

9.8.1.10 Donor Assistance and Action Programs

International, regional, national and local financial institutions should be requested to assist KMC in solving the environmental problems. KMC should also collaborate with financing agencies to develop programs and projects based on the aforementioned recommendations.

As an immediate measure, the list of tentative projects (City Assistance program) should be widely discussed with donor community and financial institutions.

In addition, full support should be extended to KMC by HMG by synchronizing its plans and policies with the environmental programmes of KMC.

9.8.2 Institutional Development

The main bulk of the projects as well as the methods of their implementation are contained within the charter of existing institutions (National and Local). However upgrading and strengthening the measures and methods is a continuous process.

Kathmandu's environmental problems are hampered by the involvement of a large number of central government agencies, and the highly centralised nature of the MLD's functioning. There is an acute dearth of skilled staff in the KMC, and the gap between demand and supply is ever widening.

The institutional needs of CDS are not the creation of new government agencies, but the imperatives mentioned below:

- ❖ Coordination between KMC and other supporting government and non- government agencies,
- ❖ Evaluation of ministry plans within the context of an overall CDS programs, specially plans of MOPE and MLD,
- ❖ Liason with and management of private sector development activity in environment protection,
- ❖ Implementation of agreed and prioritised programs.

9.8.3 Mechanisms of Coordination

9.8.3.1 Central Coordination Centre :

The arrangement differs from existing machinery only in the establishment of:

- ❖ a KMC CDS coordination committee composed of senior officials of the KMC departments, CPC, deputy mayor, mayor, including invitees concerned with environmental plans and programs,
- ❖ a CDS coordination centre based in KMC. This will be a conglomerate of skilled manpower resources within Kathmandu valley, with particular representation from various stakeholders such as HAN, NHS etc. The coordination centre should be headed by a senior and highly motivated KMC official, preferably from CPC, who is willing to commit himself to the cause.

The recommended arrangement may be instituted not only for CDS activities but for every KMC activities.

9.8.4 Justification

It is truism to state that the KMC can play a key role in the environmental protection and improvement in the KMC area. Environmental disruption is mainly caused by callous citizens. Owing to lack of planning, the economic benefits are being siphoned off from the KMC area by vested interests. The beneficiaries of KMC's economic enterprises do not betray positive proclivities to invest for Kathmandu's environmental well-being.

As stated earlier, environmental concerns are not intrinsically woven with economy, but have to be discerned and addressed by society. Additional income is required to support KMC's conservation activities.

9.9 OVERVIEW

The developmental targets of the KMC can be summarised as:

- ❖ Consistent economic growth
- ❖ Environmental improvement and protection.

These two might seem contradictory at a glance. The eco-friendly economic alternatives and sustainable development initiatives enumerated in great detail in the foregoing pages of this report, points to the logical confluence of these two important targets.

Table 15: Environment - Issues and Implications

ISSUES	IMPLICATIONS	ACTORS
Wholeistic and balanced development of valley as a single ecological unit.	In the context of environment, KMC in particular and whole valley as a unit in general, it is important that extreme precautions development strategies are to be developed and extremely bold environmental protection measures are to be initiated at the earliest possible.	<input type="checkbox"/> Parliamentary Committee on Environment <input type="checkbox"/> MLD <input type="checkbox"/> MOPE <input type="checkbox"/> NPC <input type="checkbox"/> MPPW <input type="checkbox"/> MOTCA
Environmental constraint to growth in the Valley.	Land, water and air are severe constraints to unlimited growth. The Valley as a whole is a unique place in the world and hence, its development needs to be sympathetic to national and global interests.	<input type="checkbox"/> Cabinet <input type="checkbox"/> (KMC +4)* <input type="checkbox"/> Relevant ministries.
Minimizing the release of pollutants.	The growing pollution and the relatively dwindling protection measures is the crux of environmental problems evident in KMC.	<input type="checkbox"/> All sectoral and central govt. agencies
Land Management	With one of the Nation's most heavily populated cities, land is at a premium in KMC. Not only does steady increase in population means less land per capita, but the accompanying pressure on limited infrastructure is the serious threat.	<input type="checkbox"/> MLD <input type="checkbox"/> DDCCS <input type="checkbox"/> KMC <input type="checkbox"/> NPC <input type="checkbox"/> Cabinet <input type="checkbox"/> MLR
Solid Waste Management	MLD is in the process of finding a proper landfill site within or outside the Kathmandu Valley. MLD has also initiated the process of privatizing the solid waste management.	<input type="checkbox"/> Cabinet, MLD, MOPE, (KMC +4), Parliamentary Committee
Composting /Recycling	Promote composting and recycling for revenue generation.	
Air Pollution	Past three decades have seen a tremendous increase in air pollution mainly caused by the rapid increase in population accompanied by rise in number of vehicles, number of registered kilns and air polluting industry like Himal Cement Plant. The implication of air pollution control on health and tourism industry, therefore, is significantly high.	<input type="checkbox"/> NPC, EPC <input type="checkbox"/> HMG/Bureau of standards, Dept. of Transport Management, MOPE, Traffic Police, MI, NEA.
Industrial Pollution: The environmental problems created by industries assumes significance as their number increases. At the present, there is no system guiding or monitoring these industries in terms of their location, out puts and effluent. There is no effective industrial pollution and effluent standards. In its absence, there is no mechanism for implementation of pollution control or its monitoring.	<input type="checkbox"/> Positive impacts on the natural environment; <input type="checkbox"/> Energy demand in valley will be improved; <input type="checkbox"/> Carrying capacity of infrastructure will be improved; <input type="checkbox"/> Overall improvement in valley's environment and economy	<input type="checkbox"/> NPC, Parliamentary Committee, MI, MLD, DDCCs, EPC, MOPE.
Water Pollution: The pollution of municipal piped supply in terms of bacterial parameters is uniformly higher than WHO recommendations.	The primary aim of the KMC is to protect the public health. Water supply plays an important role towards this primary goal. Every effort should be made to achieve drinking-water quality standard as high as implementable.	<input type="checkbox"/> NPC, EPC, MOPE, <input type="checkbox"/> DDCCs, MPPW.

ISSUES	IMPLICATIONS	ACTORS
The pollution of surface water is marked both by chemically and biologically and are mainly due to raw sewage, industrial effluent and solid waste.		
Noise Pollution: In KMC, there is very little information on the extent of disturbance from community or neighbourhood noise. However, the recorded noise level (73-80 dBA) at the market areas indicate that the noise level is high.	Noise pollution is on a steady rise. Noise control measures neither exist nor are getting priority in national agenda. Hence, it will remain an environmental hazard.	<input type="checkbox"/> MOPE, MPPW, DOT,
Visual Pollution:	The visual pollution of KMC in the form of bill-boards, light pollution, ill maintained buildings are seriously hampering the tourism industry.	<input type="checkbox"/> KMC <input type="checkbox"/> MLD <input type="checkbox"/> MOPE
Cultural and Natural Heritage	Economically and socially the backbone of Kathmandu's identity.	<input type="checkbox"/> KMC, <input type="checkbox"/> Heritage Dept. <input type="checkbox"/> ML
Public Education	Serious lack of ethical values in KMC citizens although they are exposed to sanitation and hygiene.	<input type="checkbox"/> KMC, Media.
Information, Research, Technical Assistance etc.	Information is the key to action oriented programs.	<input type="checkbox"/> KMC.
Donor Assistance	KMC should seek donor assistance in priority areas of pollution control.	<input type="checkbox"/> KMC.
Institutional Development:	The institutional development needs of CDS are for an arrangement to improve the overall capacity of KMC.	<input type="checkbox"/> MLD <input type="checkbox"/> KMC.
Implementation of pilot project in certain limited areas	Confidence building	<input type="checkbox"/> KMC, MLD <input type="checkbox"/> Other sectoral agencies.

BIBLIOGRAPHY

1. Banskota, M. & Shakya, S.M. March, 1992. *Industrial Growth in Kathmandu Valley- A process of transforming Tourism Paradise to a Thriving City of Slums* (Paper read at INTERCEI, 92).
2. DHUD/MSUD-Project. April, 1990. *Urban Infrastructure Services Delivery in Nepal* (Kathmandu: Department of Housing and Urban Development).
3. DHUD/MSUD-Project. June, 1991. *Infrastructure Assessment Summaries of Municipalities in Nepal* (Kathmandu: Department of Housing and Urban Development).
4. DHUD/MSUD-Project. October, 1990. *Review of Existing Legislation Related to Major Urban Environmental Problems* (Kathmandu: Department of Housing and Urban Development).
5. HMG, CBS, *A Compendium on the Environmental Statistics of Nepal*, 1994.
6. HMG (DHUD)/HFK, PPK& CEMAT. 1991-92. *Reports on "Kathmandu Valley Urban Development Plans & Programs" - ADB/DHUD Study Project* (Kathmandu: Department of Housing and Urban Development).
7. HMG (LUDTC) UDLE (GTZ). June, 1992. *Urban Environmental Guidelines for Nepal*, (Pokhara: Urban Development Through Local Efforts and Local and Urban Development Training Center).
8. HMG/EPC. August, 1993. *Nepal Environmental Policy and Action Plan* (Kathmandu: Environment Protection Council).
9. HMG/MHPP. September, 1992. *Human Settlements Sector Review and Programme Preparation* (Kathmandu: Ministry of Housing and Physical Planning).
10. IUCN/NEPAL, NCS, 1991.
11. Mathema, M.B.; Joshi A. R.; Shrestha, S.L.; Shrestha, C.L. June, 1992. *Environmental Problems of Urbanization and Industrialization- The Existing Situation and the Future Direction* (Kathmandu).
12. MEIP/WB, Urbair, Oct, 1996.
13. MHPP/MLD/MSTP-Project. 1987-1989. *Infrastructure Assessment Reports* (Kathmandu)
14. MHPP/MLD/UDLE (GTZ). August, 1993. *Municipal Organizational Development and Administration (MODA) Report - Lalitpur Municipality* (Kathmandu: Urban Development Through Local Efforts).
15. NPC/IUCN. 1991. *Source of Industrial Pollution in Nepal- A National Survey* (Kathmandu: His Majesty's Government of Nepal, IUCN- The World Conservation Union).
16. NPC/IUCN. August, 1991. *Environmental Pollution in Nepal - A Review of Studies* (Kathmandu: His Majesty's Government of Nepal, IUCN- The World Conservation Union).
17. Shakya, S. M. et al, *Sector Program Assistance Document, DANIDA*.
18. Stanley/EAST/Mott Mc Donald. April, 1994 *Bagmati Basin Water Management Strategy and Investment Program- A study executed by the World Bank with assistance of Japanese Grant Fund Report* (Kathmandu).
19. UDLE (GTZ). August, 1991. *Future of Municipal Finance and the Octroi Discussion paper* (Kathmandu: Urban Development Through Local Efforts).
20. UNICEF/MLD. 1990. *Urban Basic Services, A Community Profile - Lalitpur Municipality* (Kathmandu: UNICEF).
21. World Bank/UNDP. 1992. *Environmental Management and Urban Vulnerability- Discussion papers* (Washington: The World Bank).

MUNICIPAL FINANCE

Naresh P. Shrestha
MUNICIPAL FINANCE SPECIALIST

LIST OF ABBREVIATIONS

ADB	Asian Development Bank
CAP	City Assistance Program
CAS	Corporate Accounting System
CBO	Community Based Organization
CDS	City Development Strategy
CEC	Commission of European Communities
CPC	City Planning Commission
DBMS	Data Based Management System
DDC	District Development Committee
DOR	Department of Roads
DOTM	Department of Transport Management
FNCCI	Federation of Nepalese Chamber of Commerce & Industry
GIS	Geographic Information System
HMG/N	His Majesty's Government of Nepal
HRI PC	Human Resource Information and Promotion Center
INGO	International Non-government Organization
KCDS	Kathmandu City Development Strategy
KMC	Kathmandu Metropolitan City
KVMP	Kathmandu Valley Mapping Program
KVTDC	Kathmandu Valley Town Development Committee
LSGA	Local Self Governance Act, 1999
MuAN	Municipal Association of Nepal
NASC	Nepal Administrative Staff College.
NEA	Nepal Electricity Authority
NGO	Non-government Organization
NTC	Nepal Telecommunication Corporation
NUSS	Nepal Urban Sector Strategy
NWSC	Nepal Water Supply Corporation
4P	Public Private Partnership Program
PSP	Private Sector Participation
TUGI	The Urban Governance Initiative
UDLE	Urban Development through Local Efforts
UNDP	United Nations Development Program
VAT	Value Added Tax
VDC	Village Development Committee
WB	World Bank

TABLE OF CONTENTS

List of Abbreviations	332
Table of Contents	333
List of Tables	334
List of Figures	334
10. MUNICIPAL FINANCE	335
10.1 Introduction	335
10.1.1 Background	335
10.1.2 Recent Initiatives	335
10.1.3 KCDS and Municipal Finance Element	336
10.2 Objectives	337
10.3 Existing Situation	338
10.3.1 Current Status of City Finance	338
10.3.2 Expenditure Planning/Budgeting	345
10.3.3 Private Sector Participation	349
10.3.4 Accounting	351
10.3.5 Review of Existing Legislation	364
10.4 Vision & Mission For KMC	364
10.4.1 Vision	364
10.4.2 Mission	365
10.5 Issues & Challenges	365
10.5.1 Resource Mobilization	365
10.5.2 Expenditure Planning/Budgeting	371
10.5.3 Private Sector Participation	372
10.5.4 Accounting	372
10.5.5 Identification of Legislative Gaps	374
10.5.6 Strategic Challenges	376
10.6 Strategic Framework	376
10.6.1 Goals	376
10.6.2 Policy Objectives	376
10.6.3 Strategic Objectives	377
10.6.4 Strategies	378
10.6.5 Options Considered for Legislative Support	380
10.6.6 Justifications	380
10.6.7 Uncertainties and Risks Related to the CDS, with or without Municipal Finance Interventions	382
10.7 Tools For Development	382
10.7.1 KMC's Current Organization and Capacity	382
10.7.2 Result Management	383
10.7.3 Logical Framework Matrix for Municipal Finance Development	384
10.8 Conclusions	385
10.8.1 Summary of Findings & Recommendations	385

Annex :1	Kathmandu Metropolitan City MODA Proposed Organization Structure	389
Annex: 2	Organization Structure (Previous) Kathmandu Metropolitan City Office	390
Annex: 3	Improved Organizational Structure Kathmandu Metropolitan City Office	391
Annex: 4	Vehicle Tax Rates	392
Annex: 5	Rate of Business (Professional) Tax	393
Annex: 6	Land Revenue or Land Tax and House-Land Tax	396
Annex: 7	Rate of the Integrated Property Tax	398
Annex: 8	KMC Revenue (Detailed) Data	399
Annex: 9	KMC Expenditures	414
Annex: 10	KMC Town Level Projects	444
Annex: 11	KMC Annual Budget 2057/58	445
Annex: 12	Budget Preparation Procedure: Showing Assistance from ADB and World Bank	457
Annex: 13	KMC Revenue Expenditures Projections	458
Annex: 14	Kathmandu Metropolitan City Information and Communication Strategy	460
Annex: 15	Targets for Improved Financial Management	461
Annex: 16	Revised Targets for Improved Financial Management	462
Annex: 17	Total Staff and Approved Positions in the KMC	464
Annex: 18	Total Staff and Approved Positions in the Finance Department of KMC	464
Annex: 19	Total Staff and Approved Positions in the Revenue Department of KMC	464
Annex: 20	Total Account Staff and Approved Positions in Other Departments of KMC	465
Annex: 21 (A)	Stakeholder Analysis - Mounicipal Finance	466
Annex: 21 (B)	Focused Group of Stakeholders for Municipal Finance	469
End Notes:		470
Bibliography		471

LIST OF TABLES

Table 1:	Main Functions of the sections of Finance, Account and Audit Department of Kathmandu Municipality in 1993.
Table 2:	KMC Revenue Data
Table 3:	KMC Expenditure Data
Table 4:	List of 4P Projects
Table 5:	Municipal Finance - Issues and Implications

LIST OF FIGURES

Figure 1:	KMC Actual Revenue 1999-00 KMC Revenue Data
Figure 2:	Own Source Vs. Grants & Loans FY 2956/57 (1999/00)
Figure 3:	KMC Expenditures
Figure 4:	Financial Year 2053/54
Figure 5:	Financial Year 2054/55
Figure 6:	Financial Year 2055/56
Figure 7:	Financial Year 2056/57
Figure 8:	Bace Case
Figure 9:	Potential
Figure 10:	Financial Year 2057/58

10.

Municipal Finance

Historically, as far as KMC's municipal finance is concerned, prior to B.S. 2027 (1970 AD), financial functions were carried out by the "Kosh Phant" (Fund Unit). The Koshadhachha (treasurer) used to be the head of this unit, under the direct supervision of the Pradhan Adhikrit (Senior Executive) and there were no separate executives for accounting and taxation functions. During the Panchayat era, the senior executive as well as the organization was under the influence of Anchaladhish Karyalaya (Office of the Zonal Commissioner).

10.1 INTRODUCTION

10.1.1 Background

In the year 2027 B.S., the Kosh Phant was split into two sections: account section and tax section. The tax section was headed by the tax executive and was responsible for the collection of taxes and fees. On the other hand, the account section was still headed by the treasurer. Later in the year 2041 B.S. (1984 AD), with the permission of the then Ministry of Panchayat and Local Development, the title of the treasurer was changed to "Account and Stores Executive."

In the year 2050 B.S. (1993 AD), the KMC board approved and implemented the organizational structure prepared by MODA (Municipal Organization Development and Administration) task force under Organizational and Management Improvement Program of the then Kathmandu Municipality. The organization structure is illustrated in Annex 1 and accordingly, there were six departments and 32 sections. The Finance, Account & Audit Departments came into existence as a single department responsible for municipal finance functions. There were five sections under this department as illustrated in Table 1:

Again in 1997, the organizational structure of KMC was modified in the changed context of decentralization and the new status of the Metropolitan City. The number of departments was increased from 6 to 11, and sections from 32 to 43. The organization structure is illustrated in Annex 2. The Finance, Account & Audit Department became the Finance Department with three sections: Revenue Section, Audit Section and Account &

Budgeting Section. Stores section was transferred to the Administration Department.

10.1.2 Recent Initiatives

KMC's Institutional Strengthening Program started from September 1999 with the technical assistance from ADB. The goal of this program is "Improving the capabilities of Kathmandu Metropolitan City for efficient, responsive and sustainable urban management in the Kathmandu Metropolitan Area." This program has four components:

- ❖ Organizational competence building
- ❖ Improved financial management
- ❖ Improved operation and maintenance for solid waste management, and
- ❖ Private sector participation

Under the organizational competence building component, the TA program made necessary adjustments in the organization structure and reduced the number of dysfunctional sections and proposed a new structure comprising 12 departments and 33 sections. The Municipal Council meeting of May 1, 2000 approved the proposed structure and is now functional. The new organization structure is illustrated in Annex 3.

As per the new arrangement, the Revenue Section was upgraded to the new department. Now the revenue department has two sections: a) Revenue planning and monitoring section, and b) Tax & fees collection section.

Similarly, the finance department also has two sections: a) Account and budgeting section, and b) Store section.

Table 1: Main Functions of the sections of Finance, Account and Audit Department of Kathmandu Municipality in 1993.

S#	Sections	Main Functions
1.	Planning and Budgeting Section	<ul style="list-style-type: none"> ❖ Financial Resource Analysis & Planning ❖ Budget Formulation ❖ Programming & Monitoring
2.	Revenue Section	<ul style="list-style-type: none"> ❖ Direct & Other Tax Collection ❖ Indirect Tax Collection ❖ Other Revenue Collection
3.	Accounts Section	<ul style="list-style-type: none"> ❖ Regular Expenditure ❖ Development Expenditure ❖ Other Expenditure
4.	Audit Section	<ul style="list-style-type: none"> ❖ Audit & Inspection ❖ Property Assessment ❖ Irregularities & Arrears Clearance
5.	Stores Management Section	<ul style="list-style-type: none"> ❖ Internal Office Stores Management ❖ Central Stores Management ❖ Procurement

Source: Report on Organizational and Management Improvement Program, Kathmandu Municipality; p. 15, August 1993.

Under the improved financial management component, the TA focused on following areas:

1. Revenue Mobilization

House numbering in three pilot wards for integrated property tax (IPT), preparation of vehicle database for vehicle tax, estimation of IPT

2. Corporate Accounting

Modification of charts of accounts, accounts manual, customizing of corporate accounting software developed by UDLE/GTZ, on-the-job training.

3. Budgeting System Improvement

Introduction of more realistic program based budgeting, expenditure control procedure and financial analyses.

Improved financial management component of ADB TA is directly linked to the municipal finance component of the CDS program. So in the context of CDS, the

issues and challenges studied by the above program will be considered.

10.1.3 KCDS and Municipal Finance Element

The need to strengthen policy environment, institutional and financial capacities, and to address pressing service deficiencies is more than ever-critical for KMC. The role of public participation, especially those of the urban poor and other vulnerable groups and the need for local ownership of projects and programs is now widely recognized as vital to secure sustainable urban growth. It is on the context that the CDS approach has been found to be an effective mechanism to assist KMC in identifying its issues, constraints and opportunities, and formulating a vision for the city, along with a concrete action plan for implementation. It should be also noted that the CDS exercise is a process for capacity building.

KCDS is a facilitating participatory process by which the local stakeholders define their vision for KMC,

analyze its economic prospects, and identify priorities for action and for external assistance to implement the strategy.

Urbanization in KMC demands rapid expansion of services and infrastructure facilities and puts considerable strain on municipal finance. These demands have mostly been tackled by central government interventions. However, financial problems at national level have led to shortfalls of financing of KMC's infrastructure development. In order to prepare a common vision for the development of the city, various key areas connected with it have been considered under the CDS and Municipal Finance constitutes a major area. The Municipal Finance element will focus on the "bankability" or the "Fiscal balance" dimension. Municipal Finance describes the components of sound financial management, revenue generation, budget formulation and execution, financial information and control.

In the municipal finance context, KMC is characterized by low collection of taxes, insufficient and under-qualified staff, dependency on the central government for the local development fee, and weak financial monitoring and evaluation. KMC's own funds have not been able to keep pace with the incremental rate of urbanization, fast growing population, and increasing demand for its services.

CDS is a facilitating participatory process by which the local stakeholders define their vision for the city, analyze its economic prospects, and identify priorities for action and for external assistance to implement the strategy. In the context of municipal finance, the objective of CDS is to increase bankability of KMC.

This city diagnostic report under CDS, deals with the municipal finance component and explores present and future trends, and recommends draft strategies. The analysis is based on existing documents and interviews/consultations with central government officials, with the executive staff of KMC, and with the expert and consultants of the World Bank's CDS program and those of other relevant donor programs regarding urban development in Kathmandu. Using the data on municipal budgets collected from KMC, the report also looks at the trends in KMC finance from FY 1992/1993 to 1999/2000.

Chapter one examines the historical perspective and recent initiatives of KMC municipal finance. Then, it

describes CDS in the municipal finance perspective. Chapter two discusses the objectives of the municipal finance. Current status of city finance is analyzed in the chapter three. It begins with KMC's role analysis. Then existing situation regarding resource mobilization, expenditure planning/budgeting, private sector participation and accounting are explored. A brief SWOT analysis of these elements is then presented. After that, the existing legislation is reviewed in brief.

Vision and mission for KMC is exhibited in Chapter four. Chapter five exhibits issues and challenges associated with various components of KMC municipal finance. It then identifies the legislative gaps about municipal finance, which is followed by strategic challenges.

Chapter six outlines various goals, strategic objectives and strategies regarding municipal finance. In addition, the options considered for legislative support is also discussed in this chapter.

Chapter seven explores KMC's current organization and capacity, which is followed by indicators for performance evaluation.

10.2 OBJECTIVES

The principal objective of the study is to assist KMC in improving the city's livability, competitiveness, bankability, governance and management capacities. The CDS is being prepared to assist KMC in creating a vision for the city to guide future actions. It is intended to provide an overall framework within which KMC will synchronize and rationalize various future programs in a strategic and coherent manner. The CDS will also help to prioritize investments linked to the city's long term development strategy and provide a clear basis for KMC to seek and attract additional resources from bilateral and multilateral donors as well as the private sector.

In the context of municipal finance component, the objective of the CDS is to increase bankability of KMC.

The second objective of the study is to assist KMC in addressing the issues of the urban poor. At present the city lacks specific policy and programs regarding the underprivileged and marginal sector of the society and specially regarding the growing squatter settlements in

different locations of the city. The study will help to formulate policies and action plans for the improvement of slums and squatter settlements of the city.

10.3 EXISTING SITUATION

The present study attempts to prepare CDS for KMC taking into consideration the development occurring beyond its boundary and has tried to focus on those actions, which would be primary responsibility of KMC. This section deals with the present situation of KMC in relation to following elements:

1. Resource Mobilization
2. Expenditure Planning/Budgeting
3. Private Sector Participation
4. Accounting

KMC as the local government is a municipal service provider and engaged in public welfare, service and infrastructure development activities. As per the provision of Local Self-Governance Act 1999, the municipalities as the local government have to perform mandatory and optional municipal functions. The mandatory functions and responsibilities of any Municipality are:

1. Financial
2. Physical/Infrastructure Development
3. Water Resources, Environment and Sanitation
4. Education and Sports Development
5. Culture Related
6. Construction and Transport Related
7. Health Services Related
8. Social Welfare
9. Industry and Tourism Related
10. Miscellaneous

Apart from the above mandatory functions, the following are the optional/recommended functions:

1. To promote quality secondary and college education.
2. To conduct literacy campaigns, open libraries.
3. To control unplanned settlement within the Municipality Area.
4. To implement employment schemes
5. To maintain old age homes and those for the retarded persons.
6. To provide electricity, telecommunications, ambulance services and corpse transporting vehicles.

7. To arrange for recreational parks, playing grounds, museums, zoos, parks etc. in the Municipality Area
8. To launch programs to control river pollution.
9. To formate user groups, etc.¹

In the intergovernmental allocation of functions and expenditure responsibilities, the above mentioned services are "lower order services" whose benefits are largely confined to municipal jurisdiction. KMC has been providing almost all the mandatory and optional municipal services except water supply, electricity and communication.

In this broader context, KMC, as an institution, plays a very significant role to implement the strategies in action. Or in other words, KMC is mainly responsible for the overall development activities of the city.

10.3.1 Current Status of City Finance

Municipal finance of KMC could be broken into following components for the purpose of the study:

10.3.1.1 Resource Mobilization

Section 8.2 of the Ninth Plan (1998-2002) of the Government of Nepal describes about the local development plan and emphasizes decentralization and increasing the responsibility of local governments. Similarly, Section 8.2 describes about human settlement and urban development and specifically mentioned about Kathmandu Valley Development Program and Town Development Fund.²

Under the Plan, local governments will have the primary responsibility for urban development; and the municipalities will need to expand their financial resource base and strengthen their urban management capabilities with the eventual elimination of the tax looming, local governments needed to expand their sources of revenue. In this way, the Plan emphasizes on local resource mobilization for the benefit and service of the local people.

(a) Past Trend

Not only in Nepal, but also in the region, the finance of municipal governments is in an unsatisfactory state. Most of them rely on transfers from the central governments for bridging the fiscal gap - a gap between resources that they have at their command and what they

need in order to fulfill their mandated responsibilities. On one hand, the degree of fiscal autonomy to the municipalities are limited, on the other, it is evident that municipalities are not able to effectively use even the limited fiscal powers that they have under the intergovernmental arrangements. To make the matter worse, local revenues are not adequately responsive to the changing needs.

Before the introduction of Local Self-Governance Act 1999, the major source of revenue for all municipalities in Nepal, including Kathmandu was octroi. Octroi is a kind of local tax without very much local character - collected by the municipality on the basis of 1 per cent of the value of goods entering the municipalities. In 1997/98, the own source revenue of 58 municipalities of Nepal were Rupees 1125 million whereas contribution from one single source, i.e., octroi was Rupees 827.24 million in which Kathmandu claimed the biggest pie, i.e., nearly 24.97 percent (after distribution to other valley municipalities). That year, Kathmandu collected Rs. 206.58 million rupees from octroi. It comes to be approximately 80 percent of total revenue collected. (Source: KMC budget documents).

(b) Situation After New Act

The introduction of Local Self-Governance Act 1999 (May 1999) abolished the octroi and the municipalities are no longer allowed to collect it. The question now is: What could be the most suitable alternative to octroi? It is very clear that in the present situation none of the single local tax could be a strong alternative to octroi, which is very much essential. The above financial scenario shows that in the absence of such a big revenue source (octroi), the municipalities cannot even meet their employee's salaries and other administrative expenses. This could turn the municipalities into merely administrative units and data documentation centers. So the time has come in the part of the government to clarify at policy level that whether it intends to view the municipalities as a development agency or an administrative documentation center.

Considering the huge contribution of octroi in the financial structure of the municipalities, the government will provide more or less same amount of revenue in the form of local development fee. The government itself collects the local development fee from different custom points and distributes to municipalities as per ratio of 1997/98 octroi collection. However, the provision of local development fee is a temporary arrangement and

it may not be continued for a long period because it too has more or less the same features of octroi.

The local development fee was proposed as an interim alternative to octroi. During the 5-year time frame, all the municipalities of Nepal are expected to completely replace the local development fee by mobilizing the existing and the new proposed taxes.

Too much dependency on octroi and not paying attention to other sources of revenue could be the reason for present financial turmoil in the Nepalese municipalities.

(c) KMC Sources of Revenue

At present, the main sources of KMC's revenue comprises following elements:

I. Own Source Revenue:

a. Tax Income:

(i) *Land Revenue* : The municipality collects land revenue, as prescribed, on the land within the municipal area.

(ii) *Vehicle Tax* : The municipality levies vehicle registration and annual vehicle tax on the prescribed vehicles within its jurisdiction and occasional vehicle tax, as prescribed, on all kinds of vehicles entering into its area. The current rate levied by KMC and prescribed in the Local Self-Governance Rules, 2056 is illustrated in Annex 4.

(iii) *Advertisement Tax* : The municipality levies tax on signboards, neon-boards, stalls, etc., permitted to be placed on roads, junctions, public places in its area for advertisement, publicity, etc.

(iv) *Business Tax (Enterprise Tax)*: The municipality collects enterprise tax, as prescribed, on trade, profession or occupation within its jurisdiction on the basis of capital investment and financial transaction. The current rate levied by the KMC and prescribed in the Local Self-Governance Rules, 2056 is illustrated in Annex 5.

b. Income from Fees:

(i) Such as vehicle entrance fee, bus park fees, parking fee, property valuation fee, building map approval fee, and market fee, etc.

c. Income from Property:

(i) Rental Income - income from rental of KMC property.
(ii) Income from Metro FM Station.

d. Income from Investment:

- (i) Such as interest from bank deposit, revolving fund, government bond and gain on sale of investment.

e. Sundry Income:

- (i) Minor Fees : such as application fee, registration fee, environment & sanitation fee, tender document fee, map form fee, certification fee, other form fee, pet animal (dog) registration fee, etc.

- (ii) Charges: such as tourism charges, wastage disposal charge, block number plate and road maintenance charge.

- (iii) Other Sales: such as auction of animals/materials, sale of scrap, sale of trees, sale of compost, and gain on sale of assets.

- (iv) Fine and Penalty: such as contractor performance penalty, forfeiture of deposit payable, late fee penalty, and miscellaneous/insurance claim received.

II. Government Grant and Others:

- (a) Local Development Fee : The Local Development Fee could be termed as octroi compensation grant or subsidy, received from His Majesty's Government of Nepal. Local governments of Nepal are supposed to receive this grant in regular intervals, but in reality the payment made by the ministry of Local Development to the local governments are very irregular and tardy.

- (b) Grants from National and International Organizations

III. Additional Sources

Besides the above regular revenue sources, the Act has mentioned about the following new revenue sources:

- (i) House and Land Tax/Integrated Property Tax (IPT) : From the beginning of this fiscal year (July 2000) the central government handed over the responsibility of collecting house and land tax to the local governments.

The municipalities are now authorized to collect either house & land tax or the Integrated Property Tax. Annex 6 illustrates house & land tax, and Annex 7 illustrates IPT rates.

- (ii) Rent Tax: The municipality may collect rent tax, as prescribed, on the amount of rent in cases where any house, shop, garage, warehouses, stall, shed, factory, land or pond within its jurisdiction is rented wholly or partly.

The municipality may impose rent or tenancy charges, as prescribed, on temporary shops permitted to be kept at the market places, public places, unregistered land or roadside constructed, supervised or operated by it within its jurisdiction.

Provided that no permanent shop shall be allowed to be constructed in a manner to obstruct the public movement and sanitation.

Status: Not collected yet

- (iii) Entertainment Tax: The municipality may levy entertainment tax, as prescribed, on the means of entertainment such as cinema halls, video-halls, cultural show halls, permitted within the municipal area.

Status: Under Negotiation with Hall Owner's Association.

- (iv) Commercial Video Tax: The municipality may levy tax as prescribed on video, projector, cable, etc. used by any person or organization for commercial purpose.

Status: Not collected yet.

- (v) Various fee, user charge and penalty

Table 2 illustrates summary of various sources of revenue data of Kathmandu Metropolitan City for the last eight years and their percentage. The details are provided in Annex 8.

Table 2
KMC Revenue Data

(Nepalese Rupees)

Accounting Codes	1991/1992		1992/1993		1993/1994		1994/1995			
	2048/049 Actual	2049/050 Budget	Actual	Percent	2050/051 Budget	Actual	Percent	2051/052 Budget	Actual	Percent
90 04 00 TAX INCOME	3,195,247	4,663,275	4,507,889	96.67%	14,757,375	5,518,881	37.40%	14,470,000	8,510,373	58.82%
91 00 00 INCOME FROM FEES	7,277,146	7,594,000	9,181,653	120.91%	11,881,600	5,681,084	47.81%	12,925,000	22,469,520	173.85%
92 00 00 INCOME FROM PROPERTY	1,382,308	2,218,666	1,494,478	67.36%	2,615,799	1,681,753	64.29%	3,265,599	3,221,518	98.65%
93 00 00 INCOME FROM INVESTMENT	-	-	-	-	-	-	-	-	-	-
94 00 00 SUNDRY INCOME	2,771,233	1,610,000	2,063,574	128.17%	8,004,615	1,639,703	20.48%	6,914,000	2,714,987	39.27%
00 TROI	152,563,449	232,655,000	204,330,065	87.83%	252,875,000	213,944,690	84.60%	257,000,000	214,400,902	83.42%
TOTAL OWN SOURCE REVENUE	167,139,383	248,740,941	221,577,659	89.08%	290,134,389	228,466,111	78.74%	294,574,599	251,317,500	85.32%
95 00 00 GRANTS AND DONATIONS	11,140	100,000	200,000	200.00%	20,200,000	2,695,865	13.35%	1,350,000	251,535	18.63%
96 00 00 INCOME FROM RECEIPTS CONTRACT	-	-	-	-	-	-	-	-	-	-
97 00 00 PRIOR YEAR INCOME	-	-	-	-	-	-	-	2,200,000	2,108,538	-
98 00 00 LIABILITIES WRITTEN BACK	-	-	-	-	-	-	-	-	-	-
60 00 00 LOANS	-	1,500,000	1,500,000	100.00%	29,000,000	500,000	1.72%	140,000,000	3,401,233	2.43%
35 00 00 LAST YEARS' BALANCE	63,909,589	-	143,982,908	-	115,015,611	115,015,571	-	35,609,774	35,606,091	-
GRAND TOTAL	231,060,112	250,340,941	367,260,567	146.70%	454,360,000	346,677,567	76.30%	473,734,373	292,684,897	61.78%

**Table 2
KMC Revenue Data**

(Nepalese Rupees)

Accounting Codes	1995/1996 2052/053		1996/1997 2053/054		1997/1998 2054/055	
	Budget	Actual	Budget	Actual	Budget	Actual
90 04 00 TAX INCOME	14,433,000	8,512,836	15,455,000	12,687,017	92,775,000	17,246,363
91 00 00 INCOME FROM FEES	17,988,700	18,488,886	20,242,560	15,244,518	30,818,065	17,060,177
92 00 00 INCOME FROM PROPERTY	3,411,823	3,486,480	4,204,765	3,704,819	4,704,765	3,900,972
93 00 00 INCOME FROM INVESTMENT	300,000	-	300,000	-	10,300,000	1,122,672
94 00 00 SUNDRY INCOME	6,134,000	6,755,626	6,953,000	8,947,572	37,667,000	4,283,456
00TROI	293,100,000	247,813,603	288,100,000	258,104,698	390,300,000	318,260,415
TOTAL OWN SOURCE REVENUE	335,377,523	285,062,431	335,255,325	299,688,620	566,564,830	361,874,056
95 00 00 GRANTS AND DONATIONS	1,115,000	135,000	31,635,000	454,970	260,650,000	290,000
96 00 00 INCOME FROM RECEIPTS CONTRACTS	-	-	-	-	-	-
97 00 00 PRIOR YEAR INCOME	500,000	2,141,301	500,000	1,871,096	300,000	3,805,054
98 00 00 LIABILITIES WRITTEN BACK	-	-	-	-	-	-
60 00 00 LOANS	30,000,000	4,196,327	92,817,000	14,391,740	387,000,000	40,148,327
35 00 00 LAST YEARS' BALANCE	40,515,070	39,840,070	28,367,871	26,397,919	47,885,170	45,423,686
GRAND TOTAL	407,507,593	331,175,129	488,575,196	344,604,345	1,262,400,000	451,541,123
						35.77%

Figure 1: KMC Actual Revenue 1999-00
KMC Revenue Data

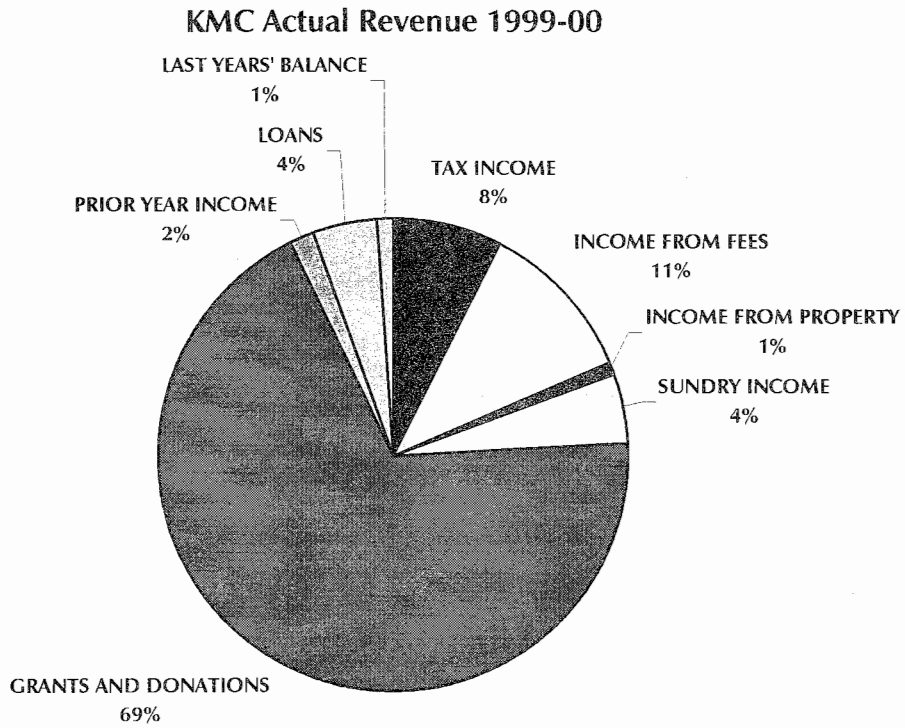
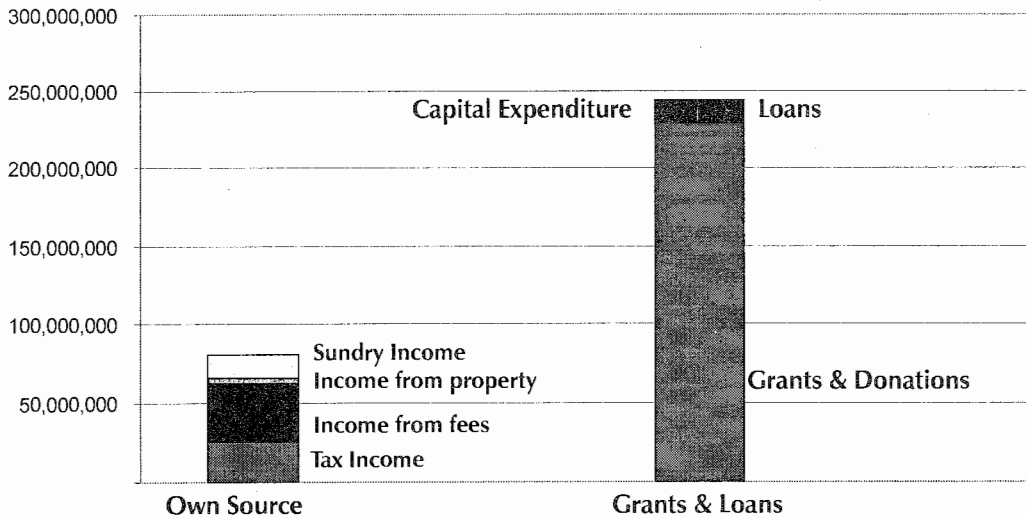


Figure 2: Own Source Vs. Grants & Loans
FY 2956/57 (1999/00)



Tax Income	25,493,068	Grants and Donations	229,234,744
Income from Fees	36,221,356	Loans	14,700,000
Income from Property	3,662,111		
Sundry Income	14,899,491		
Total own Source Rev (NRs.)	80,276,026		

10.3.2 Expenditure Planning/ Budgeting

The second most important area of municipal finance is expenditure planning /budgeting. It has been clearly mentioned in the Ninth Plan of the HMG/N, that the local governments will have the primary responsibility for urban development; and the municipalities will need to expand their financial resource base and strengthen their urban management capabilities. In this context, there could be the question of how KMC is performing with designated functions of urban service delivery? What is the status of expenditure planning inside KMC and whether it is controlled and regulated or not? Situation analysis is presented in the following paragraphs.

10.3.2.1 Past Trend

In the past, KMC budgets were prepared centrally and without much detailed consultation with all the department and sections, and tend to be unrealistic. Till the last fiscal year, KMC used traditional method of budget preparation in conformity to the rules and regulations, and budget preparation was based on past, current and next year's programs. The features of traditional budgeting were:

- The budget was prepared on the basis of the previous year's expenditures.
- Previous year's programs continued into the current year.
- There was a problem of budget management and implementation.
- It was not used as a practical management tool.

Summary of KMC expenditures for last eight-years (budget vs actual) are illustrated in table 3 and details are presented in Annex 9.

10.3.2.2 Budget Classification

In the previous budgeting system, for the purpose of preparing and implementing the budget, KMC divided expenditures into "regular" and "development". The meaning of "regular and development budgets" is not the same as "recurrent and capital budgets". The two classifications should not be seen as the same, nor should the terms be mixed up. The essential differences are: -

- a) Operations, repairs and maintenance are classified as development expenditure under KMC's previous budgeting procedure, whereas these should be included in recurrent expenditures.

- b) Fixed assets such as vehicles and equipment etc. are classified as regular expenditures, whereas these should be included in capital budget.

The disadvantages of the previous classification are:

- The concept of recurrent expenditures (as the means to keep the organization and assets of KMC running) is not fully realized if operations and maintenance are not considered as committed recurrent expenditure, and
- The concept of adding to the asset value of KMC cannot be correctly considered, if new fixed assets are not counted as capital investment.

10.3.2.3 Process

This starts with the then revenue section of the finance department preparing estimates of the projected revenues for the fiscal year. These were based on whatever information was available and taken into account policy initiatives to improve or extend collection. However due to a lack of appropriate data the projections were often:

- based on assumptions drawn from the experience of previous years, and
- too optimistic in order to placate diverse and competing political interests.

The major actors in the previous process were not Spending Departments but the Finance Department together with the Executive Officer and Budget Committee chaired by the political leader (Elected representative). This approach shows that not only budget formulation but also its subsequent monitoring and control proceeded largely without any departmental involvement.

The tendency to apply political judgements after the estimates have been substantially assembled leads to numerous and time consuming changes that might be avoided if these judgements were made first and fed into the compilation process. Similarly, ward level expenditures, which amount between 30 and 40% of the total expenditure is based on an allocation formula and not detailed in terms of specific spending proposals.

10.3.2.4 Consequences

The principal problem is due to the delay in its approval: the budget not being used for its intended purpose of

guiding expenditures in relation to projected revenues. Instead it became a retrospective record of expenditures that have been authorized as advances against draft expenditure ceilings that would very likely be changed when the budget is finally approved, but in any event have to match the actual expenditures incurred during the year.

Most departments and wards prepare their budgets using the traditional approach whereby expenditure in the previous fiscal year is taken as the yardstick and used to determine allocations in the future. The result is that too little attention is given to how the money will be spent, and of equal importance was it, or will it, be spent wisely.

In the report "Detailed Revenue and Expenditure Breakdown and Basic Financial Information of 58 Municipalities of Nepal (FY 1995/96 - 1998/99)" the comments regarding KMC were as follows:

Expenditure Side

- The Overall performance in expenditure side was not good.
- The percentage of current expenditure was too high (64%). But the rule, which was on Local Governance, permitted only 25-40%. So the municipal corporation should consider limiting the cost.
- The expenditure in social programs 32% showed poor performance. Municipal Corporation should give priority on social program.³

The above comments is the evidence of poor budgetary performance of KMC. The management should take note of that and should take necessary corrective actions.

10.3.2.5 Current Status

Keeping in view the problems associated with previous expenditure planning/budget procedure and the requirement of KMC, ADB assisted KMC Institutional Strengthening TA helped formulating budget for the fiscal year 2057/58 (2000/01). The activities which have been completed are as follows:

1. Several rounds of brainstorming workshop and discussion sessions with the department heads and section chiefs.

2. Training to junior engineers of Public Works Department and Urban Development Department for preparing Ward Level Local Area Plans.
3. Budget Formulation Procedure Manual prepared.⁴
4. New Charts of Account prepared.
5. Formats for Expenditures Budgeting prepared.⁵
6. Attendance by staff at all levels within KMC and from the wards for various training sessions on the new budget procedure and how to complete the form.
7. A two-day workshop for the ward chairpersons and department heads on the new budget procedure.
8. Adoption of the suggestions made in working paper B6: Revenue Forecast for FY 2057/58.
9. Local Area Plan at three pilot wards prepared and incorporated into the new budget.

After these activities, the KMC board under the chairmanship of the Deputy Mayor formed a budget committee. The committee asked all the departments and wards to complete the procedures as per training given and submit them back. Then with rigorous exercise, the committee formulated the new budget and it was approved by the Municipal Council on August 6, 2000.

This budget could be termed as a mix of traditional line item budget and program budget and has tried to follow the concept of decentralization. This budget also acknowledged the plans and programs of respective wards and departments. In addition it also prioritized the ward level and town level projects. This budget also brought forward the concept of balancing the budget (revenue and expenditure); and classified them into Recurrent Budget and Capital Budget, which was further classified into ward level projects and town level projects. Annex 10 exhibits the budget system and Annex 11 exhibits the KMC budget for 2000/2001.

Earlier this year, when ADB TA started the new budget initiatives, Kathmandu City Development Strategy Program was also expected to begin in February-March, 2000. On the basis of this assumption, ADB TA envisaged cooperation from the KCDS program regarding development of vision for KMC and prepared a work plan, which is illustrated in annex 12. However, due to certain factors, KCDS was delayed for some time and it did not materialize.

Table 3
KMC Expenditure Data

Accounting Codes	1991/1992		1992/1993		1993/1994		1994/1995	
	Actual 48/49	Budget 49/50	Actual 49/50	Budget 49/50	Actual 50/51	Budget 50/51	Actual 51/52	Budget 51/52
70 00 00 Salaries & Benefits	18,021,920	27,979,308	15,911,640	56.87%	31,110,000	23,996,389	77.13%	27,976,341
71 00 00 Operational Expenses	43,038,221	105,657,240	88,441,385	83.71%	119,045,000	96,541,740	81.10%	110,396,520
80 00 00 O & M of Infra & Services	22,987,288	176,356,692	132,700,797	75.25%	226,655,000	179,321,326	79.12%	257,044,824
10 00 00 Capital Expenditure	2,924,598	55,350,000	15,186,232	27.44%	64,375,000	8,648,060	13.43%	49,600,000
TOTAL EXPENDITURES	86,972,027	365,343,240	252,240,054	69.04%	441,185,000	308,507,515	69.93%	445,017,685
								253,288,966
								56.92%

(Nepalese Rupees)

Table 3
KMC Expenditure Data

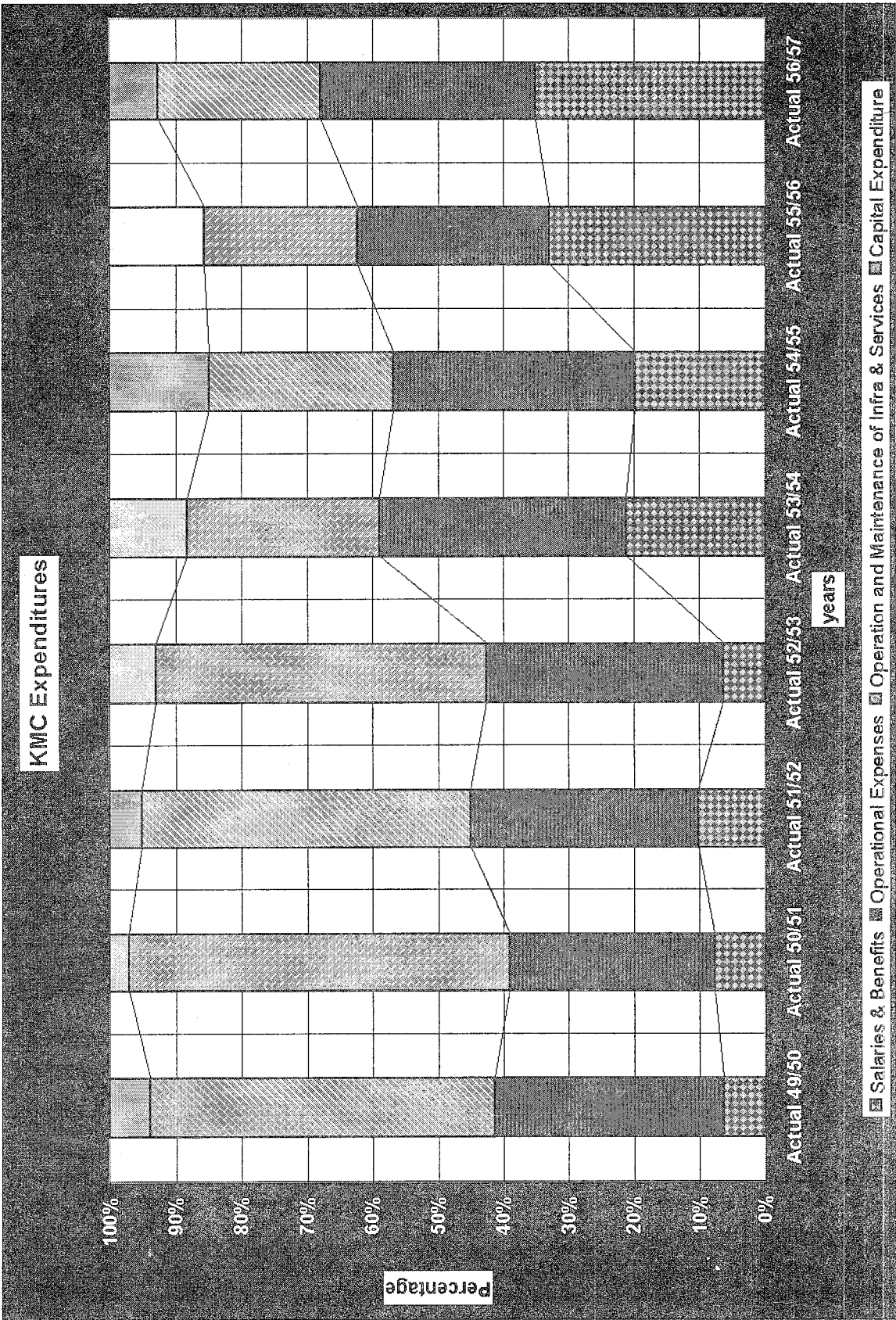
Accounting Codes	1995/1996		1996/1997		1997/1998	
	Budget 52/53	Actual 52/53	Budget 53/54	Actual 53/54	Budget 54/55	Actual 54/55
70 00 00 Salaries & Benefits	24,195,875	19,466,722	79,077,999	66,573,574	84.19%	86,874,208
71 00 00 Operational Expenses	122,487,600	109,413,551	124,565,798	118,775,116	95.35%	161,867,643
80 00 00 O & M of Infra & Services	214,246,000	152,610,145	199,852,000	91,736,697	45.90%	123,435,279
10 00 00 Capital Expenditure	82,400,000	21,262,405	170,196,000	37,052,821	21.77%	227,820,000
TOTAL EXPENDITURES	443,329,475	302,752,823	573,691,797	314,138,208	54.76%	438,598,128
						34.20%

(Nepalese Rupees)

Table 3
KMC Expenditure Data

Accounting Codes	1998/1999		1999/2000		2000/2001	
	Budget 55/56	Actual 55/56	Budget 56/57	Actual 56/57	Budget 57/58	Actual 57/58
70 00 00 Salaries & Benefits	109614981	93919113	85.68%	134316500	114062390	84.92%
71 00 00 Operational Expenses	237795252	83626865	35.17%	163965891	106704758	65.08%
80 00 00 O & M of Infra & Services	545065535	66457580	12.19%	462458550	80563731	17.42%
10 00 00 Capital Expenditure	231588000	40719388	17.58%	114845000	23853757	20.77%
TOTAL EXPENDITURES	1124063778	284722946	25.33%	875585941	325184636	37.14%
						1054016000

(Nepalese Rupees)



10.3.3 Private Sector Participation

Another important area of municipal finance is the private sector participation. At present KMC recognized the principles of private sector participation in the provision of urban services. But KMC does not have concrete policy and procedures in black and white. It has created confusion to the private sector that wants to work with the city.

Private sector involvement is changing the way governments do business around the world. Development franchises for constructing infrastructure are one result of this trend toward greater private involvement in producing government services. As an extension of the services traditionally provided under construction contracts, franchises grant private firms a time-limited opportunity to finance, design, build, operate, and collect revenue from infrastructure facilities. At the end of franchise period, usually after 20 to 50 years, the government acquires, free of charge, a facility that it otherwise would have had to finance and operate with scarce public resources. This approach to project delivery has revolutionized infrastructure procurement in the developing world and is spreading to industrialized countries.

Public-private partnerships are not a panacea for the government's inability to finance all the infrastructure and the increasingly mobile public demands. Only projects with the largest and most certain net revenues successfully compete for the attention of investors. Development franchises are thus merely a supplement to public financing of less self-supporting facilities. By allowing the public sector to focus its resources on developing otherwise un-financeable projects, public-private partnerships help to fill the "infrastructure gap" between what the treasury can afford and what the public needs.⁶

10.3.3.1 Past Trend

KMC has limited resources for its functions, while the private sector is not empowered to make policy decisions. It is KMC's conviction, however, that if the public and private sectors come together, amazing results are possible. A coordinated effort by these stakeholders, beginning with a shared vision and joint commitment, would benefit the city to a degree impossible to attain individually. KMC has thus launched the Public Private Partnership Program (4P) to create environment where the private sector can work together with KMC and to

encourage the private sector to share all costs, benefits, risks and opportunities of joint projects.

In the past KMC had organized various 4P seminars to attract private sector investment in the municipal services and infrastructure. The budget of fiscal year 1998/99 provided the provision of Private participation in the development activities of KMC⁷, which are listed in Table No. 4.

10.3.3.2 Current Status

Critics take building of traffic islands with private sector participation in the process of beautification of the city as a success story. Many other municipalities of Nepal are now trying to follow this example of Kathmandu. But the story of private sector participation is different in the case of capital intensive projects. Although there were 31 projects listed in the budget of fiscal year 1998/99 for private sector participation, only three projects materialized in a limited manner. What went wrong? Why is the private sector reluctant to invest in the provision of urban services? What does KMC need to do to attract the Private Sector? Services of PSP expert was sought under the ADB TA to tackle these questions. The activities which have been completed are as follows:

(i) Current Capacity of KMC in PSP Assessed

KMC in cooperation with ADB TA established an Executive Task Force and an Operational Working Group. Institutionalization is paramount for future sustainability of PSP. Private sector participation cuts across various KMC functional areas and requires multi-disciplinary focus to bring PSP transactions to the market. KMC has responded with timely creation of a 15 member Executive Task Force, of which 7 are from the private sector and the remainder from KMC (the mayor; KMC secretary; representatives from five political parties, and a KMC department head). The private sector members include representatives from the chamber of commerce, professional associations, an advocacy group for transparency and the media.

(ii) Policy Framework and PSP Guidelines Completed

Policy framework and PSP Guidelines have been prepared and translated into Nepali as well. These documents will be the cornerstone of all the training events that are designed to strengthen KMC's institutional capacity in PSP development and will eventually support the standard operating procedures for PSP activities. These include:

Table 4: List of 4P Projects

The budget of the Fiscal year 98/99 provided the provision for private participation in development activities of Kathmandu Metropolitan City. The 31 projects to be conducted under private participation are as follows:

1. Culture House	2. Slaughter House
3. Public Toilets in each ward	4. Sports Complex
5. Multi Decker Parking	6. Tundikhel Car Park
7. Children Park	8. Mass Transit
9. New/Old Bus Park Management	10. Eastern Bus Park
11. Truck Park	12. Door to Door Garbage Collection
13. Safety Tank Service	14. Ichangu Drinking Water
15. District Police Office Hanumandhoka	16. Internet Online Service
17. Public Telephone Booths	18. Tourist Bus Park/Telephone Booth
19. Bhugol Park	20. Bhishnumati Park
21. Advertisement Hoarding-Board Rules & Regulations	22. Tripureswor Temple Area
23. Auto Parking	24. Mechanical Section
25. Significant Sanitation Management	26. Incinerator for Solid Waste Management
27. Waste Water Treatment System	28. Solid Waste Management
29. Sundhara/Dharahara	30. Kamal Pokhari Park
31. Bhuikhel Meditation Park	

Working Paper No. F-1: Draft PSP Policy Framework.

Working Paper No. F-2: Draft Standard Operating Procedure for Implementing PSP Projects.

Working Paper No. F-3: Draft Feasibility Guidelines for PSP Policy Projects.

Working Paper No. F-4: Draft Procurement Guidelines for PSP Projects.

Working Paper No. F-5: Draft Contracting Guidelines for PSP Projects.

Working Paper No. F-6: Draft Pre-feasibility Analysis for Vehicle Tax Collection Service Contract.

(iii) PSP Transactions

Several PSP Transactions are in various stages of implementation. Three transactions have been awarded. These include the bus terminal; slaughter house and vehicle tax collection. The night market lease contract is in the process of being evaluated. Initial procurement preparation is being developed on the overhead bridge concession contract.

KMC is currently determining other prospective PSP transactions, such as:

- ❖ solid waste service contract for primary and secondary transfer.
- ❖ service contract for maintenance and repair for vehicles of solid waste management.
- ❖ contract for the collection of advertisement tax.



Traffic Island: An example of Public Private Partnership



Solid waste door to door Collection : Private Sector Involvement

10.3.4 Accounting

In order to increase people's participation and deliver effective and efficient public services, KMC must disseminate reliable, timely, up-to-date and true information to the public. Thus KMC must have strong and effective accounting system with the corporate settings, as the sub system of Management Information System. This system should be able to reflect the true fiscal picture of KMC; in the mean time it should provide necessary data for policies, strategies and future development. Besides this, the accounting system also should be simple and transparent. With these objectives KMC decided to adopt Commercial Accounting System (CAS) from the first day of the fiscal year: 2057/2058 (2000/2001).

10.3.4.1 Background

Prior to July 16, 2000, the accounting system adopted by KMC was cash based government accounting system, which runs under historical cost concept. As a result, financial information for decision making and financial reporting were not available on time.

In 1994, KMC entered into an agreement with Asian Development Bank (ADB), regarding Improved Resource Mobilization in Kathmandu. One of the loan covenants was to introduce CAS in KMC, but it could not be introduced due to various factors, such as: no provision in the Act; lack of adequately trained and qualified employees; and lack of proper plans. As KMC is committed to implement CAS, various training programs and necessary exercises have been carried out.

Several meetings were held at KMC to prepare for the implementation of the system and the training needed

to the staff. Accordingly, accounting training program was organized by Kathmandu Urban Development Project (KUDP) at Pokhara, for employees of several municipalities including KMC. After this training program, a decision was made to use "The Manual On Accounting System For Nepalese Municipal Bodies" prepared by udle/gtz, as the base for the system.

The Municipal Council meeting of 1998 decided to adopt the Corporate Accounting System in KMC. This system will be guided by the fiscal rules as mentioned under the "Local Self Governance Act, 1999."

In order to implement the Corporate Accounting System (CAS) in the full scale, it is important that it must be well understood by all concerned and all the doubts should be addressed properly. In this respect, the need for further training to the core accounting group has been felt.

(i) Need Assessment:

KMC made it clear in the beginning that -- training that is undertaken without analysis of whether or not it is needed is likely to be ineffective and a waste of money.

Various meetings and discussion sessions took place to discuss and analyze the above questions. After analyzing the situation, it has been concluded that specialized training programs should be continuously activated to implement CAS trouble free and full scale; and these programs should be conducted in a phased manner. As a part of this plan it has been decided that in the first phase, an overview of CAS should be presented to the core accounting group so they will be prepared mentally and physically. Accordingly, an action plan was developed to start the training from June 16, 1999 and the training objectives were established.

(ii) The Training Phase:

Once the training need is identified and behavioral objectives are prepared, the next step is to develop a training program that will achieve those objectives. This is accomplished by selecting training methods and developing training materials that convey the knowledge and skills identified in the behavioral objectives.

(iii) Responsibility of Training

KMC discussed with various organizations like: Mr. A.B. Kshatry & Co., Surmount Chartered Consultants and Nepal Administrative Staff College for conducting the training program. Finally the terms and conditions of the Nepal Administrative Staff College has been approved.⁸

With the financial assistance from KUDP, in June 1999, a 2-week training program was organized at the Nepal Administrative Staff College (NASC). An overview of CAS was presented to the 40 participants of KMC. Evaluation of this training program clearly indicated that, during the introduction stage, there should be a continuous support program focused on human resource development and day-to-day problem solving.

In order to run the continuous support program, various donor agencies have been approached, such as: Regional Urban Development Office (RUDO/USAID) -- New Delhi, KUDP, UDLE and DANIDA.

RUDO/USAID agreed to provide the necessary grant of US Dollar 7,274.00 (equivalent of NRs. 5,01,890.00) for the program and an agreement has been signed between USAID and KMC. With this assistance, KMC entered into an agreement with Nepal Administrative Staff College for conducting the continuous support program. Accordingly, NASC provided nine months services, and a consultant began work from November 1, 1999.

In the meantime, Asian Development Bank (ADB) assisted KMC Institutional Strengthening Program - Technical Assistance (TA) also commencing from 27 September 1999. This program is designed to address various issues related to the overall capacity building of KMC including financial management and resource mobilization. The TA consultants also organized various on-the-job training to implement CAS as a part of improved financial management.

(iv) Formation of CAS Implementation Unit

In order to speed up shadow accounting practices, the efforts of consultants from NASC and ADB TA are

coordinated with the formation of CAS implementation unit on February 25, 2000. The implementation unit has been formed as a core group that will lead the shadow accounting practices and will assist in future training and development of KMC employees in the field of CAS. The implementation team, under the guidance of above experts has achieved various targets set for CAS. Several orientation and training programs have been conducted for the staff of the implementation unit in different aspects of CAS. They include:

- ❖ principles of CAS, account coding, receipt and payment of cash and recording; bank reconciliation, payroll accounting;
- ❖ purchase and stores procedures/management, fixed assets management,
- ❖ transaction between finance department and other departments/wards.

Similarly, training/orientation on different aspects of CAS to other staff (internal audit, staff of Revenue department, accountants of different department/wards, ward secretaries) were also conducted. Standard forms and stationeries were prepared discussed/agreed and KMC ordered printing of those that are required for the introduction of CAS. The budget for fiscal year 2057/58 (2000/01) was prepared in line with CAS accounting heads.

10.3.4.2 Current Status

At present, a complete set of charts of accounts has been drawn up, and an Accounts Manual has been prepared. The accounts under CAS are maintained following the Double Entry Accounting System on accrual basis. In theory, as a result, the actual picture of income and expenditure of a certain period is available in time for financial reporting, that is to say, Financial Statements, i.e., Balance Sheet and Income Statement, for any certain period can be prepared taking updated financial information.

The introduction of CAS could be attributed to the commitment of KMC as well as various initiatives supported by the ADB TA and RUDO/USAID grant program. But still there exist threats and challenges in the implementation of CAS, which will be discussed under the problems.

Institutional Analysis

Key Issue 1: Resource Mobilization

OPPORTUNITIES	THREATS	ACTIONS
O 1.1 The new Local Self Governance Act, 1999 has paved way for resource mobilization (provision for more tax and fees)	T 1.1 Regulations of the Same Act have restricted the financial autonomy of the local governments by prescribing the tax rates.	Municipalities should be allowed to make necessary revision in the existing tax rates and user charges and implementation.
O 1.2 Broader responsibilities.	T 1.2 Because of the larger number of local governments the tax base has been narrowed or restricted and it reduced the collection potentiality. But the actual tax collected is much lower than the ability to pay or the potentiality to pay.	Effective enforcement bylaws shall be passed from the municipal council.
O 1.3 Kathmandu is a growing city and has revenue potential.	T 1.3 After the abolishment of Octroi, HMG itself is raising the local development fee and distributing it to the municipalities and VDCs. However it is also a temporary arrangement and the government, at any time, could stop it.	
O 1.4	T 1.4 Enforcement process mentioned in the Act is cumbersome and involves several government agencies thus giving opportunities to the defaulters.	

Key Issue 2 : Expenditure Planning/Budgeting		
OPPORTUNITIES	THREATS	ACTIONS
O 2.1 The Act has provided broad and specific framework for budget preparation	T 2.1 There are chances of central government actions if the budget preparation process is not complete on prescribed time-frame.	Budget preparation process must begin on time and proper planning is essential.
O 2.2 Several national and international agencies already helped KMC in the budgeting process and still are ready to assist.	T 2.2 There is no provision of coordinating with budget process of central government.	
O 2.3 Project identification and prioritization process began with KVMP initiatives		

Key Issue 3 : Private Sector Participation (PSP)

OPPORTUNITIES	THREATS	ACTIONS
O 3.1 Central Government encouraged local governments for PSP.	T 3.1 Private sector (national companies) are still not willing to work with KMC in case of Capital Intensive Projects (Infrastructure Finance)	<ul style="list-style-type: none"> ❖ Develop private sector scanning and evaluation mechanism. ❖ Develop liberal policies, prepare feasible and profitable projects to encourage the Private Sector to come forward.
O 3.2 Foreign private sector companies are interested to work with KMC in various projects such as solid waste management, operation of trolley bus, apartment building etc.	T 3.2 KMC still does not have the information about private sector's capacity and willingness to work.	Strongly pursuing and lobbying with the government for the availability of Landfill Site.
O 3.3 Mobilization of local resources	T 3.3 Political instability and division among politicians is also a reason behind reluctance of private sector to work with KMC.	Information dissemination to concerned stakeholders.
O 3.4 Inflow of New Technology		Transparent review system
O 3.5 Efficient management of Projects		Awareness about "pay charges - receive services"
O 3.6 Less burden to KMC		
O 3.7 Monetary liquidity level is high with the private sector at present and now it is evident that they are ready to invest in profitable projects.		Develop liberal policies, prepare feasible and profitable projects to encourage the Private Sector to come forward.

Key Issue 4: Accounting/Financial Reporting	OPPORTUNITIES	THREATS	ACTIONS
<p>O 4.1 The new Local Self Governance Act, 1999 has provided freedom to adopt "cash based" government accounting system or "accrual" accounting system.</p>	<p>O 4.2 The Act also gave freedom to the municipalities to appoint external auditors for fiscal transparency.</p>		

**Organizational Analysis
(Strength and Weakness)**

Key Issue 1: Resource Mobilization

STRENGTH	WEAKNESS	ACTION
S 1.1 New Revenue Department is created keeping in mind the importance of revenue for the sustainable urban service delivery.	W1.1 Unable to mobilize resources in accordance with provisions of existing Act.	
	W1.2 Lack of proper utilization of available financial resources.	
	W1.3 Lack of commitment on the part of politicians regarding direct tax collection and weak organizational capacity	
	W1.4 Not able to demonstrate the benefits of tax payment or guarantee the proper utilization of collected revenue. (Lack of Transparency)	
	W1.5 Not able to demonstrate the benefits of tax payment or guarantee the proper utilization of collected revenue. (Lack of Transparency)	
	W1.6 On one hand KMC lack qualified human resources, who really understand the importance of tax and perform accordingly. On the other, elected representatives are also confused with it.	
	W1.7 Administrative or political culture of honoring the taxpayer is not developed yet.	Highest taxpayers should be awarded annually to encourage the taxpayers to pay the taxes.
	W1.8 Lack of marketing orientation in the collection of revenue, i.e., there are not any schemes or plans for tax payer's awareness and tax payer's service and satisfaction.	
	W1.9 There is not enough space for offices under the revenue department and they are not organized properly.	
	W1.10 There is no computerized database system of taxpayers.	
	W1.11 There is no monitoring and evaluation system. Top management and political representatives have not shown any interest in it.	Develop resource mobilization program
	W1.12 A system is not developed yet for assessment and collection of Integrated Property Tax (IPT), House & Land Tax, and Rent Tax.	
	W1.13 A comprehensive Address System and Property Register is not developed yet, which could be termed as the base for the revenue collection system.	
	W1.14 Enforcement of business tax is poor.	
	W1.15 Revenue Potential of all the taxes and fees are not explored yet.	
	W1.16 Result Management mechanism is almost not existence.	
	W1.17 Pricing of the services are not done properly. The cost recovery approach is not followed to realize the cost of services.	

Key Issue 2: Expenditure Planning/Budgeting	STRENGTH	WEAKNESS	ACTI-ONS
S 2.1 New Budget Format developed, adequate training given to the concerned employees and budget for fiscal year: 2000/01 developed accordingly.	W 2.1 Adequate planning for budget preparation is lacking.	Create strong commitment on the part of policy makers and employees.	
S 2.2 This budget could be termed as a mix of traditional line item budget and program budget and tried to follow the concept of decentralization.	W 2.2 Lack of fiscal discipline in the implementation of budget.		
	W 2.3 Lack of variance analysis and taking appropriate actions.		
	W 2.4 Revenue figures estimated are extremely optimistic and there are no clear justifications.		
	W 2.5 Revenue Potentials are not explored fully.		
	W 2.6 Gaps in infra support (unable to procure heavy machinery and equipment for SWM).		Resources scan.
	W 2.7 O & M Budget is not sufficient and consequently SWM equipment are not maintained properly.		Proper estimation of O & M costs and budget accordingly.
	W 2.8 Austerity measures are not adopted to control unproductive costs.		
	W 2.9 Long-term or periodic Capital Budget or investment plans are nonexistent.		

Key Issue 3: Private Sector Participation (PSP)		
STRENGTH	WEAKNESS	ACTION
S 3.1 Other municipalities of Nepal consider some PSP activities of KMC as success stories.	W 2.1 KMC board still has not approved the policy framework and guidelines.	Create strong commitment on the part of policy makers and employees.
S 3.2 PSP policy framework and guidelines are ready.	W 2.2 KMC do not have a specific unit or department to handle PSP transactions.	Create a new unit responsible to deal PSP activities with qualified human resources.
	W 2.3 There is no marketing budget allocated for PSP activities and there is no marketing plan as such.	Allocate budget & draft a marketing plan.
	W 2.4 Lack of commitment and capability to evaluate and analyze the cost, benefit and sustainability of the projects.	Create a new unit responsible to deal PSP activities with qualified human resources.

Key Issue 4: Accounting/Financial Reporting		WEAKNESS	ACTION
STRENGTH			
S 4.1	Corporate Accounting System (CAS) developed and implemented from FY 2057/58 (2000/01).	W 3.1	Although the Act provided autonomy to appoint external auditors, KMC has not appointed them yet. Books of accounts for the FY 2055/56 (1998/99) and 2056/57 (1999/00) remained unaudited.
S 4.2	CAS implement team was formed, trained and the team is working to date.	W 3.2	Uncontrolled Advances: Timely book keeping of expenses are adversely affected by the delay in the clearance of advances. This exhibits the weak budgetary control system and incorrect expenditure statement.
S 4.3	Training/orientation on different aspects of CAS to other staff such as: staffs from Internal Audit Unit, Revenue Department, Stores Section; Accountants from different departments and all wards.	W 3.3	KMC finance department can produce the monthly and other periodic statements on time, only if all other concerned wards and departments submit monthly statements/returns on time. For the past three months of this fiscal year it has been observed that the concerned wards and departments have not submitted the monthly statements/returns on time creating a spiral effect and ultimately the finance department has not been able to produce periodic financial statements on time.
S 4.4	Standard forms and stationeries were prepared discussed/agreed and used.	W 3.4	Inadequate Human Resources: At present KMC finance department and revenue departments are understaffed and it also affected the daily functions. For instance, general stores section under the finance department are functioning with only 4 persons and Account and Budget section of the same department has only one officer. In the context of CAS, where the work horizon has been expanded, inadequate HR will result inadequate works.
			Municipal Council meeting of July 24, 2000 had authorized the KMC board to select and appoint the external auditor. Therefore, an external auditor must be selected and appointed at earliest. Detailed control system should be developed with active participation from all elected representatives and department heads. CAS implementation unit must get support from the CEO in this regard and those who does not comply with submitting timely statements to the finance department should be dealt with prompt actions. Adequate and qualified HR must be arranged for the timely and proper execution of all the functions including municipal finance functions.

Key Issue 4: Accounting/Financial Reporting	STRENGTH	WEAKNESS	ACTION
S 5.5	The budget for FY 2057/58 (2000/01) was prepared in line with CAS accounting heads.	W 3.5 Result Management mechanism is almost nonexistent.	As for other cases, Monitoring, Evaluation and Control mechanism must be developed.
S 5.6	Internal audit unit has been created as an independent unit directly reporting to the CEO.	W 5.6 Although the internal audit unit has been created, qualified personnel are not assigned yet regular internal audit is not carried out.	Internal audit unit must be strengthened to maintain fiscal discipline in the KMC.
		W 5.7 Elected representatives are also found passive regarding internal audit and internal control.	
		W 5.8 Authority not delegated from the CEO to other concerned executives: Every form, voucher, requisition are to be approved by the CEO and it is a time consuming process affecting the productivity.	In the context of municipal finance, the CEO should delegate certain authorities to other executives and its accountability also should be fixed. In this way it will help reduce bureaucratic hurdles.

Key Issue 5: Human Resource Management for Municipal Finance:	
STRENGTH	WEAKNESS
	<p>W 5.1.1 HR Plan is lacking and it is creating a chain reaction: No job analysis; No recruitment, selection and socialization system.</p>
	<p>W 5.1.2 There have been instances of political appointment of employees and it affected the productivity directly. For example, new CAS demand qualified and able accounts personnel in wards and departments. But most of the present personnel (ward secretary and assistant accountant) deputed in wards do not have accounting background and are reluctant to learn.</p>
	<p>W 5.1.3 Dependency on nonpermanent employees: Most employees working in the finance and revenue departments and wards are of temporary nature. In one hand these employees feel unsecured and do not contribute with optimum level. On the other hand training opportunities are not provided to such employees on the ground that they are temporary ones. This affects the work output.</p>
	<p>W 5.1.4 Trained employees are transferred to other positions</p>
5.2 Training and Development of HR	
STRENGTH	WEAKNESS
	<p>Proper training need identification and introduce awareness program</p>
	<p>W 5.2.1 Lack of trained and qualified H.R.</p>
	<p>W 5.2.2 Lack of motivation to participate in training program</p>
	<p>W 5.2.3 Management Development Programs are lacking</p>
	<p>W 5.2.4 Career development opportunities are lacking.</p>

5.3 Motivation and Maintenance of HR	STRENGTH	WEAKNESS	ACTION
S 5.3.1 Available HR are capable of crisis management	W 5.3.1 Effective reward system (including salary, benefit and other facilities) is lacking.	W 5.3.2 Performance management system is very weak.	Develop and implement proper performance appraisal system.
	W 5.3.3 Discipline problems exist.		
	W 5.3.4 Effective grievance handling procedure is lacking.		Introduce reward and compensation system.
	W 5.3.5 Health and safety issues are neglected.		
	W 5.3.6 Employee morale is low.		Job guarantee for best workers

10.3.5 Review of Existing Legislation

The constitution of The Kingdom of Nepal adopted in 1990 highlights the norms of local self-government in Part IV on Directive Principles and Policies of the State. Article 25 on Directive Principles of the State in Clause (4) states as follows:

"(4) It shall be the chief responsibility of the State to maintain conditions suitable to the enjoyment of the fruits of democracy through wider participation of the people in the governance of the country and by way of decentralization, and to promote general welfare by making provisions for the protection and promotion of human rights, by maintaining tranquility and order in the society."

Unlike the previous Constitution, the present Constitution of the Kingdom of Nepal does not speak about the local institutions including the Municipalities directly.⁹

(i) *Local Self-Governance Act, 1999*

Local institutions in Nepal are governed on the basis of Local Self-Governance Act 1999 (LSGA). Exploring through the Act reveals that this Act is prepared on the basis of principles of decentralization and self-governance. This Act provided three tier local government structure, i.e., village development committees, municipalities and district development committees. Part 2, 3 and 4 of the Act includes provisions relating to VDCs, Municipalities and DDCs respectively.

Since the legislation for municipalities is being reviewed, the focus will be on the Part 3 of the LSGA only.

Sections 72 to 75 of chapter 1 includes descriptions of Municipal Area, Ward Divisions and Ward committee.

Chapter 2 contains Sections 76 to 79 and describes Provisions relating to Municipal Council.

Chapter 3 deals with Provisions relating to Municipality and it contains Sections 80 to 88.

Chapter 4 discusses Meetings and Working Procedures of ward committees, municipal council, municipality etc. and it covers sections 89 to 100.

A great deal of Judicial Power of Municipality is covered in Chapter 5 and it includes Sections 101 to 110.

Following up on the judicial powers, Chapter 6 discusses in detail about the Formulation of Plans of Municipality and Process of Implementation. This chapter contains Sections 111 to 124.

Chapter 7 incorporates the most important topic of Financial Provisions and includes Sections 125 to 135.

Chapter 8 includes equally important topic of Taxes, Fees, Services Charges and Fares and includes Sections 136 to 148.

Chapter 9 deals the detailed Provisions relating to the Construction of Building. This Chapter consists of Sections 149 to 164.

Authority of Municipality to Punish, and Recovery of Punishment and Fine are the two sections (165 & 166) discussed under the Chapter 10.

The final Chapter 11 of Part 3 of LSGA contains sections 167 to 169 and it discusses Complaint and Provisions pertaining thereto.

Part 5 of LSGA deals with General Provisions relating to Local body, which is common to the VDC, municipality and DDC. Chapter 1 covers the Relation between HMG and Local Body. Administrative Organization and Employee related topics are discussed in the Chapter 2, and Chapter 3 incorporates miscellaneous issues.

10.4 VISION & MISSION FOR KMC

10.4.1 Vision

From the viewpoint of municipal finance, the vision outlined for KMC is as follows:

Vision

"A well planned, clean and healthy city with adequate housing, good transportation and infrastructure services managed by a strong and capable municipal government".

10.4.2 Mission

The statement suggested at the first stakeholder's workshop could be considered as the KMC's mission statement in the context of municipal finance:

Mission

Financially strong, managerially efficient and capable metropolitan to provide quality, effective, efficient and sustainable urban services and facilities to its citizens.

10.5 ISSUES & CHALLENGES

10.5.1 Resource Mobilization

The issues related to resource mobilization identified by the first stakeholders workshop are as follows:

10.5.1.1 Issues

1. How to fulfill the resource gap?
2. Absence of conducive environment to mobilize resources.
3. Unable to mobilize resources in accordance with provisions of existing Act.
4. Lack of proper utilization of available financial resources.

Similarly, Local Government Finance Commission, in a study paper, identified issues related with resource mobilization of local governments, which is very relevant to the KMC situation as well, are mentioned below:

1. Broader responsibilities, insufficient financial resource and restricted financial autonomy.
2. Lack of commitment on the part of political leaders regarding direct tax collection and weak organizational capability.
3. Local Self-Governance Act authorized the local governments to levy the taxes and service fees, but the regulations of same Act prescribed the tax rates that restricted the financial autonomy of the local governments despite their capacity and commitment.
4. Because of the larger number of local governments the tax base has been narrowed or restricted and it reduced the collection potentiality. On the other hand actual tax collected is much lower than the ability to pay or potentiality to pay.

5. Tax collection and payment, both systems are in initial stage of development. Local governments have not been able to demonstrate the benefits of the tax payment or guarantee the proper utilization of collected revenue.
6. Public confidence will rise only if the tax collection capacity is effective, efficient and reliable. In the absence of such elements or in a doubtful environment taxpayers are reluctant to pay the taxes.
7. Tax collection is a technical job, which is not an easy task. The collection system consists of various stages and inputs, for which the capacities of local governments are in question.
8. Administrative or political culture of honoring the taxpayer is not developed yet.
9. On one hand the local governments lack qualified human resources that really understand the importance of tax and perform accordingly and, on the other, the local leadership is also confused with it.

10.5.1.2 Challenges:

The above-mentioned issues regarding resource mobilization reflect the following critical challenges for KMC:

(i) Fiscal Gap is Widening:

If past data of KMC is observed, it will be evident that in the previous years the revenue collected were matching the expenditure on employee's salaries and other administrative expenses, debt payment, social services, ordinary capital and development activities or capital investment. But gradually the situation is changing as illustrated in the figures.

For example, in 1996-97 the total expenditure was 314 million, whereas the own source revenue accounted for 299.68 million and grants/loans stood 14.84 million rupees. So it could be said that the fiscal gap was minimum (figure 4). In the previous fiscal year 1999-00, the actual own source revenue was 80.27 million rupees only, and grants/donations (local development fee received from MLD) was 229.23 million rupees, whereas the total expenditures amounted 325.18 million rupees and there was a resource gap of about 16 million rupees (Figure 7). This figure clearly illustrates two impacts from the abolishment of octroi. The first is a sharp decline in the own source revenue position, and second, KMC financial situation is so

critical that the own source revenue is not even enough to meet the salary and benefits obligations to KMC employees.

For the current fiscal year, 2000/01, KMC estimated revenue as 818.47 million rupees and expenditures as 1054 million rupees causing resource gap of 235 million rupees, which KMC intends to fulfill through loan mobilization (figure 10).

Earlier this year, ADB assisted KMC Institutional Strengthening Program forecasted revenue of KMC for this fiscal year 2000/01. Accordingly, the own source revenue is estimated to be 300 million rupees with minimum "base" case and 480.23 million rupees with maximum or "best" case. For the same year the expenditures are expected to be 687.7 million rupees (Figures 8 & 9). Even if the best case for revenue is assumed, there will be a resource gap of 207.5 million rupees.¹¹

So, in both cases, there exist a resource gap. The difference occurred in KMC's own forecast and ADB TA's forecast is mainly due to new programs added and much optimistic estimation made by the KMC.

Now the vital question is: How will this gap be filled? It is clear that in the absence of required resources, KMC would not be able to invest in the required infrastructure and development works (or capital works) as well as operation and maintenance of infrastructure and services. Deficit financing without improvement in the resource mobilization initiatives at this stage could affect long term functionality of KMC.

In the context of rising municipal responsibilities the rising expenditure needs are inevitable. The rising expenditure needs could be attributed to the effects of rapid urbanization; and rising municipal responsibilities are the results of effects of decentralization in the region. Increasing cost of municipal service provision and often static revenues are creating the growing gap between income and expenditure needs. Price of goods and services a city has to acquire, continues to increase, e.g., the increasing human resources cost, operation & maintenance costs and infrastructure investment costs. The gap between expenditure and revenue often widens because user charges are inadequate and other revenue bases are inelastic, that is they do not increase in proportion with growing expenditure needs. This situation clearly calls for better resource mobilization

**FIGURE 4 : FINANCIAL YEAR 2053/54 (1996/97)
COMPARISON OF ACTUAL EXPENDITURES AND REVENUES
MILLIONS**

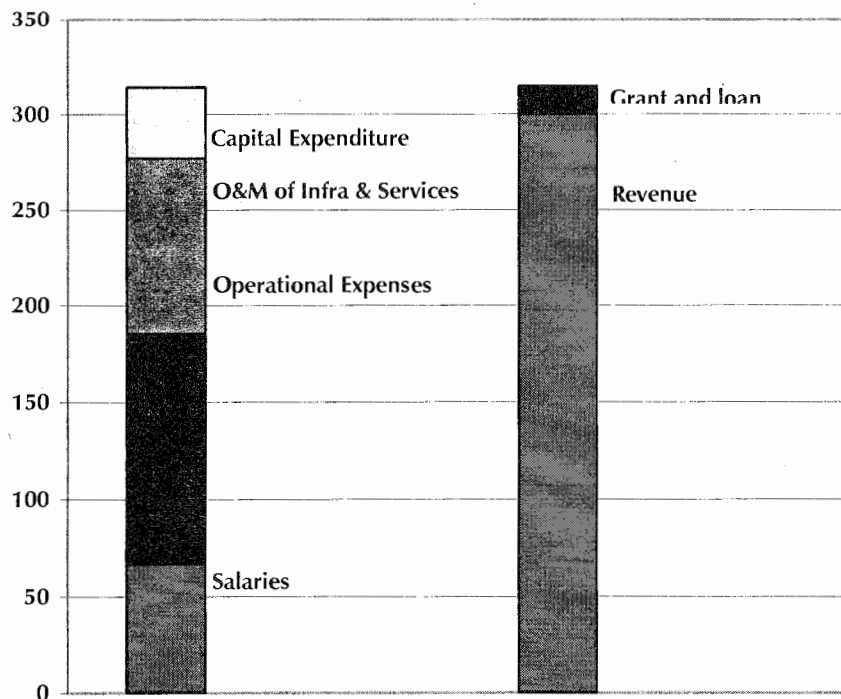
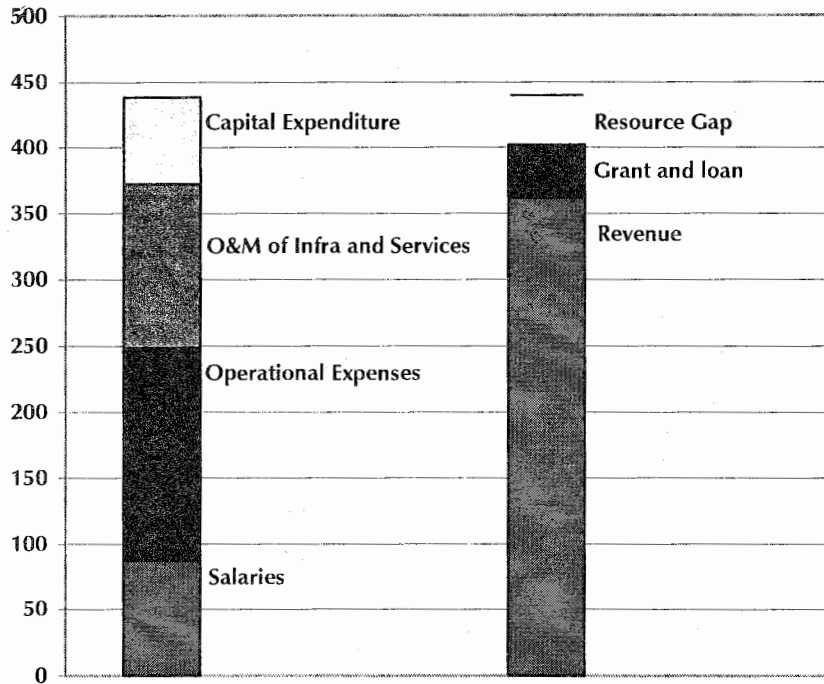


FIGURE 5 : FINANCIAL YEAR 2054/55 (1997/98)
COMPARISON OF ACTUAL EXPENDITURES AND REVENUES

MILLIONS



Source: KMC Budget Document

FIGURE 6 : FINANCIAL YEAR 2055/56 (1998/99)
COMPARISON OF ACTUAL EXPENDITURES AND REVENUES

MILLIONS

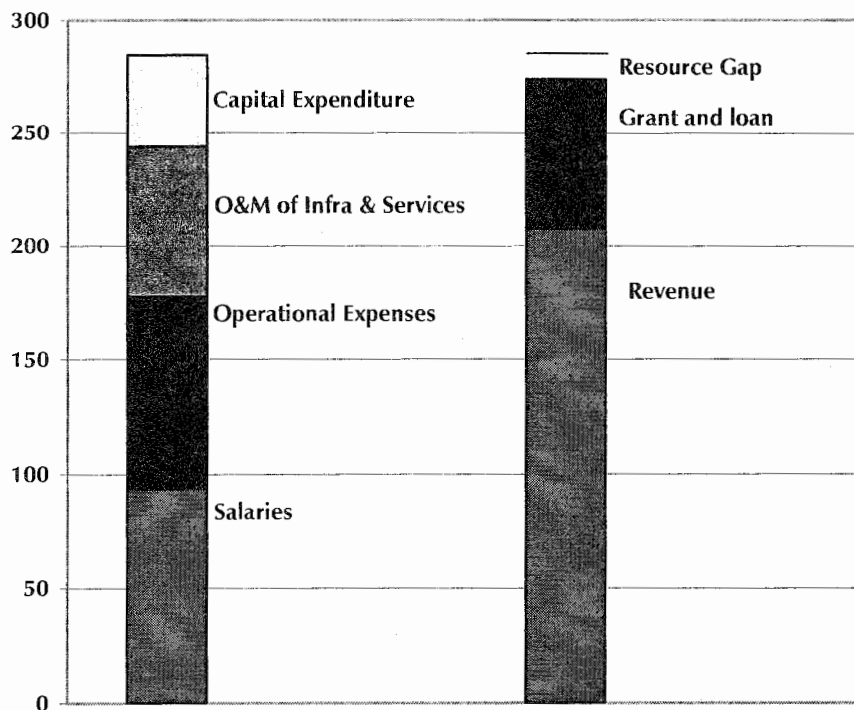


TABLE 7 : FINANCIAL YEAR 2056/57 (1999/00)
COMPARISON OF ACTUAL EXPENDITURES AND REVENUES
MILLIONS

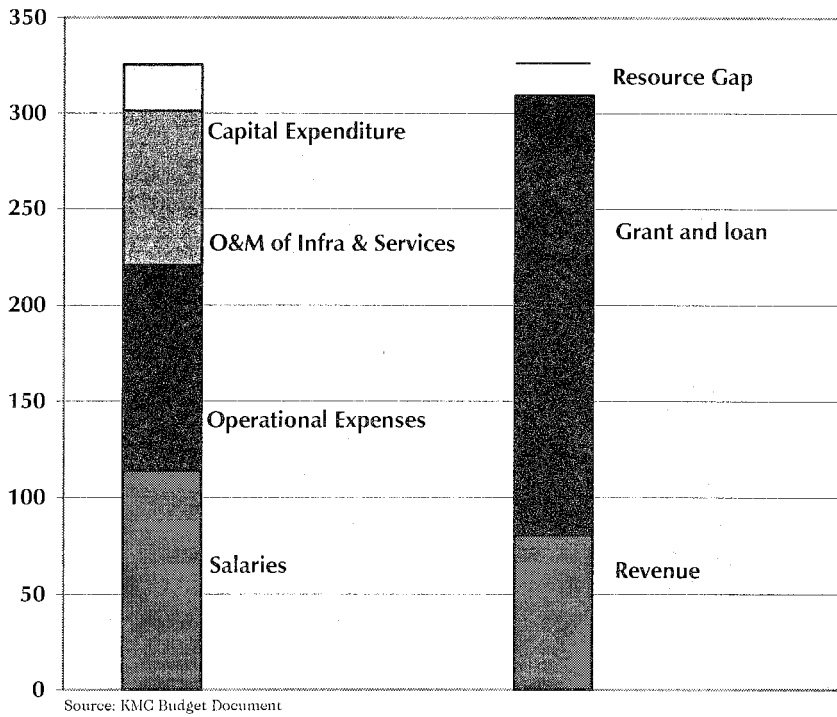
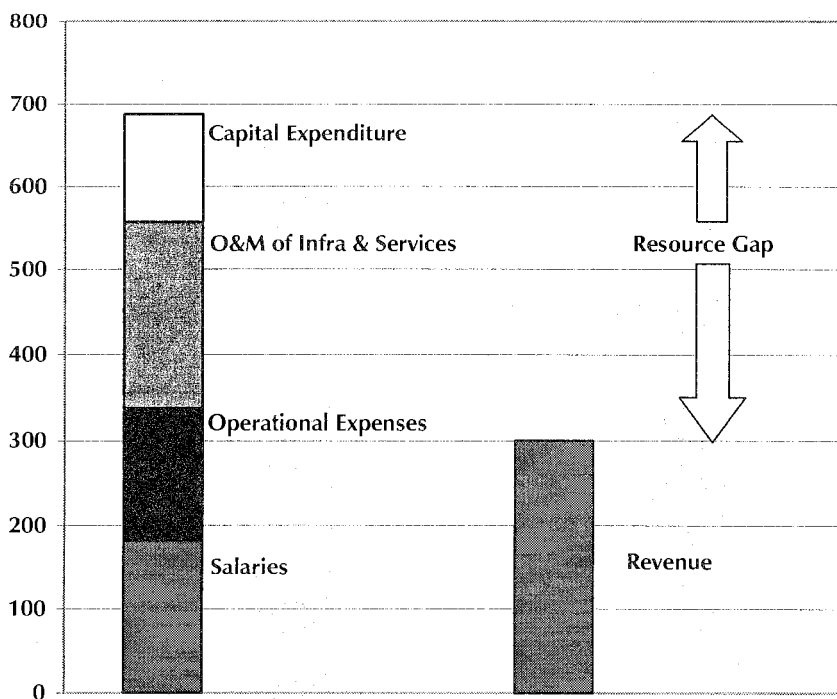
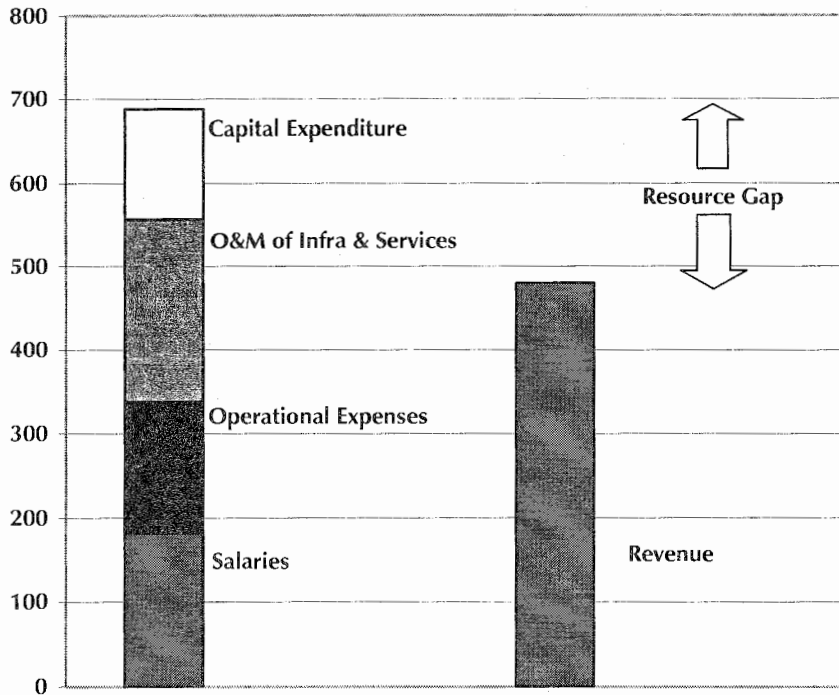


FIGURE 8 : BASE CASE
COMPARISON OF PROJECTED EXPENDITURES AND REVENUES FOR FY 2057/58
MILLIONS

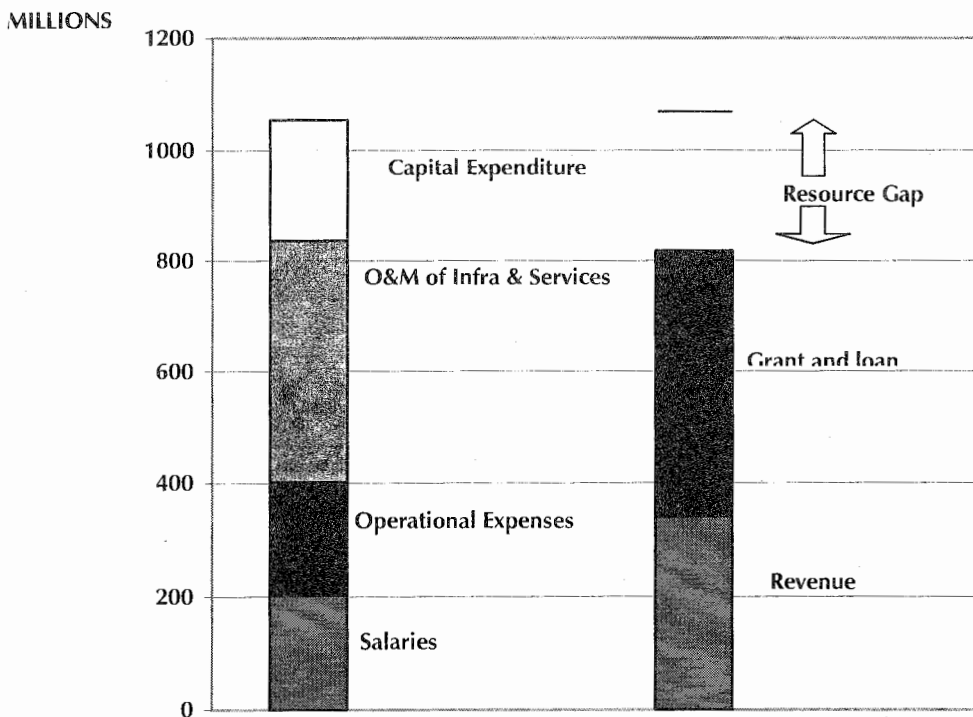


**FIGURE 9 : POTENTIAL
COMPARISON OF PROJECTED EXPENDITURES AND REVENUES FOR FY 2057/58
MILLIONS**



Source: Working Paper No. B6 - ISKMC, ADBTA.3185, June 2000.

**FIGURE 10: FINANCIAL YEAR 2057/58 (2000/01)
COMPARISON OF BUDGETED EXPENDITURES AND REVENUES**



Source: KMC Budget 2057/58 (2000/01)

for the sustainability of KMC. Having said this, it is now essential to analyze the problems related with collection mechanism.

(ii) Lack of Comprehensive or Integrated Revenue Collection System

In order to collect all the taxes, fees and charges timely, effectively and efficiently - the basic need is a comprehensive or integrated revenue collection system, which KMC is lacking. Such kind of system shall incorporate an up-to-date database and information of taxpayers (including property survey and house numbering); trained, capable and motivated human resources; proper equipment, software and physical settings, well defined marketing and communication mechanism, and a result management mechanism. Result management here refers to the monitoring, evaluation and control mechanism. At present, KMC is lacking the complete system and it could be termed as the constraint toward effective and efficient resource mobilization.

(a) Database

Not only for the Integrated Property Tax (IPT), but also for other taxes and fees, KMC does not have proper database and information about taxpayers. The importance of database and information is always acknowledged by KMC, but has never tried to build it in time bound manner despite several recommendations from various studies and experts. KMC must participate and take ownership in the process of creating and maintaining required database and it should not be left for donors to assist. At this stage, KMC do not have any policy about building and updating crucial database, not only for resource mobilization, but also for other purposes.

Property survey, house numbering activities and preparing a comprehensive database are prerequisites for IPT and House & Land Tax. In this fiscal year KMC estimated to collect revenue of 60 million rupees from House and Land Tax and 2.5 million rupees from the IPT. The first three months of the fiscal year have already passed without any development in this regard. KMC is collecting only the voluntary payment of house and land tax and nothing has been done regarding building the required database. There is no clear understanding either at the political level or at the administrative level as to how the target will be achieved. Similarly, last year, for the collection of business tax, collection teams were mobilized in all the wards and achievement was 142.43 percent.¹² This year KMC estimated to collect

55 million rupees business tax, but again, three months have already passed and there is no immediate plan to mobilize the collection teams. Again, the question is: How will that target be achieved? Therefore, the absence of required database adversely affected the revenue collection system and ultimately the resource mobilization initiatives.

(b) Automation

Similarly, KMC does not have adequate computer hardware and necessary software to support the system; office settings are primitive and taxpayers find it difficult to pay the tax. Office automation with corporate setting is almost nonexistent. At present, the importance of newly formed Revenue Department is recognized by all, but the reality is that KMC has not been able to provide proper office space for this department.

At this stage all the major cities in the region are benefitting from the use of Information Technology. There are scopes to increase computer applications to speed up procedures, reduce costs and improve accuracy. KMC also has realized this fact and is trying to develop GIS of the city, but such activities must be accelerated with proper coordination with all internal departments and external line agencies concerned. In this aspect also KMC policy is not clear.

(c) Marketing & Communication

In addition, there should be a well-defined communication mechanism so that all the stakeholders related to this system are informed on time. At present, KMC neither has any information about taxpayer's willingness and ability to pay nor the views of different stakeholders such as various organizations, elected representatives, and central government. Although KMC has its own FM radio station, it has not been exploited to the required level. The interaction between business community (and taxpayers) and KMC hardly takes place. KMC communicates with the business community and the taxpayers only through the publication of notices in daily newspaper. Business community perceives it as one way communication and opined that it is not enough. Consequently, on one hand, taxpayers have no access to the developments inside KMC, and on the other, the image of KMC remains unfavorable among general public. There is a total lack of "marketing concept".

Information and Communication Strategy of KMC clearly mentions about communication objectives, strategy and expected outputs (see Annex 14), but to a large extent it

is not practiced in reality. This situation could also be termed as a hindrance in effective resource mobilization.

(d) Result Management

Another important part missing in KMC revenue collection system is result management. There is no clear internal policy about monitoring, evaluating, and taking necessary follow-up and corrective actions in relation to revenue administration.

(e) Lack of Enforcement

In addition, there are problems of initiating action against tax defaulters because provision of the Regulations of the Act regarding enforcement right is ambiguous and the process is lengthy. Recovery of arrears and dues by seizure and remand of moveable properties as provided by LSGA cannot be enforced because of cumbersome process involving several central government agencies. Although LSGA Chapter 10 provides for auction sale of property belonging to defaulters, this has never been practiced.

So it could be concluded that the lack of comprehensive or integrated revenue collection system is an obstacle towards effective and efficient resource mobilization, creating a resource gap for infrastructure development and urban service delivery.

(iii) Poor Human Resource Management

Poor human resource management have also affected overall financial management of KMC. Inadequate number of qualified and motivated human resources has hindered the fiscal functions of all the departments and wards. There is no human resource planning, resulting in lack of job analysis and proper procurement of human resources. Training, development and career planning are also neglected aspects. Furthermore, performance appraisals are not done resulting in motivation and discipline problems.

As mentioned earlier in the issues, tax collection is a technical job and it demands highly motivated professionals and other employees. At present, the Revenue Department of KMC is understaffed (Annex 19) and the qualification of all present employees are yet to be examined.

Furthermore, it seems that managerial and administrative qualifications of most of the elected representatives are also deficient at this stage. Therefore, poor human resource management could also be termed as a problem in the resource mobilization initiatives of KMC.

(iv) Issue of Municipal Bond

Prior to the promulgation of Local-Self Governance Act, 1999, the municipalities of Nepal were functioning under the Municipality Act, 1991, which authorized the municipalities to issue Municipal Bonds. Under Chapter 10 (Special Arrangements for Metropolitan City) Section 63.2 clearly mandated the metropolitan city to issue municipal bonds. Issue of Municipal Bond is a new concept to the local authorities in Nepal. But the LSGA superseded the Municipality Act and has not given this authority to the municipalities. KMC officials view this as an obstacle in generating necessary funds for the city.

(v) Lack of Cost Recovery Concept.

As discussed earlier, revenue will continue to be inadequate in relation to the growing responsibility for operation and maintenance. If KMC is to fulfil its wish to take over responsibility for urban services from the line agents, it must seek ways and means to recover this cost from the beneficiaries. As matters stand, this has not been addressed and, as a result, operations and maintenance is often neglected and, in any event, is beyond the financial resources of KMC.

The concept of User Pay in relation to municipal services is relatively new for the people of Kathmandu. No politician likes to raise taxes or charge fees and no citizen likes to pay them. At present, KMC does not have a clear policy regarding cost recovery for the services it is providing to its constituents.

10.5.2 Expenditure Planning/Budgeting

The two-day workshop organized by ADB TA for KMC ward chairpersons and department heads, on March 6 & 7, 2000, identified issues related to the Expenditure Planning/Budgeting¹³ which are as follows:

10.5.2.1 Issues

- ❖ New budget should incorporate principles of fiscal decentralization.
- ❖ Wards should be autonomous to prepare the budget, wards should collect business tax and all records should be maintained there.
- ❖ While prioritizing the projects, the citizen participation should be taken into account.
- ❖ Budget should not be traditional and it should consist of local area plans.
- ❖ Appropriate planning about budget preparation should be there with ample time.

- ❖ Budget should be formulated and passed by the Municipal Council before the beginning of fiscal year.
- ❖ Austerity measures should be adopted to control unproductive costs.
- ❖ Lack of fiscal discipline in the implementation of budget.
- ❖ Lack of political commitment in the budget
- ❖ Expenditure planning should guide fund allocation.
- ❖ Long Term or Periodic Capital Budget and Investment Plans are not prepared.

5.2.2 Challenges

The above-mentioned issues regarding expenditure planning/budgeting reflects the following problems for KMC:

(i) Budget Preparation Process not Completed on Time:

Chapter 6 of Local Self-Governance Act, 1999, clearly defined in detail about Formulation of Plans of Municipality and Process of Implementation with time frames. In the past, KMC had not followed the time frame prescribed in the Act. KMC should adhere to the provisions of the Act.

(ii) Long-term or Periodic Capital Budget and Investment Plans are not Prepared

The capital budget is largely concerned with the creation of long-term assets (roads, pipes, schools, water treatment plants etc.). The capital budget details the local government's long-term capital improvement needs. Governments commonly establish a uniform and organized multi-year (5 year) capital investment plan (CIP) to outline the public facilities, infrastructure, and land purchases that the jurisdiction intends to implement during a multi-year period given the availability of funds.¹⁴

Currently, KMC itself is preparing the budget for one year only, which means that the estimation of revenue and expenditure is done for one year only. All long and medium term infrastructure plans of KMC have been prepared by donor assisted projects. At present, KVMP is helping KMC by preparing integrated action plans. KMC does not have necessary expertise and resources at present. But from the viewpoint of CDS and its implementation, KMC must have in-house capacity to formulate long-term investment plans.

(iii) Result Management Framework not Developed yet.

As in the case of KMC revenue collection system, the result management component has not been developed yet for the expenditure planning/budgeting process. There is no clear internal policy about monitoring, evaluating, and taking necessary follow-up and corrective actions in relation to budget administration. Similarly control mechanism and accountability has also not been spelt out clearly. To sum up, Budget Performance Appraisal System, which is very important, is lacking at present.

10.5.3 Private Sector Participation

The first stakeholders workshop identified the following issues related to the Private Sector Participation:

10.5.3.1 Issues

1. Unable to promote investment for the development of the city.
2. Lack of vision for long term investment planning.

The following critical issues related with PSP are mentioned in the Interim Report of the ADB TA:

1. PSP Institutionalization the policy framework and other working papers should be passed by the KMC board.
2. PSP Awareness and Dissemination to the Key Stakeholders: PSP policy, programs and impact should be communicated widely to KMC and its stakeholders. A marketing strategy and public relations campaign to promote PSP needs to be envisaged.
3. PSP HRD Training: The training events will be crucial to the institutionalization of PSP in KMC. Hence the availability of the targeted audience for each specific training activity is paramount to ensure success. Training events will have to be scheduled to assure maximum participation.¹⁵

10.5.4 Accounting

The first stakeholder's workshop identified the following issues related to the financial management and accounting system of KMC:

10.5.4.1 Issues:**Financial Management****Issues**

1. Lack of effective financial management system.
2. Lack of fiscal system that will make KMC financially autonomous and accountable towards local people.

Accounting Related**Issues**

1. Financial Statements are not completed in time.
2. No timely auditing.
3. Audited financial statements are not available to the taxpayers and general public.
4. Advances and irregularities are not settled on time.
5. Financial information is not available from the Wards and Departments on time.
6. Information regarding Accounts receivable and Accounts payable are not updated.

10.5.4.2 Challenges:

Although efforts have been put forward for the implementation of CAS by various parties concerned, there are still many things to be done to achieve complete success. As mentioned earlier, KMC must actively participate and own all the aspects of management procedure in order to be effective to achieve its goals. After consultations, study and observation in relation to the implementation of CAS, the consultant felt that active participation and feeling of ownership among KMC staff were not satisfactory. Despite commitment from the political leadership, people still doubt whether CAS will be implemented successfully or not. The above-mentioned issues regarding implementation of CAS also reflect the following critical problems for KMC:

(i) Late Status of Targets

After the formation of CAS Implementation Unit, various targets for improved financial management is set (Annex 15). Some of the targets that were set to be completed before July 16, 2000 (for the introduction of CAS) were late as production of some statements could not be done within the required time frame. As a result the status of some of the assets/liabilities will remain an unconfirmed element of CAS, and as a result the Municipality Fund will also remain unconfirmed.

Targets regarding balance sheet items of KMC are also late, although work on them is continuing. Nevertheless,

progress on following targets needs to be improved, with particular regard to: -

- ❖ Valuation of fixed assets.
- ❖ Valuation of inventory held in various stores and consumption report.
- ❖ Reconciled balance of various bank accounts including wards and departments.
- ❖ Loan and interest payable to ADB.
- ❖ Other unpaid liabilities..

The management of KMC should be serious regarding late status of targets and all possible help and guidance should be provided to achieve it. If these targets are not met on time, the purpose of CAS will be defeated. ADB TA in its final interim report has published a revised target schedule (Annex 16), and KMC management must direct its efforts in attaining it. It is observed that whenever account related programs are prepared and the management asked to cooperate, they are engaged with the problems of crisis management of solid waste disposal issues. It is true that the number one priority of KMC is solid waste management, but CAS issues should not be ignored, because financial accounting is the heart of financial management system and effective financial management is the lifeblood of any organization.

(ii) Continuous Support for Corporate Accounting System (CAS)

On various occasions, KMC staff and officials expressed that there should be a continuous support program focused on human resource development and day-to-day problem solving during the introduction stage of CAS. For the support of CAS, the contract period of consultant from the Nepal Administrative Staff College (NASC) has completed (August 2000). Similarly the service term of finance consultant of ADB TA ended on October 2000. After that period, there are chances that some problems may arise, which could affect the system. Or still, there could be some confusion among KMC staff about the system or process. In such cases, there must be a finance expert from outside of KMC to provide necessary services or for problem solving. Although the services of finance expert may not be required on daily basis, he/she should be available at regular intervals for necessary consultation and support.

(iii) Uncontrolled Advances

The practice of sanctioning advances to employees, elected members, wards, clubs, institutions and departments is prevalent at KMC at present. Sanctioning of advance after advance by the authorities without settling the accounts of advances previously sanctioned

is also in existence. The increasing volume of outstanding advances of the KMC reveals this practice. This practice is to be completely checked by the authorities and provision of the rules and system relating to sanctioning of advances to wards and departments be stopped and instead, alternative system be adopted, e.g., department-wise budget. Delay in clearance of advances will have direct adverse effect in timely booking of expenses and it will lead to incorrect expenditure statement as well as weak budgetary control system.

(iv) Submission of Statements>Returns from Wards /Departments

Submission of monthly statements/returns from all wards and concerned departments to the Account and Budget Section of Finance Department is a precondition for production of monthly statements of KMC. Delay in submission of statements/returns by any of the wards/ departments will delay in production of monthly statements of KMC by the Account and Budget Section of Finance Department.

Directives in this relation have been issued to all wards, departments and concerned units, but the Account and Budget Section still has not received required statements/ returns from most of the wards and departments. Few wards have expressed that they need further training, but others are delaying it for no reason. So far the KMC management has taken no action.

(v) Lack of Auditing and Internal Control

Financial auditing by external parties may be undertaken to accomplish a variety of goals. The traditional object is to ensure compliance with the law, that funds are raised and expended in accordance with the authorizing legislation and following required procedures. In addition to compliance or legal audit, there may be the additional objective of reporting the financial condition and result of operations. Essentially it means that the presentation of accounts fairly reflects KMC's financial operations and balances. Lastly, audits may examine for fraud or speculation - a stealing of funds for personal benefits. KMC books of accounts for the FY 2054/55 (1997/98), 2055/56 (1998/99) and 2057/58 (1999/00) remained unaudited and authentic report has not yet been published and the above-mentioned objectives have not been fulfilled.

Similarly, the internal audit unit is also not strong enough to enforce proper internal control measures. There is confusion on the part of most employees regarding

accounting and reporting procedures and activities, resulting flaw in the internal control.

(vi) Result Management Framework not Developed yet.

As in the case of previous areas of municipal finance, the result management component has not been developed yet. There is no clear internal policy about monitoring, evaluating, and taking necessary follow-up and corrective actions in relation to CAS.

10.5.5 Identification of Legislative Gaps

There exists various gaps or oversight in the current legislation related to the municipal finance of local governments. Financial constraints at the national level have led to shortfalls of financing of municipal infrastructure development and the central government adopted the policy of delegating powers to raise local taxes. This fiscal year's budget of Nepal has emphasized this policy. Local governments are allowed to raise various taxes and fees. However, proper administrative procedures for implementing these resources have remained silent. The following gaps are visible:

10.5.5.1 Special Provision for Metropolitan City is not Defined:

The main drawback of LSGA is that there is no special provision for metropolitan and sub-metropolitan cities. It has treated metropolitan and sub-metropolitan cities and other municipalities as equal. In reality, the complexities, challenges and resource needs of KMC can not be compared with other ordinary municipalities. In order to govern a metropolitan city like Kathmandu, there should be a separate Act.

In the previous Municipality Act, 1991, there was a separate chapter (Chapter 10) containing Special Arrangements for Metropolitan City, which described additional function, authorities and responsibilities of a metropolitan city. In the LSGA, this chapter has been deleted. So from this aspect LSGA could be termed as regressive.

10.5.5.2 House and Land Tax:

Chapter 8, Section 136.1 of LSGA had mentioned about the House and Land Tax. Accordingly, "The Municipality may levy house and land tax, as prescribed, on each house and land within its jurisdiction on the basis of the size, type, design, construction and structure

of the house and compound and area covered by the house, as approved by the municipal council."¹⁶

But there is also a separate House and Land Tax Act 2019 (1962), which is still active and is not superceded by LSGA. Prior to the beginning of this fiscal year 2057/58 (2000/01) central government tax offices collected house and land tax on the basis of this Act. From the first day of the current fiscal year, tax offices of the central government have shifted the responsibility of collecting house and land tax to the municipalities.

Now the municipalities are confused with this situation, whether to collect the tax as per provisions of House & Land Tax Act 2019 or LSGA? On one hand, the central government did not clarify the situation, and on the other, KMC and other municipalities also have not presented the matter to concerned line agencies. There should not be any confusion in the context of collection of taxes and the matter should be cleared. At present, KMC is following the provisions of House & Land Tax Act.

10.5.5.3 House Rent Tax

There exists similar confusion in the house rent tax also. Chapter 8, Section 137, subsections 1 & 2 of LSGA mentions about the Rent Tax. Local Self-Governance Rules, 2056 of LSGA that prescribes 2% rent tax on the rentals of land, building, shed, etc.

In this case also, there is a separate House Rent Tax Act, which is still active and is not superceded by LSGA. Central government tax offices collect 15% rent tax on the basis of this Act.

Now the confusion on the part of municipalities are: a) rent tax collection procedures are not prescribed clearly, b) is 2% rent tax mentioned in the rules of LSGA in addition to 15% central government rent tax? Or will the municipalities get 2% out of 15%? This is not clear and KMC has not yet started to collect this tax, nor inquired with the concerned line agencies.

10.5.5.4 Commercial Video Tax

According to LSGA Chapter 8, Section 142, "The municipality may levy tax prescribed on the video, projector, cable etc. used by any person or organization for commercial purpose."

LSG Rule 146 of LSGA just prescribed the rate of rupees two hundred to five hundred per video, but again specific

criteria and collection procedures are not mentioned and it also caused confusions to the municipalities.

10.5.5.5 Business Tax

According to LSGA Chapter 8, Section 138, "The Municipality may levy and collect business (enterprise) tax, as prescribed, on trade, profession or occupation within its jurisdiction on the basis of capital investment and financial transactions."¹⁸

The Act clearly mentioned that business tax could be levied on the basis of capital investment and financial transactions, but the LSG Rule 142 of the same Act has contradicted this provision and restricted the financial autonomy of the local governments by prescribing the tax rates. For example, in this rule, airline services are categorized under service industry and maximum tax prescribed is rupees seven hundred only (Annex 5). The rate prescribed is very low and could not be justified in comparison to the investments or transactions of airline services.

10.5.5.6 Vehicle Tax

As per LSGA, Chapter 8, Section 138, besides vehicle registration and annual vehicle tax, municipalities may levy occasional vehicle tax, as prescribed, on all kinds of vehicle entering into its area.

A Municipality may levy the temporary vehicle tax as follows on the roads it has constructed or having been handed over to it: -

- (a) Five to twenty rupees for a private or on-hire bus, truck and tractor,
- (b) Five to ten rupees for the minibuses,
- (c) Five to twenty rupees for the private or on hire bus truck and tractor,
- (d) Up to five rupees for other vehicle;

Note:

- (1) No tax referred to in this clause shall be levied on a highway and sub-highway.
- (2) The amount of tax under this clause shall be expended in repair and maintenance of the concerned roads.

No irregular vehicle tax shall be levied within the same Municipality on the vehicle in respect of which vehicle registration and annual vehicles tax have been levied pursuant to clause (1).

In this way the provisions made in the Rules of the same Act have downgraded the spirit of the Act.

10.5.5.7 Tourism Fee

As per LSGA, Chapter 8, Section 145, Municipalities may impose service charges for making available the facilities. Subsection 3 of this section also mentions about the collecting fee from tourist places and other sources, for making available such facilities.

Here again the controversy regarding tourism charge is that it is not prescribed in the rules and collection procedure is silent.

10.5.5.8 Duplication of Work Due to Lack of Coordination

LSGA clearly assigned mandatory and optional functions to the municipalities. It also clearly mentioned in chapter 6 in detail about planning, implementation and management of various types of projects. But it is not mentioned anywhere about how such projects will be coordinated with central government line agencies, resulting duplication of works.

Many institutions are involved in providing infrastructure and services and there are duplications and confusions with ad hoc investment decisions based on project by project approach. There is a lack of coordination among different actors and stakeholders. Different actors run their programs on the same territory with their own interests. They focus on their own interests and the more important and difficult parts of the development programs were postponed referring these will be done by others.¹⁹

For example one of the main development activity of KMC is to build and maintain sewerage lines in the city and KMC is supposed to receive fee for sewerage maintenance. But the Nepal Water Supply Corporation collects sewerage maintenance fee, which is also involved in the construction of storm water drains.

10.5.6 Strategic Challenges

So far, SWOT analysis, issues and challenges related to municipal finance component have been covered. On

the basis of this, strategic challenges related with each component could be outlined.

- Challenge 1:** Bridge the fiscal gap.
- Challenge 2:** Develop and manage integrated revenue collection system.
- Challenge 3:** Introduce cost recovery concept.
- Challenge 4:** Prepare long-term or periodic capital budget and investment plans.
- Challenge 5:** Prepare balanced budget.
- Challenge 6:** Attract private sector participation in the provision of municipal services
- Challenge 7:** Implement CAS effectively and efficiently.
- Challenge 8:** Improve auditing & internal control system.
- Challenge 9:** Acquire, Develop, Motivate and Maintain quality human resources for municipal finance (and all other) activities.
- Challenge 10:** Develop effective result management system for all components of municipal finance.

10.6 STRATEGIC FRAMEWORK

10.6.1 Goals

Setting broad goals for an organization based on the vision and mission statement is a vital part of the planning process. In KMC's context, while developing the broad goals, the objectives of CDS also should be considered, besides vision and mission. In the light of strategic challenges and other analysis, following broad goals could be outlined for the municipal finance component:

- Goal 1** **Bridge the Fiscal Gap**
- Goal 2** **Prepare Balanced Budget**
- Goal 3** **Involve Private Sector in the Provision of Municipal Services & Infrastructure**
- Goal 4** **Implement CAS Effectively and Efficiently**
- Goal 5** **Develop Human Resources**

10.6.2 Policy Objectives

In order to meet above goals, the system of municipal finance will need to be restructured in accordance with a number of basic policy principles:

10.6.2.1 Principles for the Proposed Financial Framework:

(i) Revenue Adequacy and Certainty:

KMC needs to have access to adequate sources of revenue - either own sources or intergovernmental transfer - to enable it to carry out the functions that have been assigned to it. KMC should come forward to fully exploit these sources of revenue to meet the developmental objectives. KMC should have reasonable certainty of revenue to allow for realistic planning.

(ii) Sustainability:

Financial sustainability requires that KMC ensure a balanced budget (income should cover expenditures). Given revenue constraints, this involves ensuring that services are provided at levels, which are affordable, and that KMC is able to recover the cost of service delivery. It is the responsibility of the political leaders to ensure that they set realistic budgets. However, there is a need for subsidization to ensure that poor households, who are unable to pay even a proportion of service costs, have access to basic services.

(iii) Effective and Efficient Resource Use:

Economic resources are scarce and should be used in the best possible way to reap the maximum benefit for local communities. However, there are no mechanisms available to ensure that municipal decisions will indeed lead to an effective allocation of resources. It is therefore important that local residents provide the necessary checks and balances. They can do this by participating in the budgeting process to ensure that resources are being put to their best use. Efficiencies in public spending and resource allocation will ultimately increase the access of the poor to basic services.

(iv) Accountability, Transparency and Good Governance:

KMC should be held responsible and accountable to local taxpayers for the use of public funds. Elected

representatives should be required to justify their expenditure decisions and explain why and how the revenue necessary to sustain that expenditure is raised. The fiscal system should be designed to encourage accountability. KMC budgeting and financial affairs should be open to public scrutiny, and local residents should have a greater voice in ratifying decisions about how revenue is raised and spent. Community participation in budgeting should aim to incorporate those groups in the community, such as women, who face particular constraints in participating. It should also include a capacity-building component to ensure that people understand the process of prioritization - why resources are allocated to one set of things rather than to another. Accounting and financial reporting procedures should minimize opportunities for corruption and malpractice.

(v) Equity & Redistribution:

KMC must treat its citizens equitably with regard to the provision of services. In turn, the central government must treat KMC equitably with regard to intergovernmental transfers.

(vi) Development and Investment:

Meeting the basic needs in the context of existing issues related to the resource mobilization issues related to the resource mobilization service backlogs will require increased investment in municipal infrastructure. Public Private Partnerships such as leases and concessions, Administrative Systems, provide a mechanism for attracting private investment in municipal infrastructure.

10.6.3 Strategic Objectives

Strategic objectives are statements that represent organizational commitments. Commitments that will be used to obtain the mission and goals. In relation to the hierarchy of goals and principles, the following strategic objectives could be prescribed:

GOAL	STRATEGIC OBJECTIVES
Goal 1 Bridge the fiscal gap	1.1 Develop and Implement Integrated Revenue Collection System by the end of 2003. 1.2 Introduce Cost Recovery Concept. 1.3 Lobby for favorable legislative change.
Goal 2 Prepare balanced budget	2.1 Develop Multi-year Financial Planning. 2.2 Evaluate the use of debt financing to leverage spending in the Capital Fund.
Goal 3 Involve private sector in the provision of municipal services & infrastructure	3.1 Conduct feasibility studies of already identified city service and infrastructure areas; and make them (private sector/NGOs) involved in the project. 3.2 Negotiate with HMG/N and obtain authority for bulk distribution of electricity.
Goal 4 Implement CAS effectively and efficiently	4.1 Improve present CAS. 4.2 Improve auditing & internal control system. 4.3 Establish a program to upgrade KMC's accounting and financial reporting to international standards.
Goal 5 Develop Human Resources	5.1 Implement comprehensive HR Management and Human Relations Programs. 5.2 Improve necessary training & development. 5.3 Design performance appraisal system and compensation and benefit system. 5.4 Implement health and fitness programs.

10.6.4 Strategies

KMC have option to consider following strategies to achieve strategic objectives:

Goal 1: Bridge the Fiscal Gap

Strategic Objective: 1.1 Develop and Implement Integrated Revenue collection system by the end of 2003

Strategy 1.1.1 Develop a special project to design and implement the Integrated Revenue Collection System.

Strategy 1.1.2 Identify the donor who will assist in the implementation of project. (Given the present financial situation of KMC, donor assistance is essential).

Strategy 1.1.3 Maximize KMC staff involvement in the project to transfer the learning in practice and to have feeling of ownership.

Strategic Objective: 1.2 Introduce Cost Recovery Concept

Strategy 1.2.1 Privatize the solid waste collection in all the wards in a phased manner.

Strategy 1.2.2 Negotiate with NWSC in sharing the drainage service charge collected from Municipal system.

Strategy 1.2.3 Analyze "Ability to Pay" and "Willingness to Pay" capacities.

Strategic Objective: 1.3 Lobby for favorable legislative change.

Strategy 1.3.1 Demand a separate Act for KMC, which will guarantee complete fiscal autonomy.

Strategy 1.3.2 Lobby for amending the existing Act.

Strategy 1.3.3 Prepare, approve and implement internal by laws related to resource mobilization.

Goal 2: Prepare Balanced Budget

Strategic Objective: 2.1 Develop Multi-year Financial Planning

Strategy 2.1.1 Prepare operating and capital budgets with 5-year budget horizons.

Strategy 2.1.2 Monitor and control budget expenditures to minimize the potential of expenditure overrun (revenue shortfalls).

Strategy 2.1.3 Study revenue potentialities for realistic multi-year financial planning and resource mobilization.

Strategic Objective: 2.2 *Evaluate the use of debt financing to leverage spending in the Capital Fund.*

Strategy 2.2.1 Analyze KMC's debt-carrying capacity.

Strategy 2.2.2 Decide upon the measures to enhance credit

Strategy 2.2.3 Use concessional loan finance

Goal 3: Involve private sector in the provision of municipal services & infrastructure

Strategic Objective: 3.1 Conduct feasibility studies of already identified city service and infrastructure projects; and involve the private sector/NGOs in the project.

Strategy 3.1.1 Prioritize the projects and determine the cost of detailed feasibility studies.

Strategy 3.1.2 Create a new unit with qualified human resources to deal with PSP activities.

Strategy 3.1.3 Allocate marketing budget and develop a comprehensive marketing plan to "market" the results of feasibility studies.

Strategic Objective: 3.2 Negotiate with HMG/N and obtain authority for bulk distribution of electricity.

Strategy 3.2.1 Assess private sector's capacity and willingness to work on this project.

Strategy 3.2.2 Develop framework for bulk distribution of electricity with the private sector involvement.

Strategy 3.2.3 Negotiate with HMG/N.

Goal 4: Implement CAS Effectively and Efficiently

Strategic Objective: 4.1 Improve present CAS.

Strategy 4.1.1 Review existing CAS and identify areas to be improved.

Strategy 4.1.2 Develop and implement procedures to control and settle outstanding advances.

Strategy 4.1.3 Organize intensive education program on accounting process, practices and internal control to all concerned including elected representatives.

Strategic Objective: 4.2 Improve auditing & internal control system.

Strategy 4.2.1 Organize and strengthen the internal audit unit with approved human resources.

Strategy 4.2.2 Prepare internal audit and control bylaws. Conduct awareness campaign for KMC employees and elected representatives.

Strategy 4.2.3 Design a system to facilitate appointment of external auditor as provisions of the Act.

Strategic Objective: 4.3 Establish a program to upgrade KMC's accounting and financial reporting to international standards.

Strategy 4.3.1 Design sustainable automation system for accounting and financial reporting, establishing linkage with proposed integrated revenue collection system.

Strategy 4.3.2 Develop policy about periodic reporting and dissemination of financial reports.

10.6.5 Options considered for legislative support

10.6.5.1 Long-term Option:

(i) Demand a Separate Act for KMC

As already mentioned under the identification of gaps, there should be a separate Act for Metropolitan Cities. LSGA tend to be more general, because it does not distinguish a Metropolitan City from other ordinary and remote municipalities. In order to be a true local government, the provisions mentioned in the LSGA and its Rules are not enough. Again the spirit of LSGA is restricted by its Rules and in such a situation controversies will mar the positive aspects of the Act. Therefore, a separate Act, which is free from controversies and contradictions; which gives true autonomy; which incorporates true spirit of decentralization; which also calls for transparency, accountability and participation, is needed in the context of implementation of CDS.

There are many important measures to encourage sound management of local finances that should be adopted as part of new legislation governing local finances. In the area of revenues, this should include the devolution of authority to municipal governments to administer and collect local taxes and fees. The law also should address existing deficiencies in the structure of local taxes and fees. For example, it should include automatic adjustments for inflation to the tax base. The law also should provide greater authority and discretion to local governments over non-tax revenues, especially in the area of fees for services.

With regard to budget management, the new legislation should include measures regarding the adoption of a balanced budget and of a multi-year capital budget. To encourage prudent cash management, the new legislation should set limits on the use of short-term loans from any source to fund operating expenses.

Finally, there are two important additional measures that are necessary to encourage the prudent and efficient

management of local finances. The most important is the requirement of public participation in the budget process to ensure transparency. If this is to be fully effective, it also will be important to require that municipalities provide complete and timely information on their finances to local citizens and the public in general on an accounting basis.

10.6.5.2 Short-term Options:

Demanding a new Act will take a long time to materialize. So, for the immediate remedy, the following short-term options could be considered:

(i) Amend the Existing Act

The first short-term option would be to request Ministry of Local Development for necessary amendment in the existing LSGA and its Rules to correct the oversights. KMC in cooperation with other Sub-metropolitan Cities and Municipalities, should strongly lobby for necessary amendment in the existing Act and Rules.

(ii) Add New Sections in the Existing Act

KMC also should lobby for adding a separate section in the LSGA containing Special Arrangements for Metropolitan City, as it was available in the previous Act. This will give KMC various rights and duties including the right to issue municipal bonds for infrastructure financing.

Similarly another section should define the coordinating role of KMC. In order to avoid duplication with the central government programs, there should be a mechanism of coordination which should be spelled out in the Act itself.

10.6.6 Justifications

Justification regarding options considered for legislative support is self-explanatory. For the strategies considered, it has already been reflected during environmental and organizational analysis, and issues and problem identification. But in the context of CDS implementation,

justifications for strategies considered may be summarized as follows:

Strategic Objective: 1.1 Develop and Implement Integrated Revenue Collection System by the End of 2003

In order to face the main challenge of how to fulfill the resource gap, one of the main areas of intervention in KMC's context is to create a strong system of revenue collection. Without a proper system, the activities will not lead to desired outcomes. Therefore there must be a strong system for effective collection of much needed resources.

In the present situation where KMC is facing resource constraints, KMC alone will not be able to develop the project, therefore assistance from external sources must be sought.

Developing a project to design a system is not enough. Any system is relevant only when it is owned and implemented. From that viewpoint, the project and the system should be owned by KMC; and active involvement of the KMC staff is a basic requisite.

Strategic Objective: 1.2 Introduce Cost Recovery Concept

The goal of bridging the fiscal gap could also be met through strategic objective of introducing cost recovery concept. In this area, the important need of the hour is to privatize the collection of solid waste management services. Although it cannot be done at once, it must be done in different phases and KMC could have the following benefits:

- More than fifty percent of the total work force of KMC are cleaning staffs and if they could be laid off and transferred to private sector in different phases, KMC will have more time and resources to look into other critical issues.
- KMC policy of public-private partnership will be successful and will attract private sector to work with KMC.

Alternatively, KMC also should negotiate with NWSC in recovering the drainage service charges, because KMC is building and maintaining the city drains. Such a negotiation can generate significant revenue for KMC.

Strategic Objective: 2.1 Develop Multi-year Financial Planning

Another dimension of the broad Goal 1 is related with preparing balanced budget, which could be termed as broad Goal 2. Resources available with KMC must be

adequate to cover all types of expenditures. Since capital projects and some infra O&M projects will not be completed in one year's budget period, KMC must prepare operating and capital budget for at least 5-year budget horizon.

Similarly, monitoring and control mechanism must be operational to gauge the upcoming risks.

Again, in order to prepare a balance budget KMC must study the revenue potentials, along with the expenditure side.

Strategic Objective: 2.2 Evaluate the Use of Debt Financing to Leverage Spending in the Capital Fund.

A measure of an organization's financial strength is whether it can borrow from the capital markets without outside assistance. At this stage KMC should analyze the debt-carrying capacity. Various options should be considered in this area.

Strategic Objective: 3.1 Conduct Feasibility Studies of Already Identified City Service and Infrastructure Projects; and Involve the Private Sector/NGOs in the Project.

In order to achieve the goal of private public partnership in the provision of municipal services and infrastructure, KMC should now go into action. This strategic objective could be met through the strategies already outlined.

Strategic Objective: 3.2 Negotiate with HMG/N and Obtain Authority for Bulk Distribution of Electricity.

In the private-public partnership dimension, this strategic objective is very important to KMC. Obtaining authority for bulk distribution of electricity means a lot to KMC. For effective resource mobilization, it could be an effective tool KMC ever had. It is possible to have this authority with private sector involvement and careful strategy implementation.

Strategic Objective: 4.1 Improve Present CAS

Next broad goal is to implement CAS effectively and efficiently to acquaint the true financial position and to have fiscal transparency. It could be achieved by improving CAS, which calls for reviewing the present system and identifying the areas to be improved. Similarly, if all concerned persons including elected representatives are not familiar with accounting requirements, procedures and control mechanism, then there will be problems. Therefore, it is very essential to organize intensive education programs.

Strategic Objective: 4.2 Improve Auditing & Internal Control System.

Without proper auditing (internal and external) and internal control mechanism, fiscal discipline will be a daydream; and true and authentic fiscal statements will not be available. Therefore, it is essential to improve auditing and internal control system.

Strategic Objective: 4.3 Establish a Program to Upgrade KMC's Accounting and Financial Reporting to International Standards.

In order to improve reliability and image of KMC accounting system, it is necessary to upgrade KMC's accounting and financial reporting to international standards.

10.6.7 Uncertainties and Risks Related to the CDS, With or Without Municipal Finance Interventions

In order to improve bankability, intervention in the municipal finance components is a must. Without such interventions, the financial situation of KMC and ultimately the city cannot be improved. At present, KMC is extremely weak financially. The generation of revenue is poor and the funds are inadequate to meet the needs of the urban areas. In such a situation, failure to apply appropriate intervention will adversely affect entire KMC and its constituents. Therefore, the situation without municipal finance interventions could not be imagined in the context of CDS implementation.

The first condition for implementing CDS is that KMC must assume ownership of the entire programs and activities. The top and middle level managers of KMC must be willing and able to accept and bring desired changes.

10.7 TOOLS FOR DEVELOPMENT

10.7.1 KMC's Current Organization and Capacity

At present, KMC's organization structure is huge, consisting of 35 wards, 12 departments and 33 sections employing 2,475 employees. KMC's current organization structure is illustrated in Annex 3. Metropolis Council, the supreme body of KMC, consists of 197 council members (Mayor, Deputy Mayor, all 35 ward chairpersons plus 2 nominated members, 140 ward

members and 20 nominated members). Similarly, KMC board consists of all 35-ward chairpersons, 2 nominated members, Mayor, Deputy Mayor and the executive officer deputed from the Ministry of Local Development. All the functions of KMC are carried out through wards, departments, and sections.

Institutional Strengthening of KMC - ADB TA has already completed the following organizational management activities under Institutional Strengthening:

- ❖ Finalization of organizational structure
- ❖ Job position fixation
- ❖ Job description of all the wards, departments and sections.

But the program is finding it difficult to get results in the implementation side. It shows that KMC lacks its own capacity to manage and take care of all the functions assigned to them. The institutional and manpower capacities available at KMC shows that it can only manage a fraction of the tasks assign to them. In order to have effective and efficient city management, there is a pressing need for capable and dynamic city managers. But, again, the question is: Does KMC really have such kind of city managers, be it on the part of elected representatives or municipal staff including the executive officer sent by the MLD? The combination of unclear vision and structure, limited capable human resources, and weak financial management has disabled the majority of municipalities, including KMC to undertake any substantial development activities on their own. It is now evident that municipalities can no longer do "business as usual" with concentration to solve the problems of past. It must focus on the problems of present and future; and strategic management will prove to be an effective tool.

Annex 17, 18, 19 & 20 illustrate the total manpower available in the KMC Finance Department, Revenue Department and account related manpower in the rest of the departments respectively. The Finance Department is basically concentrating on the expenditure side, whereas the Revenue Department is concerned with income side only. It is clearly evident from the data that at present situation, all the departments and units under KMC, which has linkage with finance, are understaffed.

ADB TA has prepared job descriptions for the department and its heads, but it is not sufficient. The roles mentioned in the job descriptions focus on current situation only, whereas they should also cover a broader

perspective for the foreseeable future. For example, while estimating human resources need for Revenue Department, it did not take into account the human resources need for new house and land tax/integrated property tax. But from the first day of this fiscal year, the central government shifted the property tax collection responsibilities to the municipalities and KMC was not prepared for this. As a result, the Revenue Department felt tremendous pressure of shortage of human resources for the added responsibility.

Since Finance and Revenue Department constitute major area of the whole organization, proper job design and proper job analysis is a must to focus on problems of present and future. The present trend show that the fiscal transactions of KMC is on the rise, in this context it could be suggested that Strategic Human Resource Management of entire KMC including finance and revenue department, should get number one priority. This should be clearly spelled out. For instance, each element of human resource management functions as mentioned below should be explored:

1. Acquisition of Human Resources:

- Human resource planning
- Job Analysis
- Recruitment:
 - Internal
 - External
- Selection
- Employee socialization

2. Development of Human Resources

- Employee training
- Management Development/Leadership Development
- Career Development

3. Motivation of Human Resources

- Job Design
- Performance Evaluation

- Rewards
- Job Evaluation
- Compensation/Benefits
- Discipline

4. Maintenance of Human Resources

- Safety and Health
- Employee/Labor Relations

The above-mentioned human resource management functions, along with related issues should be identified and discussed thoroughly. On the basis of such discussion and survey, required and doable policies should be formulated. Such policies must be implemented strongly with proper monitoring and evaluation, to solve the problems of today and tomorrow.

10.7.2 Result Management

Another critical issue related to KMC's current organization and capacity is that there is a total lack of Result Management Mechanism for entire activities of KMC. As already discussed under each areas of municipal finance, the problem of lack of result management mechanism is adversely affecting the effectiveness of entire organization. In every sphere there is no system of looking back, stock taking and applying corrective measures. Ad-hocism is prevalent, and, as a result, things are not get done in systematic manner. For the effective implementation of CDS (or any other plans and programs), monitoring, evaluation, feedback and taking necessary corrective actions could be considered as an integral part of the process and should not be left out for any reasons. From the strategic management perspective, during implementation phase, control measures must be in place and they must be used to achieve desired results.

10.7.3 Logical Framework Matrix for Municipal Finance Development

OBJECTIVES	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
The potential contribution of own source of revenue is realized.	The overall proportion of own source revenues in relation to total revenues (excluding grants and loans) is increased to 60% (as specified in the draft budget).	Actual figures on a monthly and year end basis.	Local Development fee remains constant.
	The actual revenues collected from these taxes is equal or more than the estimated amount shown in the draft final budget.	Actual figures on a monthly and year end basis.	No external factor negates this target.
	The actual revenue collected from these taxes is equal or more than the estimated amount shown in the draft final budget.	Actual figures on a monthly and year end basis.	No external factor negates this target.
	Integrated revenue collection system designed and implemented. All concerned staff and elected representatives have understood the justification and operational procedures for the activities specified and use them.	Data entry into billing system of CAS.	
	Multi-year financial plan completed	Plan document	
Accounting is managed in a more efficient and transparent manner.	CAS is finalized and adopted by KMC by July 17, 2000.	KMC Budget document.	
CAS is introduced and operated on sustainable basis using computer software.	Monthly income and expenditure statement prepared according to CAS from August '00.	Statement of Monthly Income & Expenditure.	Commitment of KMC to implement CAS.
	Computer Use in CAS by July 17, 2000.	Reports printed.	
	KMC management has financial information on assets, liabilities and net worth of KMC by December 2000.	Financial statement (Balance Sheet) showing various assets, liabilities and KMC's reserve (net worth).	"
Necessary organizational and staffing arrangements and systems developed and in place to implement CAS.	Staff understand and operate CAS smoothly from July 17, 2000.		
	15 Account staff of the departments, 35 ward secretaries and 35 ward accountants trained in CAS by Dec. 2001.	Training report.	
	All required staff are in place and working according to new/ revised job description by July 2000	Minutes of Municipal council, Board meetings.	
Private Sector Participation	PSP Unit established with appropriate human resources	Minutes of Municipal Board meetings.	
	Feasibility Study of major PSP projects complete	Feasibility Study Report	

10.8 CONCLUSIONS

10.8.1 Summary of Findings & Recommendations

This city diagnostic report examines current status, issues and problems, and potentials for municipal finance reform in KMC. It also identifies current opportunities and constraints and recommended strategies for intervention.

Also, the report looks at the factors that might contribute to the success of the reform, as well as those that could constrain the process over the next few years. The positive factors include the ongoing efforts by representatives of central government officials and MPs to amend the legislation. Among the constraints are the current economic, political and social crisis prevalent in Nepal.

10.8.1.1 Resource Mobilization

If KMC, as a local government, has to provide effective and efficient municipal services to people, it must have a dependable source of income independent of outside grants including those from central government. As other local governments, KMC is also forced to go for massive resource mobilization and there are no other choices. Hence, there is an urgent need for KMC to strengthen its capability and competence to enhance revenue and mobilize resources as provisions of the Act.

10.8.1.2 Expenditure Planning/Budgeting

The lesson learned during formulation of current year's budget is "Timely intervention could bring desired change". Now the challenge in front of KMC is to provide continuity to the process. It is expected that the budget formulation process for the budget of fiscal year 2001/02 will begin on time as prescribed in the Act. At present, Kathmandu Valley Mapping Program (KVMP) is preparing Integrated Action Plan (IAP) for KMC and it will be a great help in the ward level and town level Expenditure Planning/budgeting process.

If KMC can develop Budget Performance Appraisal System this year and apply it, then it could be assumed that KMC would move forward in the correct direction in the years to come in relation to expenditure planning/budgeting. It will have a positive spiral effect on the KMC financial management system.

10.8.1.3 Private Sector Participation

All required policy frameworks, guidelines and standard operating procedures necessary to work with the private sector is complete at present and awaiting KMC board approval. Similarly, an Executive Task Force and an Operational Working Group is functional now for marketing tasks. It is now necessary to enhance KMC capability to analyze and evaluate various aspects of the projects such as cost-benefit and sustainability, etc. With this development it is expected that PSP will be institutionalized in KMC and will attract the private sector in various projects in the years to come.

10.8.1.4 Accounting

Although there are scores of problems associated with implementation of Corporate Accounting System (CAS), it is expected that with the help of timely and appropriate interventions from the KMC management, these problems could be solved in due course of time. In return, it will help KMC management make decisions by providing true fiscal picture of KMC.

Another possibility associated with CAS is that, if KMC goes for comprehensive revenue collection system, then in the automation process CAS will be linked with the comprehensive revenue collection system, which will bring quality and productivity.

10.8.1.5 Strategies

Finally, the report recommends municipal finance strategies that have four components. The first is a reform agenda that describes the key areas of resource mobilization. The second is a series of activities in the context of balancing the budget aspect for the CDS implementation. The third is related with involving private sector in the provision of municipal services and infrastructure. And the fourth is concerned with improvements in the internal accounting and reporting process.

Based on the issues, problems and gaps, the following strategic challenges have been identified:

- Challenge 1:** Bridge the fiscal gap
- Challenge 2:** Develop and manage integrated revenue collection system.
- Challenge 3:** Introduce cost recovery concept.
- Challenge 4:** Prepare long-term or periodic capital budget and investment plans

- Challenge 5:** Prepare balanced budget.
- Challenge 6:** Attract private sector participation in the provision of municipal services
- Challenge 7:** Implement CAS effectively and efficiently
- Challenge 8:** Improve auditing & internal control system.
- Challenge 9:** Acquire, develop, motivate and maintain quality human resources for municipal finance (and all other) activities.
- Challenge 10:** Develop effective result management system for all components of municipal finance.

With the help of these strategic challenges the following broad goals, strategic objectives and strategies are formulated:

Goal 1: Bridge the Fiscal Gap

Strategic Objectives 1.1 Develop and Implement Integrated Revenue Collection System by the end of 2003

Strategy 1.1.1 Develop a special project to design and implement the Integrated Revenue Collection System.

Strategy 1.1.2 Identify the donor who will assist in the implementation of project. (Given the present financial situation of KMC, donor assistance is essential).

Strategy 1.1.2 Maximize KMC staff involvement in the project to transfer the learning in practice and to have feeling of ownership.

Strategic Objectives 1.2 Introduce Cost Recovery Concept

Strategy 1.2.1 Privatize solid waste collection in all the wards in phased manner.

Strategy 1.2.2 Negotiate with NWSC in sharing the drainage service charge collected from Municipal system.

Strategy 1.2.3 Analyze "Ability to Pay" and "Willingness to Pay" capacities.

Strategic Objective: 1.3 Lobby for favorable legislative change.

Strategy 1.3.1 Demand a separate Act for KMC, which will guarantee complete fiscal autonomy.

Strategy 1.3.2 Lobby for amending the existing Act.

Strategy 1.3.3 Prepare, approve and implement internal by laws related to resource mobilization.

Goal 2: Prepare Balanced Budget

Strategic Objectives 2.1 Develop Multi-year Financial Planning

Strategy 2.1.1 Prepare operating and capital budgets with 5-year budget horizons.

Strategy 2.1.2 Monitor and control budget expenditures to minimize the potential of expenditure overrun (revenue shortfalls).

Strategy 2.1.3 Study revenue potentialities for realistic multi-year financial planning and resource mobilization.

Strategic Objectives 2.2 Evaluate the use of debt financing to leverage spending in the Capital Fund

Strategy 2.2.1 Analyze KMC's debt-carrying capacity.

Strategy 2.2.2 Decide upon the measures to enhance credit.

Strategy 2.2.3 Use concessional loan finance.

Goal 3 Involve Private Sector in the Provision of Municipal Services & Infrastructure

Strategic Objectives 3.1 Conduct feasibility studies of already identified city service and infrastructure areas; and involve them (private sector/NGOs) in projects by 2003.

Strategy 3.1.1 Prioritize the projects and determine the cost of detailed feasibility studies.

Strategy 3.1.2 Create a new unit with qualified human resources to deal with PSP activities.

Strategy 3.1.3 Allocate marketing budget and develop a comprehensive marketing plan to "market" the results of feasibility studies.

Strategic Objectives 3.2 Negotiate with HMG/N and obtain authority for bulk distribution of electricity.

Strategy 3.2.1 Assess private sector's capacity and willingness to work on this project.

Strategy 3.2.2 Develop framework for bulk distribution of electricity with the private sector involvement.

Strategy 3.2.3 Negotiate with HMG/N.

Goal 4 Implement CAS Effectively and Efficiently

Strategic Objectives 4.1 Improve present CAS.

Strategy 4.1.1 Review existing CAS and identify areas to be improved.

Strategy 4.1.2 Develop and implement procedures to control and settle outstanding advances.

Strategy 4.1.3 Organize intensive education program on accounting process, practices and internal control; to all concerned including elected representatives.

Strategic Objectives 4.2 Improve auditing & internal control system.

Strategy 4.2.1 Organize and strengthen the internal audit unit with approved human resources.

Strategy 4.2.2 Prepare internal audit and control bylaws. Conduct awareness campaign for KMC employees and elected representatives.

Strategy 4.2.3 Design a system to facilitate appointment of external auditor as provisions of the Act.

Strategic Objectives 4.3 Establish a program to upgrade KMC's accounting and financial reporting to international standards.

Strategy 4.3.1 Design sustainable automation system for accounting and financial reporting, establishing linkage with proposed integrated revenue collection system.

Strategy 4.3.2 Develop policy about periodic reporting and dissemination of financial reports.

Goal 5 Develop Human Resources.

Strategic Objectives 5.1 Implement comprehensive HR Management and Human Relations Programs.

Strategic Objectives 5.2 Improve necessary training and development.

Strategic Objectives 5.3 Design performance appraisal system, and compensation and benefit system.

Strategic Objectives 5.4 Implement health and fitness programs.

In addition, as a part of above reform measures, long-term and short-term options should be considered for legislative support. A separate Act should govern KMC, instead of LSGA, and this will be very important in the context of CDS implementation. Short-term options include amending and adding new sections in the existing Act.

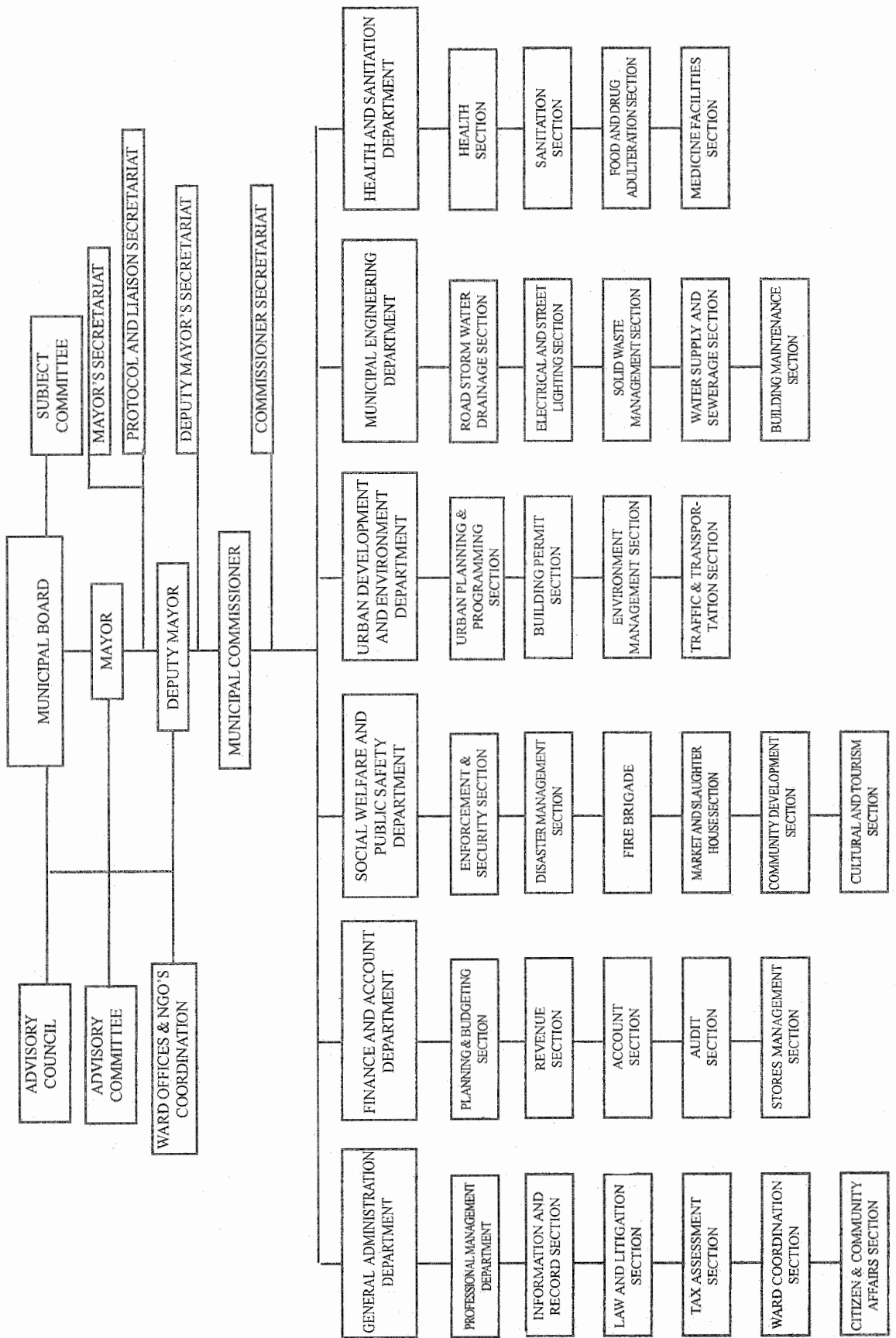
Operational objectives and action plans will be formulated on the basis of above-mentioned hierarchy of goals, strategic objectives and strategies. Important action plans will be presented in the city action plan.

Table 5: Municipal Finance - Issues and Implications

ISSUES	IMPLICATION	ACTORS/DONORS
Bridge the fiscal gap	KMC cannot be sustained financially, if this issue is not addressed.	KMC Board, donor agencies, Executive officer, finance & revenue department KMC Board, Private Sector, KMC Environment Dept., MLD
Prepare balanced budget.	KMC income should equal expenditures. A balanced budget is necessary to ensure that the KMC stays solvent, (that is, that expenditure does not exceed its revenues and reserves).	KMC Board, executive officer, wards & departments, financial institutions, donor agencies, consultants
Involve private sector and NGOs in the provision of municipal services & infrastructure	Following are the main reasons for delegating responsibilities to private sector operations and NGOs in the provision of urban services: 1. Reducing the cost of public services to consumers. 2. Relieving the financial and administrative burden on KMC 3. Satisfying unmet needs. 4. Increasing productivity and raising efficiency by promoting competition.	MLD, KMC Board, executive officer, private sector, and consultants
Implement CAS effectively and efficiently.	In order to obtain true and accurate financial picture of KMC, CAS must be implemented effectively and efficiently.	KMC Board, executive officer, Finance Department, Revenue Department, Wards, CAS implementation unit, Local Consultants, other KMC departments, Internal Audit Unit.
Develop Human Resources	1. Human Resources are the most valuable asset of any organization and key to the success of that organization. 2. "If you dig very deeply into any problem, you will get people." - J. Watson Wilson	KMC Board, executive officer, Administration Department, Wards, and other departments.

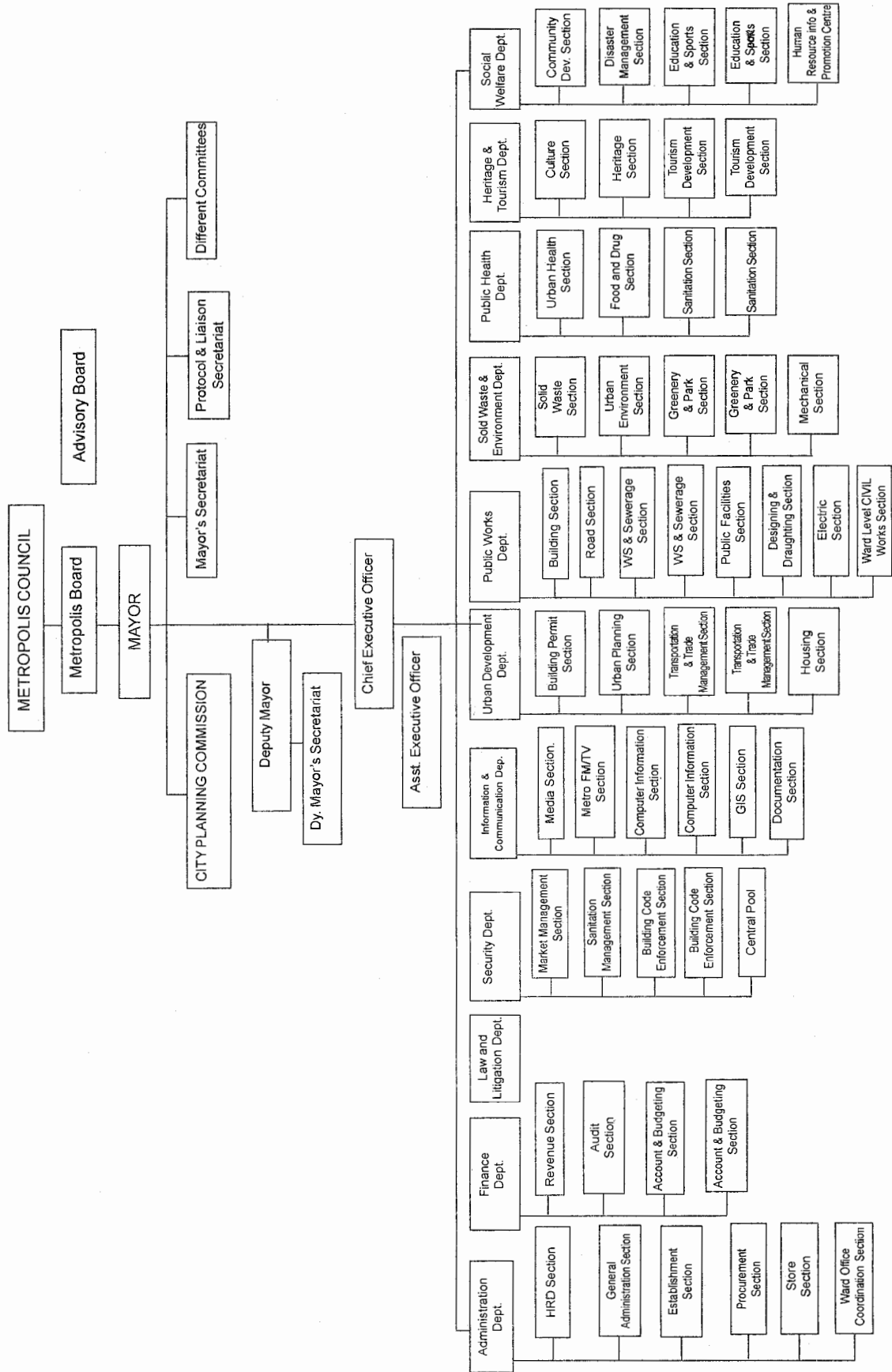
ANNEX 1

Kathmandu Metropolitan City
MODA Proposed Organization Structure



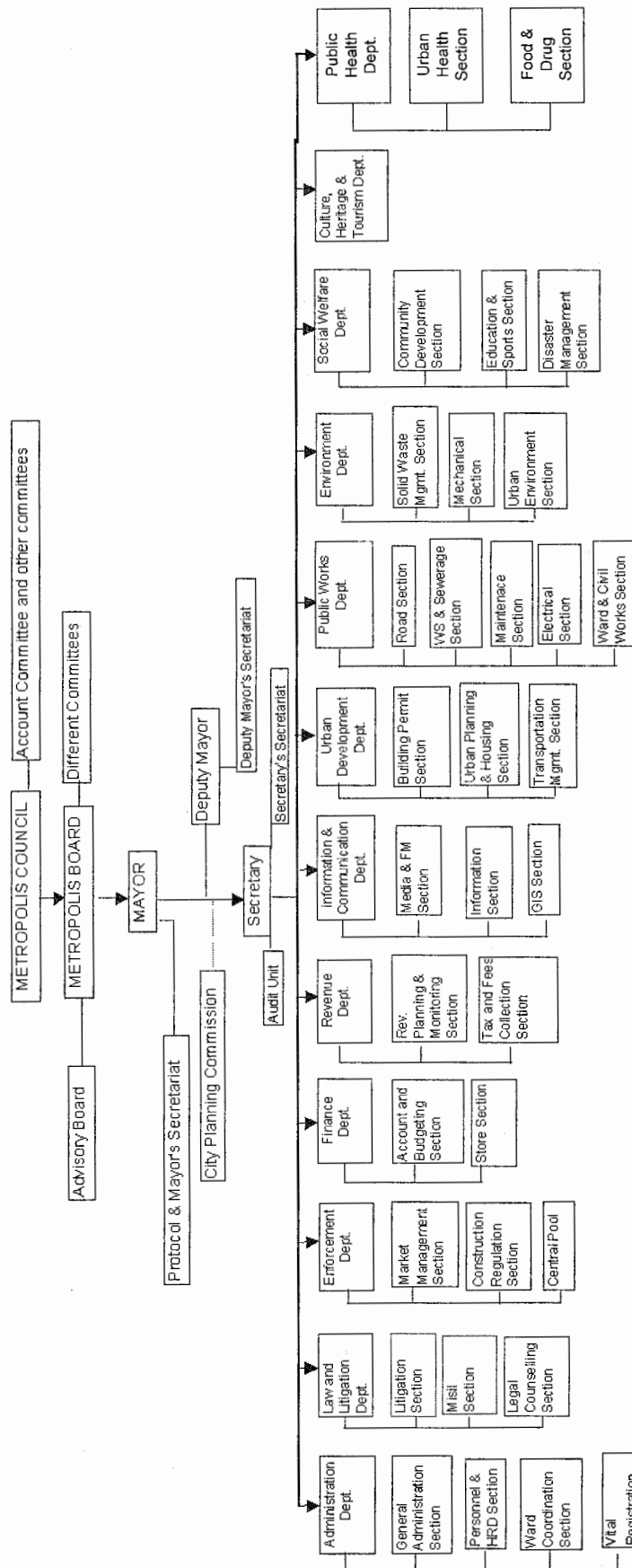
**Organization Structure (Previous)
Kathmandu Metropolitan City Office**

ANNEX 2



ANNEX: 3

**Improved Organizational Structure
Kathmandu Metropolitan City Office**



Total Departments and Sections:		
Proposed Structure:	No. of Department = 12	Previous Structure No. of Department = 11
	No. of Section = 33	No. of Section = 43

ANNEX 4

1. Vehicles Registration and Annual Vehicle Tax:

- (a) One thousand to three thousand rupees on bus, truck, lorry and other vehicles;
- (b) Two hundred to five hundred rupees on car and jeep on hire;
- (c) One hundred to three hundred rupees on auto-rickshaw on hire;
- (d) Five hundred to one thousand rupees on minibus on hire;
- (e) One hundred to three hundred rupees on private car, auto-rickshaw, minibus;
- (f) Fifty to two hundred rupees on scooter, motorcycle, and other vehicle;
- (g) Fifteen to twenty five rupees on car and rickshaw.

Note: In cases where as Municipality has levied the Vehicles Registration and the Annual Vehicle Tax in respect of a motor vehicle, no other Municipality shall be entitled to levy such Vehicles Registration and Annual Vehicle Tax.

2. Temporary (Occasional) Vehicle Tax:

A Municipality may levy the temporary vehicle tax as follows on the roads it has constructed or having been handed over to it: -

- (a) Five to twenty rupees for private or on-hire bus, truck and tractor,
- (b) Five to ten rupees for minibuses,
- (c) Five to twenty rupees for private or on hire bus truck and tractor,
- (d) Up to five rupees for other vehicles.

Note:

- (1) No tax referred to in this clause shall be levied on a highway and sub-highway.
- (2) The amount of tax under this clause shall be expended in repair and maintenance of the concerned roads.
- (3) No irregular vehicle tax shall be levied within the same Municipality on the vehicle in respect of which vehicle registration and annual vehicles tax have been levied pursuant to clause (1).

3. Registration and Operation License Fee:

A Municipality may levy the vehicle registration tax of fifteen to fifty rupees for registration and giving number to carts, riskshaws, horse-drawn-carts within the Municipality Area.

Source: Nepal: Urban Sector Strategy, Background Paper IV - Urban Finance.

ANNEX: 5

Rate of Business (Profession) Tax

<i>1. Commercial Goods:</i>	<i>Minimum (Rs.)</i>	<i>Maximum (Rs.)</i>
<i>(1) On wholesale and retail business of cigarette, liquor, jewelry, video, cassette recorder and player.</i>	750.00	10,000.00
<i>(2) On the wholesale and retail business of construction materials, computer, electric goods, camera, television, radio, carpet, petroleum materials and the like.</i>	500.00	5,000.00
<i>On the wholesale of daily use, cotton fabric etc.</i>	360.00	1,000.00
<i>2. On Expert Consultation and other Professional Services:</i>	360.00	3,000.00
<i>(1) Doctors</i>	360.00	3,000.00
<i>(2) Kaviraj (Aurvedic doctors)</i>	360.00	1,000.00
<i>(3) Engineers</i>	360.00	3,000.00
<i>(4) Legal Practitioners</i>	360.00	3,000.00
<i>(5) Auditors</i>	360.00	3,000.00
<i>(6) Dentists</i>	360.00	3,000.00
<i>(7) Researchers and Consultants</i>	360.00	3,000.00
<i>(8) Computer analysts and Programmers</i>	360.00	3,000.00
<i>(9) Insurance Agents</i>	360.00	3,000.00
<i>(10) Surveyors</i>	360.00	3,000.00
<i>(11) Translators</i>	360.00	3,000.00
<i>(12) Veterinary Doctors</i>	360.00	3,000.00
<i>(13) Share Brokers</i>	360.00	3,000.00
<i>(14) Goods Carrier and Companies</i>	750.00	3,000.00
<i>3. Construction Business:</i>		
<i>Construction business with the head office located at the Municipality.</i>	2,000.00	10,000.00
<i>4. Production-oriented Industries:</i>		
<i>Industrial business manufacturing goods by using or processing raw materials, semi-processed materials or waste materials or other materials.</i>	2,000.00	10,000.00
<i>5. Energy-oriented Industries:</i>		
<i>Industrial business producing energy from water resources, air, solar power, coals, natural oil, gas, bio-gas and other sources.</i>	2,000.00	10,000.00
<i>6. Agricultural and forest-oriented industries</i>		
<i>The industrial business based mainly on agricultural and forest products.</i>	1,500.00	10,000.00
<i>7. Mineral Industries:</i>		
<i>Industrial business excavating and processing minerals.</i>	1,500.00	10,000.00
<i>8. Tourism Industries:</i>		
<i>Tourist residence, motel, hotel, restaurant, resort, travel agency, skiing, gliding, water rafting, pony trekking, trekking, hot air ballooning, para sailing, golf-course, polo, horse-riding, etc.</i>	10,000.00	50,000.00
<i>9. Service Industries:</i>		
<i>Press, consultation service, film business,</i>		

CITY DIAGNOSTIC REPORT

public transport business, photograph, laboratory, airline services, cold storage etc.	400.00	700.00
10. Construction Business:		
Road, bridge, rope-way, trolley bus, tunnel, flying bridges, and construction and operation of industrial, business and residential complex.	1,000.00	10,000.00
11. Communication Services:		
(1) Private sector postal business.	360.00	1,500.00
(2) Private sector telephone, fax services, photocopy, mobile phone, ISD, STD, e-mail, internet, radio-paging.	360.00	1,500.00
(3) Courier services.	360.00	1,500.00
(4) Printing and publication.	360.00	3,000.00
12. Financial Services:		
(1) Commercial banks carrying on financial transactions excluding those under the full ownership of His Majesty's Government.	5,000.00	50,000.00
(2) Head office of a finance company carrying out financial transactions as well.	5,000.00	10,000.00
(3) Branch offices of finance companies.	1,000.00	3,000.00
(4) Insurance Companies.	5,000.00	10,000.00
(5) Foreign currency exchange.	1,000.00	3,000.00
(6) Securities transactions.	1,000.00	3,000.00
(7) Cooperative banks.	1,000.00	3,000.00
13. Health services:		
(1) Non-governmental hospital.	1,500.00	500.00
(2) Nursing home.	2,500.00	5,000.00
(3) Clinic and lab.	500.00	3,000.00
14. Education services:		
(1) Private sector school, campus, university	360.00	1,000.00
(2) Training and Research center	1,000.00	3,000.00
(3) Typing, computer and language training centers	1,000.00	3,000.00
(4) International non-governmental organization	2,500.00	5,000.00
15. Repairing and Maintenance services:		
(1) Heavy equipment, bus, truck, car, motorcycle, tempo, cycle repairing facilities.	360.00	3,000.00
(2) Radio, TV, watch, pressure, cooker, heater, telephone set, electric goods repairing center.	360.00	1,500.00
16. Other services:		
(1) Advertisement service.	360.00	1,500.00
(2) Foreign employment service.	1,000.00	5,000.00
(3) Native employment service.	360.00	1,500.00
(4) Secretarial service	1,000.00	5,000.00
(5) Housing company and real estate.	1,500.00	5,000.00
(6) Beauty parlour, hair dressing, dry cleaners, photo studio, tailoring etc.	360.00	1,500.00
(7) Painting service to prepare sign board.	360.00	1,500.00
(8) Animal slaughter house.	1,000.00	3,000.00
(9) Meat-sellers.	360.00	1,500.00
17. Other Business:		
(1) Park, picnic spot.	750.00	1,000.00
(2) Casino.	5,000.00	100,000.00
(3) Tour operator.	2,500.00	4,000.00
(4) Massage parlour.	1,000.00	3,000.00

18. Temporary Haat (weekly temporary market) Bazaar or Mobile shop:

Notwithstanding anything contained elsewhere in this Annex, the following business tax may be levied on the following temporary Haat (weekly temporary market, bazaar or mobile shop).

- (1) Two rupees to twenty-five rupees on the mobile shop including Khuncha.
- (2) Two to twenty-five rupees on each quadrupeds.
- (3) One rupee to five rupees on each duck or chicken.
- (4) One rupee to three rupees on vegetables and fruits shop.
- (5) One rupee to ten rupees on others.

19. An annual tax of Rs. 360.00 to Rs. 5,000.00 as per transactions and level of the service and business not included in the classification above.

Source: Nepal: Urban Sector Strategy, Background Paper IV - Urban Finance.

ANNEX: 6

Land Revenue or Land Tax and House-Land Tax

1. House-Land Tax:-

<i>Price of House-Land</i>	<i>Rate of the Tax</i>
Up to the first one million rupees	None
Up to one million thereafter	Rs. 300.00 Lump sum
Up to three million thereafter	0.05 per cent
Up to five million thereafter	0.25 per cent
Up to ten million thereafter	0.50 per cent
For the remaining amount	1.50 per cent

2. Land Revenue:-

(1) Mountain Region

(a) Land of the landowner holding the land with an area of the twenty Ropani or less than that:-

Classification of Land	Unit Per Ropani Rs.	Grade				
		Grade I	Grade II	Grade III	Grade IV	Grade V
(X) Sloppy Land	Minimum	0.38	0.25	0.12	0.11	0.03
	Maximum	1.90	1.25	0.60	0.55	0.15
(y) Paddy field	Minimum	0.50	0.38	0.25	0.20	
	Maximum	2050	1.90	1.25	1.00	

(b) Land of the landowner holding the land with an area of forty Ropani or the less than that:-

Classification of Land	Unit Per Ropani Rs.	Grade				
		Grade I	Grade II	Grade III	Grade IV	Grade V
(X) Sloppy Land	Minimum	0.44	0.37	0.28	0.20	0.13
	Maximum	2.20	1.85	1.40	1.00	0.65
(y) Paddy field	Minimum	0.62	0.40	0.37	0.25	
	Maximum	3.10	2.00	1.85	1.25	

(c) Landowner holding the land with an area of forty Ropani or more:-

Classification of Land	Unit Per Ropani Rs.	Grade				
		Grade I	Grade II	Grade III	Grade IV	Grade V
(X) Sloppy Land	Minimum	3.10	1.80	0.60	0.20	
	Maximum	15.50	9.00	3.00	1.00	
(y) Paddy field	Minimum	4.40	3.10	1.80		
	Maximum	22.00	15.50	9.00		

3. For three districts of Kathmandu Valley:-

- (1) Land revenue at the rate of Rs. 25.60 in minimum and of Rs.125.00 in maximum shall be imposed and recovered on the land in the city areas of the three districts of the Kathmandu Valley (Kathmandu, Lalitpur and Bhaktapur).
- (2) The rate of land revenue to be imposed on the lands of mountain areas of the three Districts of the Kathmandu Valley (Kathmandu, Lalitpur and Bhaktapur) shall be the same as in the case of the land in hilly areas.

4. Terai Region:-

(1) With regard to the land of the landowners holding the land with an area of one and half Bigaha or less than that:-

Classification of Land	Unit (Per Ropani Rs.)	Grade I	Grade II	Grade III	Grade IV	Grade V
Paddy field/	Minimum	6.80	6.00	4.80	3.60	
Sloppy land	Maximum	34.00	30.00	24.00	18.00	

(2) With regard to the land of the landowners holding the land with an area of three Bigaha or the less than that:-

Classification of Land	Unit (Per Ropani Rs.)	Grade I	Grade II	Grade III	Grade IV	Grade V
Paddy field/	Minimum	8.50	6.80	5.00	4.00	
Sloppy land	Maximum	42.50	34.00	25.00	20.00	

(3) With regard to the land of the landowners holding more than three Bigaha of land:-

Classification of Land	Unit (Per Bigaha Rs.)	Grade I	Grade II	Grade III	Grade IV	Grade V
Paddy field/	Minimum	70.00	62.00	50.00	30.00	
Sloppy land	Maximum	350.00	310.00	250.00	150.00	

5. Land Tax:-

Region/Unit Classified

	A	B	C	D	E	F	Unclassified
(a) Kathmandu Valley Per Ropani Rs.	128.00	102.40	76.80	61.44	46.08	35.84	61.44
(b) Mountain Region Per Ropani Rs.	35.84	30.72	25.60	20.48	15.36	10.24	20.48
(c) Terai Region Per Kaththa	50.00	40.00	30.00	25.00	20.00	15.00	25.00

Note:

- (1) Five rupees for each plot of land of the landowner in the districts in the hilly region where land survey has not been completed, and the Land Revenue Act, 2034 has not been enforced, on the basis of the previous plot.
- (2) The rate of the land revenue of the land, in the district which have been declared as tea and rubber plantation zone and in which tea and rubber plantation zone and in which tea and rubber farming is carried out and the land, occupied by private forest, shall be the minimum rate as per the type of the land concerned.
- (3) In cases where the total amount of the land revenue and land tax is less than two Rupees per annum, the minimum annual land revenue or land tax shall be set at two Rupees.
- (4) No land revenue shall be levied on the land on which land tax has been levied.
- (5) His Majesty's Government shall, on the recommendation of the concerned Municipality, determine the area where the land tax is to be levied.

Source: Nepal: Urban Sector Strategy, Background Paper IV - Urban Finance.

ANNEX: 7

Rate of the Integrated Property Tax

Value of the Taxable Integrated Property	Rate (Annual)
Up to one million rupees	From fifty to two hundred rupees
From one million to two million rupees	From two hundred to four hundred rupees
From two million to three million rupees	From four hundred to seven hundred fifty rupees
From three million to five million rupees	From seven hundred fifty to one thousand rupees
Over five million rupees	From ten thousand to one thousand five hundred rupees

Source: Nepal: Urban Sector Strategy, Background Paper IV - Urban Finance.

ANNEX: 8

Accounting Codes	Budget Heading	1991/1992		1992/1993		1993/1994		1994/1995		1995/1996	
		2048/049	2048/049	2049/050	2049/050	2050/051	2050/051	2051/052	2051/052	2052/053	2052/053
90 04 00	TAX INCOME	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Budget
90 01 00	LAND REVENUE/HOUSE & LAND TAX	-	-	50,000	-	6,700,000	-	6,700,000	-	-	2,300,000
90 01 01	Land Revenue	-	-	-	-	-	-	-	-	-	2,300,000
90 01 02	House & Land Tax	-	-	-	-	6,200,000	-	6,200,000	-	-	-
90 01 03	Land Tax	-	-	-	-	-	-	-	-	-	-
90 01 04	Tax on Sale of House and Land	-	-	50,000	-	500,000	-	500,000	-	-	-
90 02 00	RENT TAX	-	-	-	-	-	-	-	-	-	-
90 02 01	Property Rent Tax	-	-	-	-	-	-	-	-	-	-
90 02 02		-	-	-	-	-	-	-	-	-	-
90 04 00	VEHICLE TAX	2,519,975	3,394,384	3,867,025	5,444,250	4,132,742	6,000,000	3,893,401	4,408,000	3,893,401	4,408,000
90 04 01	Bus, Truck, Lorry	-	-	-	748,000	1,023,020	808,675	479,800	650,000	479,800	650,000
90 04 02	Mini Truck	730,300	1,064,075	977,500	416,500	-	516,500	409,650	500,000	409,650	500,000
90 04 03	Mini Bus - other (Public)	-	-	-	1,200,000	1,412,798	1,400,000	1,491,610	1,500,000	1,491,610	1,500,000
90 04 04	Car - other (Public)	1,046,205	1,282,182	1,675,650	1,551,300	244,550	1,551,300	278,250	290,000	278,250	290,000
90 04 05	Jeep, Van - other (Public)	81,435	93,115	114,825	177,600	106,050	177,600	105,575	110,000	105,575	110,000
90 04 06	Tempo - other (Public)	-	-	-	7,650	36,412	15,300	22,400	225,000	22,400	225,000
90 04 07	Mini Bus - Private	199,420	279,720	254,100	498,000	260,170	498,000	388,670	400,000	388,670	400,000
90 04 08	Car - Private	462,615	675,292	844,450	844,450	1,047,272	1,030,600	707,906	725,000	707,906	725,000
90 04 09	Jeep, Van - Private	-	-	500	750	2,470	2,025	9,540	8,000	9,540	8,000
90 04 10	Tempo - Private	-	-	-	-	-	-	-	-	-	-
90 04 11	Scooter & Motor Cycle	-	-	-	-	-	-	-	-	-	-
90 04 12	Tractor and Power Tiller	-	-	-	-	-	-	-	-	-	-
90 04 13	Rickshaw & Cart	-	-	-	-	-	-	-	-	-	-
90 05 00	INTEGRATED PROPERTY TAX	-	-	-	-	-	-	-	-	-	-
90 05 01	Integrated Property Tax	-	-	-	-	-	-	-	-	-	-
90 06 00	ENTERTAINMENT TAX	-	-	-	-	-	-	-	-	-	-
90 06 01	Cinema Hall	-	-	-	-	-	-	-	-	-	-
90 06 02	Video Hall	-	-	-	-	-	-	-	-	-	-
90 06 03	Cultural Exhibition Hall	-	-	-	-	-	-	-	-	-	-
90 06 04	Theatre, Music Concert	-	-	-	-	-	-	-	-	-	-
90 06 05	Circus, Magic, Acrobatic Show	-	-	-	-	-	-	-	-	-	-
90 07 00	COMMERCIAL VIDEO SHOW TAX	-	-	-	-	-	-	-	-	-	-
90 07 01	Cable Operator	-	-	-	-	-	-	-	-	-	-
90 07 02	Video	-	-	-	-	-	-	-	-	-	-
90 07 03	Projector	-	-	-	-	-	-	-	-	-	-
90 08 00	ADVERTISEMENT TAX	294,999	148,860	12,000	440,000	189,044	270,000	929,226	1,545,000	929,226	1,545,000
90 08 01	Sign Board	70,554	135,060	5,000	400,000	176,244	250,000	902,621	1,000,000	902,621	1,000,000

CITY DIAGNOSTIC REPORT

ANNEX: 8

Accounting Codes	Budget Heading	1991/1992		1992/1993		1993/1994		1994/1995		1995/1996	
		2048/049	2049/050	2049/050	2050/051	2050/051	2051/052	2051/052	2052/053	2052/053	2052/053
		Actual	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Budget
90 08 02	Neon Boards	2,250	2,000	13,400	30,000	11,600	15,000	16,560	45,000	16,560	16,560
90 08 03	Hoarding Boards	221,295	5,000	400	10,000	1,200	5,000	10,045	500,000	10,045	500,000
90 08 04	Banners & Posters										
90 10 00	BUSINESS PROFESSION TAX	381,173	734,250	964,645	2,173,125	1,197,095	1,500,000	3,687,946	6,180,000		
90 10 01	Trading Business	3,750	66,000	10,850	82,500	5,650	50,000	7,600	200,000	7,600	200,000
90 10 02	Professionals	6,000	52,000	5,300	81,250	6,800	20,000	2,100	200,000	2,100	200,000
90 10 03	Construction Business	9,750	91,250	11,800	93,750	5,550	50,000	5,200	180,000	5,200	180,000
90 10 04	Manufacturing Industries Business	67,593	75,000	79,760	373,375	100,210	250,000	226,950	230,000	226,950	230,000
90 10 05	Energy and Power Generating Business	27,000	61,000	48,500	103,750	1,700	75,000	148,000	1,000,000	148,000	1,000,000
90 10 06	Agro-Forestry Based Business	18,000	27,000	24,500	51,000	21,700	75,000	49,700	170,000	49,700	170,000
90 10 07	Mining and Minerals Processing Business	54,500	100,000	68,400	187,500	81,000	300,000	134,450	150,000	134,450	150,000
90 10 08	Tourism Based Business	144,430	150,000	635,835	1,000,000	401,135	500,000	2,586,697	2,000,000	2,586,697	2,000,000
90 10 09	Service Business	50,150	112,000	79,700	200,000	573,350	180,000	527,249	2,050,000	527,249	2,050,000
90 10 10	Property/Estate Leasing Business										
90 10 11	Communication Business										
90 10 12	Financial Service Business										
90 10 13	Health Services Business										
90 10 14	Educational and Training Business										
90 10 15	Repair & Maintenance Service Business										
90 10 16	Other Services										
90 10 17	Other Business										
90 10 18	Temporary Haat Bazar & Mobile Shops										
90 10 19	Others										
91 00 00	INCOME FROM FEES	7,277,146	7,594,000	9,181,653	11,881,600	5,681,084	12,925,000	22,469,520	17,998,700		
91 01 01	Vehicle Entrance Fee- Thankot	760,196	746,000	804,721	1,250,000	889,222	1,250,000	2,105,399	2,200,000	2,105,399	2,200,000
91 01 02	Old Bus Park										
91 01 08	New Bus Park Fee	1,026,751	1,200,000	1,626,210	4,000,000	3,767,191	4,000,000	4,876,102	5,363,700	4,876,102	5,363,700
91 01 03	Parking Fee										
91 01 04	Property Valuation Fee	27,785	30,000	8,233	10,000	57,161	75,000	69,137	100,000	69,137	100,000
91 01 05	Building Map Approval Fee	5,374,764	5,500,000	6,630,489	6,000,000	874,949	7,000,000	15,384,082	10,000,000	15,384,082	10,000,000
91 01 06	Shop at Public Land (Hymata)	69,200	100,000	62,000	100,000	500	-	-	-	500	-
91 01 07	Buspark Terminal, Bhugol Park Toilet	18,450	18,000	50,000	21,600	92,061	100,000	34,800	35,000	92,061	100,000
92 00 00	INCOME FROM RENTAL	1,332,308	2,218,666	1,494,478	2,615,799	1,681,753	3,265,599	3,221,518	3,411,823		
92 01 00	INCOME FROM RENTAL	1,332,308	2,218,666	1,494,478	2,615,799	1,681,753	3,265,599	3,221,518	3,411,823		
92 01 01	Income from Rental - Bhugol Park 1st floor	108,000	334,000	540,000	400,000	324,000	600,000	782,744	816,018	324,000	600,000
92 01 02	Income from Rental - Bhugol Park Ground Fl	498,832	853,000	569,101	1,023,600	512,191	1,023,600	682,921	682,921	512,191	1,023,600
92 01 03	Income from Rental - Bhugol Park Beneath S	251,389	189,000	153,234	226,000	241,333	226,000	241,333	241,333	241,333	241,333
92 01 04	Income from Rental - Hawker Shed near NE/	95,109	96,666	68,875	115,999	105,608	115,999	82,649	110,199	105,608	115,999

ANNEX: 8

Accounting Codes	Budget Heading	1991/1992		1992/1993		1993/1994		1994/1995		1995/1996	
		2048/049 Actual	2049/050 Budget	2049/050 Actual	2050/051 Budget	2050/051 Actual	2051/052 Budget	2051/052 Actual	2052/053 Budget	2052/053 Actual	
92 01 05	Income from Rental - Old Buspark shops	287,968	696,000	148,668	835,200	401,021	1,200,000	1,324,371	1,451,352		
92 01 06	Income from Rental - Overhead Bridge										
92 01 07	Income from Rental - Sub-way										
92 01 08	Income from Rental - Slaughter House										
92 01 09	Income from Rental - Advertisement Spots										
92 01 10	Income from Rental - Equipment										
92 01 11	Income from Rental - Ward property	91,010	50,000	14,600	15,000	97,600	100,000	107,500	110,000		
92 02 00	INCOME FROM FM STUDIO										
92 02 01	Income from Rental - Studio										
92 02 02	Income from Program Sponsorship										
92 02 03	Income from Advertisement										
93 00 00	INCOME FROM INVESTMENT										
93 00 01	Interest from Bank Deposit										
93 00 02	Interest from Revolving Fund										
93 00 01	Interest Income from Govt. Bonds										
93 00 03	Dividend Income from Equity Investment										
93 00 04	Gain on Sale of Investment										
94 00 00	SUNDRY INCOME	2,771,233	1,610,000	2,063,574	8,004,615	1,639,703	6,914,000	2,714,987	6,134,000		
94 01 00	MINOR FEES	539,331	510,000	264,410	1,580,000	917,633	1,005,000	1,088,652	1,152,000		
94 01 01	Application Fee	13,858	16,000	14,445	16,000	8,000	12,000	55,023	60,000		
94 01 02	Registration & Other fee/charges	293,417	314,000	87,043	100,000	262,959	400,000	246,242	300,000		
94 01 03	Environment & Sanitation Fee				1,000,000		10,000		50,000		
94 01 04	Tender Document Fee										
94 01 04	Tender Document Fee	64,110	65,000	42,230	65,000	45,900	65,000	18,700	25,000		
94 01 05	Map Form Fee	94,475	105,000	108,205	350,000	412,410	450,000	618,200	600,000		
94 01 06	Certification Fee										
94 01 07	Other Fee (Copy)	9,361	10,000	12,487	14,000	15,689	18,000	15,487	17,000		
94 01 08	Other Form Fee	64,110			35,000	172,675	50,000	135,000	100,000		
94 01 09	Pet Animal (Dog) Registration										
94 02 00	CHARGES	83,056	10,000	4,310	8,000	5,390	8,000	4,580	5,000		
94 02 01	Miscellaneous/Tourism Fee	79,026									
94 02 02	Wastage Disposal Charge										
94 02 03	Block Number Plate	4,030	10,000	4,310	8,000	5,390	8,000	4,580	5,000		
94 02 04	Road Maintenance Charge										
94 03 00	OTHER - SALES	334,681	600,000	1,350,985	5,600,000	164,553	5,300,000	274,734	2,975,000		
94 03 01	Auction of Animals	334,681	600,000	1,350,985	600,000	164,553	300,000	195,698	250,000		
94 03 02	Auction of Materials										
94 03 03	Sale of Scraps				5,000,000		5,000,000		2,625,000		

ANNEX: 8

Accounting Codes	Budget Heading	1991/1992		1992/1993		1993/1994		1994/1995		1995/1996	
		2048/049	Actual	2049/050	Budget	2050/051	Budget	2051/052	Budget	2052/053	Budget
95 04 02	Grant from national organizations	-	-	-	-	-	-	-	-	-	-
95 04 03	User's Group/People's participation	-	-	-	-	-	-	-	-	-	-
96 00 00	INCOME FROM RECEIPT CONTRACTS	-	-	-	-	-	-	-	-	-	-
96 00 01	Receipts from Contract 1	-	-	-	-	-	-	-	-	-	-
96 00 02	Receipts from Contract 2	-	-	-	-	-	-	-	-	-	-
96 00 03	Receipts from Contract 3	-	-	-	-	-	-	-	-	-	-
97 00 00	PRIOR YEAR INCOME	-	-	-	-	-	-	2,200,000	2,108,538	500,000	
97 01 00	Loan/Advance Refund	-	-	-	-	-	-	2,200,000	2,108,538	500,000	
98 00 00	LIABILITIES WRITTEN BACK	-	-	-	-	-	-	-	-	-	
98 01 00	Liabilities Written Back	-	-	-	-	-	-	-	-	-	
60 00 00	LOANS	-	1,500,000	1,500,000	29,000,000	500,000	140,000,000	3,401,233	30,000,000	30,000,000	
60 01 00	ADB Loan	-	-	-	-	-	-	30,000,000	3,401,233	30,000,000	
60 02 00	Loan from Local Banks	-	-	-	-	-	-	-	-	-	
60 02 00	Town Development Fund	-	1,500,000	1,500,000	29,000,000	500,000	110,000,000	-	-	-	
60 03 00	Loan from Deposit Accounts	-	-	-	-	-	-	-	-	-	
35 00 00	LAST YEAR'S BALANCE	63,909,589	143,982,908	115,015,611	115,015,571	115,015,571	35,609,774	35,606,091	40,515,070		
35 00 01	KMC Fund Balance	-	-	-	-	-	35,609,774	35,076,261	39,885,158		
	1. NRB A/C # 23	-	-	-	-	-	-	-	-		
	2. NRB A/C # 81	-	-	-	-	-	-	-	-		
	3. NRB A/C # 230	-	-	-	-	-	-	-	-		
	4. Himalayan Bank (Octroi)	-	-	-	-	-	-	-	-		
	5. Himalayan Bank (Parking Fee)	-	-	-	-	-	-	-	-		
	6. Nepal Bangladesh Bank 2001 C	-	-	-	-	-	-	-	-		
	7. Nepal Bangladesh Bank 1991 C	-	-	-	-	-	-	-	-		
	8. Rastriya Baniya Bank 3782	-	-	-	-	-	-	-	-		
	9. UNICEF Grant A/C Balance	-	-	-	-	-	-	529,830	629,912		
36 01 01	Cash Balance	-	-	-	-	-	-	-	-		

GRAND TOTAL	231,060,112	250,340,941	367,260,567	454,350,000	346,677,567	473,734,373	292,684,897	407,507,593
--------------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------

ANNEX: 8

Accounting Codes	Budget Heading	1996/1997		1997/1998		1998/1999		
		2053/054	2054/055	2055/056	2055/056	2055/056	2055/056	
90 04 00	TAX INCOME	Actual	Budget	Actual	Budget	Actual	Budget	
90 04 00	TAX INCOME	8,512,836	15,455,000	12,687,017	92,775,000	17,246,363	53,400,000	10,329,501
90 01 00	LAND REVENUE/HOUSE & LAND TAX	1,635,991	2,500,000	3,580,348	24,000,000	4,070,075	25,000,000	3,721,796
90 01 01	Land Revenue	1,635,991	2,500,000	3,580,348	4,000,000	4,070,075	5,000,000	3,721,796
90 01 02	House & Land Tax	-	-	-	10,000,000	-	10,000,000	-
90 01 03	Land Tax	-	-	-	-	-	10,000,000	-
90 01 04	Tax on Sale of House and Land	-	-	-	10,000,000	-	-	-
90 02 00	RENT TAX	-	-	-	-	-	-	-
90 02 01	Property Rent Tax	-	-	-	-	-	-	-
90 02 02		-	-	-	-	-	-	-
90 04 00	VEHICLE TAX	4,774,957	5,660,000	4,799,616	15,025,000	5,319,924	15,025,000	4,799,229
90 04 01	Bus, Truck, Lorry	689,520	850,000	716,650	3,000,000	528,820	3,000,000	614,000
90 04 02	Mini Truck	431,950	500,000	441,750	1,300,000	433,880	1,300,000	394,150
90 04 03	Mini Bus - other (Public)	1,852,420	2,000,000	1,901,124	4,500,000	2,228,548	4,500,000	
90 04 04	Car - other (Public)	460,570	500,000	549,900	1,300,000	625,440	1,300,000	
90 04 05	Jeep, Van - other (Public)	93,825	125,000	68,100	500,000	75,600	500,000	620,200
90 04 06	Tempo - other (Public)	10,675	25,000	20,400	100,000	13,150	100,000	259,660
90 04 07	Mini Bus - Private	303,030	450,000	271,150	500,000	327,800	500,000	
90 04 08	Car - Private	923,587	1,200,000	823,717	3,800,000	1,066,921	3,800,000	
90 04 09	Jeep, Van - Private	9,380	10,000	6,825	25,000	19,765	25,000	2,116,580
90 04 10	Tempo - Private	-	-	-	-	-	-	21,900
90 04 11	Scooter & Motor Cycle	-	-	-	-	-	-	703,844
90 04 12	Tractor and Power Tiller	-	-	-	-	-	-	61,600
90 04 13	Rickshaw & Cart	-	-	-	-	-	-	7,295
90 05 00	INTEGRATED PROPERTY TAX	-	-	-	-	-	-	-
90 05 01	Integrated Property Tax	-	-	-	-	-	-	-
90 06 00	ENTERTAINMENT TAX	-	-	-	-	-	-	-
90 06 01	Cinema Hall	-	-	-	-	-	-	-
90 06 02	Video Hall	-	-	-	-	-	-	-
90 06 03	Cultural Exhibition Hall	-	-	-	-	-	-	-
90 06 04	Theatre, Music Concert	-	-	-	-	-	-	-
90 06 05	Circus, Magic, Acrobatic Show	-	-	-	-	-	-	-
90 07 00	COMMERCIAL VIDEO SHOW TAX	-	-	-	-	-	-	-
90 07 01	Cable Operator	-	-	-	-	-	-	-
90 07 02	Video	-	-	-	-	-	-	-
90 07 03	Projector	-	-	-	-	-	-	-
90 08 00	ADVERTISEMENT TAX	538,940	1,545,000	948,509	3,750,000	1,134,843	6,000,000	363,621
90 08 01	Sign Board	272,102	1,000,000	711,320	1,000,000	800,390	1,000,000	198,709

ANNEX: 8

Accounting Codes	Budget Heading	1996/1997		1997/1998		1998/1999	
		2053/054	2054/055	2054/055	2055/056	2055/056	2055/056
		Actual	Budget	Actual	Budget	Actual	Budget
90 08 02	Neon Boards	15,770	45,000	47,453	250,000	77,720	2,500,000
90 08 03	Hoarding Boards	251,068	500,000	189,736	2,500,000	256,733	2,500,000
90 08 04	Banners & Posters						
90 10 00	BUSINESS PROFESSIONAL TAX	1,562,948	5,750,000	3,358,544	50,000,000	6,721,521	7,375,000
90 10 01	Trading Business	34,700	100,000	2,560	750,000	75,850	150,000
90 10 02	Professionals	4,100	10,000	21,280	250,000	33,300	50,000
90 10 03	Construction Business	13,800	20,000	9,760	250,000	40,000	50,000
90 10 04	Manufacturing Industries Business	139,075	250,000	376,715	1,750,000	420,110	450,000
90 10 05	Energy and Power Generating Business	138,000	1,000,000	57,000	3,750,000	129,500	150,000
90 10 06	Agro-Forestry Based Business	32,000	170,000	151,835	1,250,000	86,000	100,000
90 10 07	Mining and Minerals Processing Business	73,000	150,000	175,600	2,000,000	215,400	225,000
90 10 08	Tourism Based Business	651,473	2,000,000	1,862,234	21,250,000	4,824,961	5,000,000
90 10 09	Service Business	476,800	2,050,000	701,560	18,750,000	896,400	1,200,000
90 10 10	Property /Estate Leasing Business						
90 10 11	Communication Business						
90 10 12	Financial Service Business						
90 10 13	Health Services Business						
90 10 14	Educational and Training Business						
90 10 15	Repair & Maintenance Service Business						
90 10 16	Other Services						
90 10 17	Other Business						
90 10 18	Temporary Haat Bazar & Mobile Shops						
90 10 19	Others						
91 00 00	INCOME FROM FEES	18,483,886	20,242,560	15,244,516	30,818,065	17,060,177	28,540,065
91 01 01	Vehicle Entrance Fee- Thankot	2,087,390	2,200,000	2,011,705	10,000,000	2,715,640	10,000,000
91 01 02	Old Bus Park						5,000,000
91 01 08	New Bus Park Fee	4,983,246	5,000,000	4,748,940	10,000,000	4,803,541	-
91 01 03	Parking Fee		300,000		300,000	1,543,334	3,000,000
91 01 04	Property Valuation Fee	71,523	100,000	10,962	18,000	35,412	40,000
91 01 05	Building Map Approval Fee	11,104,937	12,500,000	8,469,939	10,000,000	7,764,573	10,000,000
91 01 06	Shop at Public Land (Hyumata)						10,000
91 01 07	Buspark Terminal, Bhugol Park Toilet	236,790	142,560	2,970	500,065	197,678	500,065
92 00 00	INCOME FROM PROPERTY	3,456,480	4,204,765	3,704,819	4,704,765	3,900,972	4,304,765
92 01 00	INCOME FROM RENTAL	3,456,480	4,204,765	3,704,819	4,704,765	3,900,972	4,304,765
92 01 01	Income from Rental - Bhugol Park 1st floor	816,018	816,018	816,018	816,018	840,658	816,018
92 01 02	Income from Rental - Bhugol Park Ground Fl	789,035	902,500	843,554	902,500	880,880	902,500
92 01 03	Income from Rental - Bhugol Park Beneath S	281,888	331,151	246,457	331,151	413,939	331,151
92 01 04	Income from Rental - Hawker Shed near NE/	110,090	219,960	54,990	219,960	54,990	219,960
91 00 00	INCOME FROM FEES	18,483,886	20,242,560	15,244,516	30,818,065	17,060,177	28,540,065
91 01 01	Vehicle Entrance Fee- Thankot	2,087,390	2,200,000	2,011,705	10,000,000	2,715,640	10,000,000
91 01 02	Old Bus Park						5,000,000
91 01 08	New Bus Park Fee	4,983,246	5,000,000	4,748,940	10,000,000	4,803,541	-
91 01 03	Parking Fee		300,000		300,000	1,543,334	3,000,000
91 01 04	Property Valuation Fee	71,523	100,000	10,962	18,000	35,412	40,000
91 01 05	Building Map Approval Fee	11,104,937	12,500,000	8,469,939	10,000,000	7,764,573	10,000,000
91 01 06	Shop at Public Land (Hyumata)						10,000
91 01 07	Buspark Terminal, Bhugol Park Toilet	236,790	142,560	2,970	500,065	197,678	500,065
92 00 00	INCOME FROM PROPERTY	3,456,480	4,204,765	3,704,819	4,704,765	3,900,972	4,304,765
92 01 00	INCOME FROM RENTAL	3,456,480	4,204,765	3,704,819	4,704,765	3,900,972	4,304,765
92 01 01	Income from Rental - Bhugol Park 1st floor	816,018	816,018	816,018	816,018	840,658	816,018
92 01 02	Income from Rental - Bhugol Park Ground Fl	789,035	902,500	843,554	902,500	880,880	902,500
92 01 03	Income from Rental - Bhugol Park Beneath S	281,888	331,151	246,457	331,151	413,939	331,151
92 01 04	Income from Rental - Hawker Shed near NE/	110,090	219,960	54,990	219,960	54,990	219,960

ANNEX: 8

Accounting Codes	Budget Heading	1996/1997		1997/1998		1998/1999	
		Budget	Actual	Budget	Actual	Budget	Actual
94 03 04	Sale of Trees						
94 03 05	Sale of Compost						
94 03 06	Gain on Sale of Assets						
94 03 07	Recovery from Bus Terminal Telephone		92,188	110,000	95,178	100,000	132,159
94 04 00	FINE AND PENALTY	2,528,858	1,702,329	3,502,000	1,970,103	2,701,000	1,408,274
94 04 01	Contractor Performance Penalty						
94 04 02	Late Fee Penalty	2,528,468	1,587,263	3,000,000	1,880,127	2,500,000	1,207,055
94 04 03	Arbitration Fee	390	4,429	2,000	5,000	1,000	465
94 04 04	Other Penalty						
94 04 05	Forfeiture of Deposit Payable	-	31,335	500,000	2,000	100,000	-
94 04 06	Miscellaneous/ Insurance claim received	-	79,302	-	85,276	100,000	200,754
OCTROI		247,813,603	259,104,696	288,100,000	318,260,415	390,350,000	166,095,009
1.	Thankot Depot	212,285,222	235,891,430	250,000,000	301,631,792	350,000,000	147,764,306
2.	Tribhubhan Int'l Airport Depot	17,692,777	11,619,600	20,000,000	10,393,020	20,000,000	16,123,630
3.	Banepa-Dhulikhel	3,278,438	1,716,602	2,400,000	3,526,604	5,000,000	2,017,073
4.	Bidur	132,966	49,503	200,000	68,027	200,000	100,000
5.	Janakpur Cigarette Factory	2,503,747	961,485	5,000,000	2,500,000	2,500,000	-
6.	Nepal Oil Corporation	11,732,146	8,866,076	10,000,000	2,532,682	12,500,000	-
7.	Miscellaneous	188,307	-	500,000	108,290	150,000	-
TOTAL OWN SOURCE REVENUE		285,062,431	299,688,620	335,255,325	361,874,956	488,380,830	207,440,626
95 00 00	GRANTS AND DONATIONS	135,000	454,970	31,635,000	290,000	139,400,000	34,437,596
95 01 00	GRANTS FROM HMG	135,000	150,000	135,000	200,000	300,000	33,499,600
95 01 01	HMG - Administration	135,000	150,000	135,000	200,000	300,000	300,000
95 02 02	Local Dev. Fee (Tax)						33,199,600
95 03 00	GRANT-IN-AID (FOREIGN)	-	-	156,000,000	90,000	139,100,000	937,996
95 03 01	ADB Grant					20,000,000	-
95 03 02	EU Grant			90,000,000	-	100,000,000	-
95 03 03	Grant from other international agencies			66,000,000	90,000	19,100,000	937,996
95 03 04	Grant from TUGI						
95 03 05	Grant from ILO						
95 03 06	Grant from World Bank (CDS)						
95 03 07	Grant from RUDO/USAID						
95 04 00	GRANT-IN-AID (NATIONAL)	-	304,970	104,500,000	-	-	-
95 04 01	Grant from other organizations/municipalities						

ANNEX: 8

Accounting Codes	Budget Heading	1996/1997		1997/1998		1998/1999	
		Actual	Budget	Actual	Budget	Actual	Budget
95 04 02	Grant from national organizations	-	-	-	-	-	-
95 04 03	User's Group/People's participation	-	-	304,970	104,500,000	-	-
96 00 00	INCOME FROM RECEIPT CONTRACTS						
96 00 01	Receipts from Contract 1	-	-	-	-	-	-
96 00 02	Receipts from Contract 2	-	-	-	-	-	-
96 00 03	Receipts from Contract 3	-	-	-	-	-	-
97 00 00	PRIOR YEAR INCOME	2,141,301	500,000	1,671,096	300,000	3,805,054	2,500,000
97 01 00	Loan/Advance Refund	2,141,301	500,000	1,671,096	300,000	3,805,054	2,500,000
98 00 00	LIABILITIES WRITTEN BACK						
98 01 00	Liabilities Written Back	-	-	-	-	-	-
60 00 00	LOANS	4,196,327	92,817,000	14,391,740	387,000,000	40,148,327	423,936,500
60 01 00	ADB Loan	4,196,327	92,817,000	14,391,740	157,000,000	40,148,327	173,936,500
60 02 00	Loan from Local Banks	-	-	-	230,000,000	-	230,000,000
60 02 00	Town Development Fund	-	-	-	-	-	20,000,000
60 03 00	Loan from Deposit Accounts	-	-	-	-	-	-
35 00 00	LAST YEAR'S BALANCE	39,640,070	28,367,871	28,397,919	47,885,170	45,423,686	12,943,758
35 00 01	KMC Fund Balance	39,010,158	27,737,959	27,737,959	47,885,170	45,423,686	-
	1. NRB A/C # 23	-	-	-	-	-	7,233,445
	2. NRB A/C # 81	-	-	-	-	-	437,328
	3. NRB A/C # 230	-	-	-	-	-	368,133
	4. Himalayan Bank (Octroi)	-	-	-	-	-	4,861,519
	5. Himalayan Bank (Parking Fee)	-	-	-	-	-	43,334
	6. Nepal Bangladesh Bank 2001 C	-	-	-	-	-	-
	7. Nepal Bangladesh Bank 1991 C	-	-	-	-	-	-
	8. Rastriya Banijiya Bank 3782	-	-	-	-	-	-
	9. UNICEF Grant A/C Balance	629,912	629,912	629,912	-	-	-
	10. Grant A/C Balance	-	-	30,048	-	-	-
36 01 01	Cash Balance	-	-	-	-	-	-

GRAND TOTAL	331,175,129	488,575,196	344,604,345	1,262,400,000	451,541,123	1,067,161,088	288,719,068
--------------------	--------------------	--------------------	--------------------	----------------------	--------------------	----------------------	--------------------

ANNEX: 8

Accounting Codes	Budget Heading	1999/2000		2000/2001	
		Budget	Actual	Budget	Budget
90 04 00	TAX INCOME	53,400,000	25,433,068	146,051,000	
90 01 00	LAND REVENUE/HOUSE & LAND TAX	25,000,000	4,072,151	65,000,000	
90 01 01	Land Revenue	5,000,000	4,072,151	4,000,000	
90 01 02	House & Land Tax	10,000,000		60,000,000	
90 01 03	Land Tax			1,000,000	
90 01 04	Tax on Sale of House and Land	10,000,000			
90 02 00	RENT TAX			2,500,000	
90 02 01	Property Rent Tax			2,500,000	
90 02 02					
90 04 00	VEHICLE TAX	15,025,000	6,208,126	7,051,000	
90 04 01	Bus, Truck, Lorry	3,000,000	666,500		
90 04 02	Mini Truck	1,300,000	385,200		
90 04 03	Mini Bus - other (Public)				
90 04 04	Car - other (Public)				
90 04 05	Jeep, Van - other (Public)	1,300,000	568,400		
90 04 06	Tempo - other (Public)	500,000	184,770		
90 04 07	Mini Bus - Private				
90 04 08	Car - Private				
90 04 09	Jeep, Van - Private	4,500,000	2,234,380		
90 04 10	Tempo - Private	100,000	12,150		
90 04 11	Scooter & Motor Cycle	3,800,000	2,076,661		
90 04 12	Tractor and Power Tiller	500,000	57,100		
90 04 13	Rickshaw & Cart	25,000	22,965		
90 05 00	INTEGRATED PROPERTY TAX			2,500,000	
90 05 01	Integrated Property Tax			2,500,000	
90 06 00	ENTERTAINMENT TAX			4,000,000	
90 06 01	Cinema Hall				
90 06 02	Video Hall				
90 06 03	Cultural Exhibition Hall				
90 06 04	Theatre, Music Concert				
90 06 05	Circus, Magic, Acrobatic Show				
90 07 00	COMMERCIAL VIDEO SHOW TAX				
90 07 01	Cable Operator				
90 07 02	Video				
90 07 03	Projector				
90 08 00	ADVERTISEMENT TAX	6,000,000	3,797,955	10,000,000	
90 08 01	Sign Board	1,000,000	1,343,412		

ANNEX: 8

Accounting Codes	Budget Heading	1999/2000		2000/2001	
		Budget	Actual	Budget	Budget
90 08 02	Neon Boards	2,500,000	2,223,973		
90 08 03	Hoarding Boards	2,500,000	230,570		
90 08 04	Banners & Posters				
90 10 00	BUSINESS PROFESSION TAX	7,375,000	11,414,836		55,000,000

90 10 01	Trading Business				
90 10 02	Professionals				
90 10 03	Construction Business				
90 10 04	Manufacturing Industries Business				
90 10 05	Energy and Power Generating Business				
90 10 06	Agro-Forestry Based Business				
90 10 07	Mining and Minerals Processing Business				
90 10 08	Tourism Based Business				
90 10 09	Service Business				
90 10 10	Property/Estate Leasing Business				
90 10 11	Communication Business				
90 10 12	Financial Service Business				
90 10 13	Health Services Business				
90 10 14	Educational and Training Business				
90 10 15	Repair & Maintenance Service Business				
90 10 16	Other Services				
90 10 17	Other Business				
90 10 18	Temporary Haat Bazar & Mobile Shops				
90 10 19	Others				

Accounting Codes	Budget Heading	1999/2000 Budget	1999/2000 Actual	2000/2001 Budget
91 00 00	INCOME FROM FEES	24,210,065	36,221,356	98,700,000
91 01 01	Vehicle Entrance Fee- Thankot	3,500,000	4,212,850	4,000,000
91 01 02	Old Bus Park	200,000	1,177,835	1,300,000
91 01 08	New Bus Park Fee	5,000,000	6,057,375	5,100,000
91 01 03	Parking Fee	5,000,000	1,960,205	4,500,000
91 01 04	Property Valuation Fee	10,000	36,069	2,000,000
91 01 05	Building Map Approval Fee	10,000,000	22,218,150	80,000,000
91 01 06	Shop at Public Land (Hyumata)		411,100	1,500,000
91 01 07	Buspark Terminal, Bhugol Park Toilet	500,065	147,772	300,000
92 00 00	INCOME FROM PROPERTY	4,304,765	3,662,111	11,676,910
92 01 00	INCOME FROM RENTAL	4,304,765	3,662,111	10,776,910
92 01 01	Income from Rental - Bhugol Park 1st floor	902,500	1,116,705	763,283
92 01 02	Income from Rental - Bhugol Park Ground Fl	816,018	632,415	774,165
92 01 03	Income from Rental - Bhugol Park Beneath S	331,151	331,151	348,966
92 01 04	Income from Rental - Hawker Shed near NEF	219,960	329,940	390,196

ANNEX: 8

Accounting Codes	Budget Heading	1999/2000		2000/2001	
		Budget	Actual	Budget	Budget
92 01 05	Income from Rental - Old Buspark shops	1,935,136	1,244,700	2,300,000	
92 01 06	Income from Rental - Overhead Bridge			2,000,000	
92 01 07	Income from Rental - Sub-way				3,500,000
92 01 08	Income from Rental - Slaughter House			500,000	
92 01 09	Income from Rental - Advertisement Spots			200,000	
92 01 10	Income from Rental - Equipment				
92 01 11	Income from Rental - Ward property	100,000	7,200		
92 02 00	INCOME FROM FM STUDIO				900,000
92 02 01	Income from Rental - Studio				
92 02 02	Income from Program Sponsorship				
92 02 03	Income from Advertisement				
93 00 00	INCOME FROM INVESTMENT	500,000			
93 00 01	Interest from Bank Deposit	500,000			
93 00 01	Interest from Revolving Fund				
93 00 02	Interest Income from Govt. Bonds				
93 00 03	Dividend Income from Equity Investment				
93 00 04	Gain on Sale of Investment				
94 00 00	SUNDRY INCOME	26,681,000	14,899,491	84,013,000	
94 01 00	MINOR FEES	9,471,000	13,051,976	31,426,000	
94 01 01	Application Fee	100,000	242,675	250,000	
94 01 02	Registration & Other fee/charges	2,500,000	4,838,633	5,000,000	
94 01 03	Environment & Sanitation Fee	5,000,000	4,924,858	22,240,000	
94 01 04	Tender Document Fee	500,000	53,770	360,000	
94 01 04	Tender Document Fee				
94 01 05	Map Form Fee	200,000	2,941,000	3,000,000	
94 01 06	Certification Fee	1,020,000	22,026	25,000	
94 01 07	Other Fee (Copy)	1,000	629	1,000	
94 01 08	Other Form Fee	150,000	28,385	50,000	
94 01 09	Pet Animal (Dog) Registration			500,000	
94 02 00	CHARGES	15,010,000	4,700	50,105,000	
94 02 01	Miscellaneous/Tourism Fee	10,000,000		50,000,000	
94 02 02	Wastage Disposal Charge	5,000,000			
94 02 03	Block Number Plate	10,000	4,700	5,000	
94 02 04	Road Maintenance Charge			100,000	
94 03 00	OTHER - SALES	400,000	298,134	782,000	
94 03 01	Auction of Animals	250,000	161,464	150,000	
94 03 02	Auction of Materials			532,000	
94 03 03	Sale of Scraps			100,000	

ANNEX: 8

Accounting Codes	Budget Heading	1999/2000		2000/2001	
		Budget	Actual	Budget	Budget
94 03 04	Sale of Trees			0	0
94 03 05	Sale of Compost			0	0
94 03 06	Gain on Sale of Assets			0	0
94 03 07	Recovery from Bus Terminal Telephone	150,000	136,670		
94 04 00	FINE AND PENALTY	1,800,000	1,544,681	1,700,000	
94 04 01	Contractor Performance Penalty				
94 04 02	Late Fee Penalty				
94 04 03	Arbitration Fee				
94 04 04	Other Penalty	1500000	1500244	1500000	
94 04 05	Forfeiture of Deposit Payable	100,000		100,000	
94 04 06	Miscellaneous/ Insurance claim received	200,000	44,437	100,000	

OCTROI

1. Thankot Depot
2. Tribhubhan Int'l Airport Depot
3. Banepa-Dhulikhel
4. Bidur
5. Janakpur Cigarette Factory
6. Nepal Oil Corporation
7. Miscellaneous

TOTAL OWN SOURCE REVENUE		109,095,830	80,276,026	340,440,610
95 00 00	GRANTS AND DONATIONS	351,177,985	229,234,744	431,029,390
95 01 00	GRANTS FROM HMG	206,988,544	221,047,837	250,400,000
95 01 01	HMG - Administration	400,000	4,620,000	400,000
95 02 02	Local Dev. Fee (Tax)	206,588,544	216,427,837	250,000,000
95 03 00	GRANT-IN-AID (FOREIGN)	143,101,890	6,057,700	170,529,390
95 03 01	ADB Grant	20,000,000		20,000,000
95 03 02	EU Grant	100,000,000		130,000,000
95 03 03	Grant from other international agencies	19,100,000	3,757,200	8,750,000
95 03 04	Grant from TUGI	3,500,000	2,082,000	2,746,000
95 03 05	Grant from ILO			3,850,000
95 03 06	Grant from World Bank (CDS)			4,900,000
95 03 07	Grant from RUDO/USAID	501,890	218,500	283,390
95 04 00	GRANT-IN-AID (NATIONAL)	1,087,551	2,429,207	10,100,000
95 04 01	Grant from other organizations/municipalities	1,087,551	2,099,207	

ANNEX: 8

Accounting Codes	Budget Heading	1999/2000		2000/2001	
		2056/057 Budget	Actual	2057/058 Budget	
95 04 02	Grant from national organizations			100,000	
95 04 03	User's Group/People's participation		30,000	10,000,000	
96 00 00	INCOME FROM RECEIPT CONTRACTS				
96 00 01	Receipts from Contract 1				
96 00 02	Receipts from Contract 2				
96 00 03	Receipts from Contract 3				
97 00 00	PRIOR YEAR INCOME	2,000,000	5,810,363	47,000,000	
97 01 00	Loan/Advance Refund	2,000,000	5,810,363	47,000,000	
98 00 00	LIABILITIES WRITTEN BACK				
98 01 00	Liabilities Written Back				
60 00 00	LOANS	247,813,000	14,700,000		
60 01 00	ADB Loan	17,813,000			
60 02 00	Loan from Local Banks	230,000,000	10,000,000		
60 02 00	Town Development Fund				
60 03 00	Loan from Deposit Accounts		4,700,000		
35 00 00	LAST YEAR'S BALANCE	3,996,122	4,007,185		
35 00 01	KMC Fund Balance	3,996,122	3,963,902		
	1. NRB A/C # 23				
	2. NRB A/C # 81				
	3. NRB A/C # 230				
	4. Himalayan Bank (Octroi)				
	5. Himalayan Bank (Parking Fee)				
	6. Nepal Bangladesh Bank 2001 C				
	7. Nepal Bangladesh Bank 1991 C				
	8. Rastriya Baniya Bank 3782				
	9. UNICEF Grant A/C Balance				
	10. Grant A/C Balance				
36 01 01	Cash Balance		43,283		
GRAND TOTAL		714,082,937	334,028,318	818,470,000	

ANNEX 9
KMC Expenditures

Accounting Codes	Account Head	Actual 48/49	Budget 49/50	Actual 49/50	Budget 50/51	Actual 50/51	Budget 51/52	Actual 51/52
10 00 00	Land	1,100,000	1,500,000	500,000	500,000	-	2,500,000	-
10 01 00	Land Freehold	1,100,000	1,500,000	500,000	500,000	-	2,500,000	-
10 02 00	Land Leasehold	-	-	-	-	-	-	-
11 00 00	Building	-	18,500,000	-	7,500,000	-	-	-
11 01 00	Building on Freehold Land	-	18,500,000	-	7,500,000	-	-	-
11 02 00	Building on Leasehold Land	-	-	-	-	-	-	-
11 03 00	Building on custodian lands	-	-	-	-	-	-	-
12 00 00	Infrastructure and Civil Works	-	-	-	-	-	-	-
13 00 00	Office Equipment- Computers	-	-	-	-	-	-	-
14 00 00	Office Equipment- Others	1,266,505	2,500,000	531,092	2,875,000	2,726,652	1,500,000	1,015,050
15 00 00	Furniture and Fittings	298,493	1,550,000	1,520,913	2,000,000	1,245,273	1,200,000	1,122,314
16 00 00	Vehicles	-	3,800,000	-	29,000,000	3,280,596	3,600,000	3,443,904
17 00 00	Plant and Equipment	259,600	27,500,000	12,634,227	5,000,000	-	-	-
19 00 00	Capital Work-in-progress	-	-	-	-	-	-	-
19 11 00	Building	-	-	-	-	-	-	-
19 12 00	Infrastructure and Civil Works	-	-	-	-	-	-	-
19 12 01	Roads	-	-	-	-	-	-	-
19 12 02	Traffic Management	-	-	-	-	-	-	-
19 12 03	Street Lighting	-	-	-	-	-	-	-
19 12 04	Bus Parks	-	-	-	-	-	-	-
19 12 05	Bridges/ culverts	-	-	-	-	-	-	-
19 12 06	Drainage and sewerage	-	-	-	-	-	-	-
19 12 07	Water Supply	-	-	-	-	-	-	-
19 12 08	Public Toilet	-	-	-	-	-	-	-
19 18 00	Others MIIP, 4 P	-	-	-	17,500,000	1,395,539	40,800,000	6,800,000
19 18 01	MIIP	-	-	-	17,500,000	1,395,539	40,800,000	6,800,000
19 18 02	4 P Program	-	-	-	-	-	-	-
20 00 00	Long Term Investment	-	-	-	-	-	-	-
20 03 00	Equity Investment	-	-	-	-	-	-	-
70 01 00	Salaries & Wages	16,066,993	13,685,108	8,229,009	13,500,000	7,509,666	9,024,141	8,775,021
70 01 01	Elected Members	-	-	-	-	-	-	-
70 01 02	Permanent Staff	3,937,000	3,937,000	2,101,000	1,500,000	1,324,141	1,324,141	1,164,000
70 01 03	Tenoirtart Staff	-	-	-	-	-	-	-
70 01 04	Contract Staff	16,066,993	9,748,108	6,128,009	12,000,000	6,185,525	7,700,000	7,611,021
70 01 05	Monthly Wage Staff	-	-	-	-	-	-	-
70 01 06	Daily Wage Staff	-	-	-	-	-	-	-

ANNEX 9
KMC Expenditures

Codes	Account Head	Actual 48/49	Budget 49/50	Actual 49/50	Budget 50/51	Actual 50/51	Budget 51/52	Actual 51/52
70 01 07	Others	-	-	-	-	-	-	-
70 02 00	Allowances and Benefits-Elected Men	-	-	4,407,500	4,500,000	4,407,500	4,687,200	4,687,200
70 02 01	Transportation Allowance	-	-	-	-	-	-	-
70 02 02	Telephone Allowance	-	-	-	-	-	-	-
70 02 03	Medical Expenses	-	-	-	-	-	-	-
70 02 04	Dress Expenses/Allowances	-	-	-	-	-	-	-
70 03 00	Uniform Expenses & Allowances	12,718	1,000,000	389,135	2,000,000	1,995,518	1,000,000	844,497
70 03 01	Uniform Expenses & Allowances	12,718	1,000,000	389,135	2,000,000	1,995,518	1,000,000	844,497
70 04 00	Employer's Contribution to Provident	-	-	-	-	-	-	-
70 04 01	Provident Fund Contribution	-	-	-	-	-	-	-
70 05 00	Head and Acting Allowance	-	-	-	-	-	-	-
70 05 01	Department Head Allowances	-	-	-	-	-	-	-
70 05 02	Kayam Mukayam (Acting) Allowance	-	-	-	-	-	-	-
70 06 00	Overtime	-	-	-	-	-	-	-
70 06 01	Staff Over Time	-	-	-	-	-	-	-
70 07 00	Medical Allowances	225,122	500,000	39,310	200,000	22,936	50,000	5,469
70 07 01	Staff Medical Allowance	225,122	500,000	39,310	200,000	22,936	50,000	5,469
70 08 00	Dearness Allowances	-	-	-	-	-	-	-
70 08 01	Permanent Staff	-	-	-	-	-	-	-
70 08 02	Temporary Staff	-	-	-	-	-	-	-
70 08 03	Contract Staff	-	-	-	-	-	-	-
70 08 04	Monthly Wage Staff	-	-	-	-	-	-	-
70 08 05	Daily Wage Staff	-	-	-	-	-	-	-
70 09 00	Diet Allowances	-	-	-	2,000,000	1,541,126	1,800,000	1,714,641
70 09 01	Diet for Security Staff	-	-	-	2,000,000	1,541,126	1,800,000	1,714,641
70 10 00	Tiffin Allowances	-	-	-	-	-	-	-
70 10 01	Permanent Staff	-	-	-	-	-	-	-
70 10 02	Temporary Staff	-	-	-	-	-	-	-
70 10 03	Contract Staff	-	-	-	-	-	-	-
70 10 04	Monthly Wage Staff	-	-	-	-	-	-	-
70 10 05	Daily Wage Staff	-	-	-	-	-	-	-
70 11 00	Night Shift Allowances	-	-	-	-	-	-	-
70 11 01	Night Overtime	-	-	-	-	-	-	-
70 12 00	Other Allowances	-	2,244,200	1,911,023	2,760,000	2,580,114	7,415,000	6,540,070
70 12 01	Other Allowances	-	2,244,200	1,911,023	2,760,000	2,580,114	7,415,000	6,540,070
70 13 00	Staff Insurance	-	550,000	-	150,000	-	300,000	-
70 13 01	Group Insurance	-	550,000	-	150,000	-	300,000	-
70 14 00	Leave Encashment	-	-	-	-	-	-	-

ANNEX 9
KMC Expenditures

Codes	Account Head	Actual 48/49	Budget 49/50	Actual 49/50	Budget 50/51	Actual 50/51	Budget 51/52	Actual 51/52
70 14 01	Permanent Staff							
70 14 02	Temporary Staff							
70 14 03	Contract Staff							
70 15 00	Retirement related Expenses	1,717,087	10,000,000	5,343,163	6,000,000	5,939,529	3,700,000	3,368,181
70 15 01	Gratuity							
70 15 02	Pension	1,717,087	10,000,000	5,343,163	6,000,000	5,939,529	3,700,000	3,368,181
70 15 03	Accumulated Leave Encashment							
70 15 04	Accumulated Medical Benefits							
71 01 00	Utilities	377,060	4,100,000	3,628,981	3,000,000	2,318,782	1,500,000	1,131,263
71 01 01	Electricity	377,060	4,100,000	3,628,981	3,000,000	2,318,782	1,500,000	1,131,263
71 01 02	Water							
71 02 00	Goods	1,100,480	2,845,000	2,645,374	4,225,000	4,189,898	4,505,000	4,227,057
71 02 01	Printings & Stationery	524,839	900,000	898,958	1,440,000	1,438,422	2,000,000	1,790,519
71 02 02	Publication of Journal							
71 02 03	Newspaper, Periodicals and Books purch	44,206	250,000	191,857	360,000	354,179	500,000	496,426
71 02 04	Small Assets							
71 02 05	Office Supplies	528,943	1,680,000	1,453,683	2,400,000	2,396,626	2,000,000	1,940,051
71 02 06	Fuel-Heating, Cooking etc.	2,492	15,000	876	25,000	671	5,000	61
71 02 07	Medicine							
71 03 00	Training and Services	2,010,475	3,570,240	751,740	3,400,000	2,208,750	2,950,000	1,682,919
71 03 01	HRD (Training Expenses)		700,000	50,000	200,000	118,379	150,000	82,600
71 03 02	Study Tours							
71 03 03	Research and Surveys	2,500	1,600,000	74,950	500,000	299,370	1,500,000	454,623
71 03 04	Meeting Fees	2,007,975	1,270,240	626,790	1,200,000	1,169,700	1,300,000	1,145,696
71 03 05	Meeting Expenses							
71 03 06	Audit Fees							
71 03 07	Audit Expenses				500,000	-		
71 03 08	Consultancy Fees							
71 03 09	Legal Fees							
71 03 10	Other Professional Fee				1,000,000	621,301		
71 03 11	Memberships, Registration and Renewals							
71 03 12	Rewards and Prizes							
71 03 13	Staff Welfare							
71 03 14	Laundry expemrns							
71 04 00	Notification & Publicity	439,838	780,000	777,767	2,375,000	2,057,913	3,200,000	2,784,534
71 04 01	Administrative Notification	439,838	780,000	777,767	2,375,000	2,057,913	3,200,000	2,784,534
71 04 02	Publicity							
71 04 03	Others							
71 05 00	Travel and per diem	27,857	3,180,000	994,400	2,000,000	465,433	558,520	574,547

ANNEX 9
KMC Expenditures

Codes	Account Head	Actual 48/49	Budget 49/50	Actual 49/50	Budget 50/51	Actual 50/51	Budget 51/52	Actual 51/52
71 05 01	Travel Expenses	27,857	3,180,000	994,400	2,000,000	465,433	558,520	574,547
71 05 02	Daily Allowances							
71 05 03	Other Expenses							
71 06 00	Local Transportation	13,515	25,000	-	25,000	2,900	12,000	11,418
71 06 01	Local Transportation	13,515	25,000	-	25,000	2,900	12,000	11,418
71 06 02	Transport & Porter							
71 07 00	Operation of Vehicles	2,355,707	3,620,000	3,315,956	5,960,000	5,558,769	6,900,000	5,484,939
71 07 01	Annual Registration Fees							
71 07 02	Insurance							
71 07 03	Repairs and Maintenance	839,090	1,420,000	1,195,022	2,600,000	2,570,180	2,300,000	1,972,765
71 07 04	Fuel	1,516,617	2,200,000	2,120,934	3,360,000	2,988,589	4,600,000	3,512,174
71 07 05	Oil & Lubricants							
71 07 06	Repairs and Maintenance - staff							
71 07 07	Fuel - staff							
71 07 08	Oil & Lubricants - staff							
71 08 00	Communications	700	75,000	2,106	75,000	20,333	2,510,000	1,945,970
71 08 01	Postage & Couriers	700	75,000	2,106	75,000	20,333	10,000	9,727
71 08 02	Telephone & Fax							
71 08 03	E-mail/Internet							
71 08 04	Others							
71 09 00	Repairs and Maintenance	319,708	350,000	317,010	575,000	300,509	700,000	618,120
71 09 01	Own Buildings							
71 09 02	Rented Buildings							
71 09 03	Office Equipment - Computers							
71 09 04	Office Equipment - others							
71 09 05	Furniture and Fixtures	25,663	50,000	25,876	75,000	73,667	100,000	81,080
71 09 06	Others	294,045	300,000	291,134	500,000	226,842	600,000	537,040
71 10 00	Rents, Royalties, Rates and Taxes	32,136	1,440,000	856,101	2,250,000	1,674,158	2,500,000	1,844,131
71 10 01	Rent - Buildings	32,136	1,440,000	856,101	2,250,000	1,674,158	2,500,000	1,844,131
71 10 02	Rent - Equipment							
71 10 03	Rent - Others							
71 10 04	Royalties							
71 10 05	Rates and Taxes							
71 10 06	License							
71 11 00	Financial Expenses	29,372	50,000	47,047	75,000	62,345	50,000	18,240
71 11 01	Bank Charges	29,372	50,000	47,047	75,000	62,345	50,000	18,240
71 11 02	Interest on Loans							
71 11 03	Commitment Fees							
71 12 00	Operation of Plant & Equipment	-	-	-	-	-	-	-

ANNEX 9
KMC Expenditures

Codes	Account Head	Actual 48/49	Budget 49/50	Actual 49/50	Budget 50/51	Actual 50/51	Budget 51/52	Actual 51/52
71 12 01	Annual Registration Fees							
71 12 02	Insurance							
71 12 03	Repairs and Maintenance							
71 12 04	Fuel							
71 12 05	Oil & Lubricants							
71 13 00	Revenue Mobilisation Additional Expe	970,115	1,200,000	1,122,511	1,500,000	1,499,102	2,160,000	2,146,459
71 13 01	Business Tax Collection Expenses							
71 13 02	Thankot Octroi Collection Expenses	970,115	1,200,000	1,122,511	1,500,000	1,499,102	2,160,000	2,146,459
72 00 00	Other Expenses	578,720	2,700,000	2,216,897	8,625,000	8,422,756	6,040,000	4,452,940
72 01 01	Donations - Cultural, Heritage Trust							
72 02 02	Donation Others	578,720	2,700,000	2,216,897	8,625,000	8,422,756	6,040,000	4,452,940
72 03 03	Seminars and Workshops Expenses							
72 04 04	Participation Fees & Expenses							
72 05 05	Fair Exhibitions							
72 06 06	Celebration							
72 07 00	Insurance							
72 07 01	Building							
72 07 02	Infrastructure and Civil Works							
72 07 03	Office Equipment - Computers							
72 07 04	Office Equipment - Others							
72 07 05	Furniture and Fittings							
72 07 07	Other Asset Insurance							
72 08 00	Entertainment/Guest Relation	474,651	2,310,000	1,907,811	3,432,000	3,365,927	3,911,000	3,907,451
72 08 01	Civic Reception	204,005	1,800,000	1,590,375	2,400,000	2,334,618	3,911,000	3,907,451
72 08 02	Sister City Relation							
72 08 03	Gifts							
72 08 04	Refreshment							
72 08 05	Other	270,646	510,000	317,436	1,032,000	1,031,309		
72 09 00	Puja Expenses	11,800	100,000	55,900	100,000	64,900	200,000	154,900
72 09 01	Dashain/Tihar Puja expenses	11,800	100,000	55,900	100,000	64,900	200,000	154,900
72 10 00	Other Miscellaneous Expenses	72,000	900,000	582,090	578,000	533,268	500,000	488,803
72 10 01	Other Miscellaneous Expenses	72,000	900,000	582,090	578,000	533,268	500,000	488,803
73 00 00	Other Charges							
73 01 01	Provision for Inventory Losses							
73 01 02	Provision for Doubtful Debts							
73 01 03	Loss on Sale of Assets							
73 01 04	Loss on Sale of Investments							
74 00 00	Depreciation							
74 01 00	Lease - hold Land							

ANNEX 9
KMC Expenditures

Codes	Account Head	Actual 48/49	Budget 49/50	Actual 49/50	Budget 50/51	Actual 50/51	Budget 51/52	Actual 51/52
74 02 00	Building							
74 03 00	Infrastructure and Civil Works							
74 04 00	Office Equipment - Computers							
74 05 00	Office Equipment - Others							
74 06 00	Furniture and Fittings							
74 07 00	Vehicles							
74 08 00	Plant and Equipment							
75 00 00	Refund of Revenue	34,224,087	78,412,000	69,319,694	80,850,000	63,795,997	72,200,000	56,742,325
75 01 00	Refund of Revenue - For the Year	34,131,898	78,262,000	69,186,726	80,000,000	63,486,428	71,000,000	56,489,388
75 01 01	Land Revenue to DDC	62,800	4,000,000	3,898,350	5,000,000	2,647,687	1,000,000	930,000
75 01 02	Octroi to Other Municipalities	34,069,098	74,262,000	65,288,376	75,000,000	60,838,741	70,000,000	55,559,388
75 02 00	Refund of Revenue - Prior Years	92,189	150,000	132,968	850,000	309,569	1,200,000	252,937
75 02 01	Land Revenue to DDC							
75 02 02	Octroi to Other Municipalities	92,189	150,000	132,968	850,000	309,569	1,200,000	252,937
75 02 03	Other Income	-	-	-	-	-	-	-
76 00 00	Prior Years Expenditure	-	-	-	-	-	-	-
76 00 01	Infrastructure and Civil Works - Centre	-	-	-	-	-	-	-
76 00 02	Infrastructure and Civil Works - Wards	-	-	-	-	-	-	-
76 00 03	for services	-	-	-	-	-	-	-
76 00 04	for others	-	-	-	-	-	-	-
77 00 00	Old Advances Cleared	-	-	-	-	-	-	-
77 01 00	Expenditure from Old Advances	-	-	-	-	-	-	-
77 02 00	Old Advance cleared by Statement of Exp.	-	-	-	-	-	-	-
80 00 00	Infrastructure and Civil Works	3,107,663	15,800,000	3,520,070	15,200,000	7,911,630	3,911,111	3,471,360
80 01 00	Roads/foot path	-	-	-	5,000,000	4,978,276	-	-
80 02 00	Traffic management	-	-	-	-	-	-	-
80 03 00	Street Lighting	-	-	-	1,500,000	-	-	-
80 04 00	Bus Parks	2,751,472	6,600,000	1,511,406	4,000,000	2,339,898	2,500,000	2,360,249
80 05 00	Pavements	-	-	-	-	-	-	-
80 06 00	Bridges/culverts	-	-	-	-	-	-	-
80 07 00	Others	356,191	9,200,000	2,008,664	4,700,000	593,456	1,411,111	1,111,111
81 00 00	Environmental Services	1,050,657	41,161,692	24,196,753	45,780,000	37,537,619	45,040,713	37,720,789
81 01 00	Drainage and Sewerage	-	-	-	-	-	-	-
81 02 00	River Control and Flood Protection	-	4,500,000	2,187,149	4,000,000	2,945,851	3,500,000	2,804,375
81 03 00	Water Supply	-	5,000,000	722,652	3,000,000	1,523,453	-	-
81 04 00	Parks	102,622	5,500,000	438,732	2,500,000	1,149,421	-	-
81 05 00	Public Toilet	449,382	3,000,000	87,362	-	-	-	-
81 06 00	Landfill/transfer station management.	-	-	-	-	-	-	-
81 07 00	Service subsidy expenses	-	-	-	-	-	-	-

ANNEX 9
KMC Expenditures

Codes	Account Head	Actual 48/49	Budget 49/50	Actual 49/50	Budget 50/51	Actual 50/51	Budget 51/52	Actual 51/52
81 08 00	Area/Street Cleaning Expenses	-	22,386,692	19,995,651	26,280,000	23,203,694	30,000,000	24,986,458
81 09 00	Wastage Collection Expenses	498,653	775,000	765,207	10,000,000	8,715,200	11,540,713	9,929,956
81 10 00	Community Mobilisation	-	-	-	-	-	-	-
82 00 00	Area Development	-	-	-	-	-	-	-
82 01 01	Parking Areas	-	-	-	-	-	-	-
83 00 00	Social Services	274,156	8,950,000	2,669,616	1,850,000	1,074,133	2,500,000	2,033,042
83 01 00	Restoration of Temples	-	-	-	-	-	-	-
83 02 00	Restoration of Others	-	-	-	-	-	-	-
83 03 00	Crematorium	-	5,000,000	-	500,000	-	-	-
83 04 00	Schools	-	-	-	-	-	-	-
83 05 00	Health Centers	-	-	-	-	-	-	-
83 06 00	Clinics	249,156	1,550,000	886,700	-	-	-	-
83 07 00	Hospitals	-	-	-	-	-	-	-
83 08 00	Sports	25,000	1,650,000	1,628,445	650,000	640,958	2,500,000	2,033,042
83 09 00	Scholarship	-	750,000	154,471	700,000	433,175	-	-
83 10 00	Natural Calamity Relief	-	-	-	-	-	-	-
84 00 00	Trade and Industry	-	-	-	2,500,000	-	-	-
84 01 00	Markets	-	-	-	2,500,000	-	-	-
84 02 00	Industrial Development	-	-	-	-	-	-	-
84 03 00	Shops	-	-	-	-	-	-	-
84 04 00	Others	-	-	-	-	-	-	-
85 00 00	Public Health	38,675	170,000	42,786	100,000	59,104	-	-
85 01 01	Burial Services	-	-	-	-	-	-	-
85 01 02	Cows control Expenses	23,675	110,000	23,475	50,000	59,104	-	-
85 01 03	Dogs Control Expenses	15,000	60,000	19,311	50,000	-	-	-
86 00 00	Departments	-	11,500,000	8,584,167	14,800,000	13,708,896	11,000,000	9,034,198
86 01 00	Other services of Social Welfare Dept	-	-	-	-	-	-	-
Community Development								
86 01 01	Capacity Building Training	-	-	-	-	-	-	-
New Projects								
86 01 02	NGO Resource Data Preparation	-	-	-	-	-	-	-
86 01 03	Ward Level Project for Women	-	-	-	-	-	-	-
86 01 04	International Labor Organization (ILO)	-	-	-	-	-	-	-
86 01 05	Situational Analysis of Squatters Area	-	-	-	-	-	-	-
86 01 06	Data Collection of Elderly Citizens & Illiterate Women	-	-	-	-	-	-	-
86 01 07	Implementation of adult literacy Classes	-	-	-	-	-	-	-
86 01 08	Skill Development Training	-	-	-	-	-	-	-
86 01 09	Saving & Credit Training	-	-	-	-	-	-	-
Disaster Management								

ANNEX 9
KMC Expenditures

Codes	Account Head	Actual 48/49	Budget 49/50	Actual 49/50	Budget 50/51	Actual 50/51	Budget 51/52	Actual 51/52
86 03 03	Heritage Clubs Trust Fund							
86 03 04	Heritage Site cleanup Program							
86 03 05	Cleaning Equipment 4 site							
86 03 06	Eassy & Art Competition							
86 03 07	Motor fare & lunch expenses							
86 03 08	Interaction Program							
86 03 09	Documentation Culture Heritage							
86 03 10	Promotion of Culture & Festival							
86 03 11	Preparation of FM Program							
86 03 12	FM Program Audio Materials							
86 04 00	Information and Communication Dept							
86 04 01	KMC Home Page							
86 04 02	Repair Maintenance of the Equipments							
86 04 03	Live Programs							
86 04 04	Photo Exhibition 2 nos.							
86 04 05	Meet the Press Programme 3 nos.							
86 04 06	Publication of Mahanagar Bulletin							
86 04 07	Dev. & Preparation of City Profile of Kath.							
86 05 00	Public Works Department		8,000,000	6,584,167	10,000,000	9,869,482	6,000,000	5,258,784
86 05 01	A. Ongoing Projects		8,000,000	6,584,167	10,000,000	9,869,482	6,000,000	5,258,784
86 05 02	B. Committed Projects							
86 05 03	C. Project Submitted for Approval (but no information received about it's decision yet)							
86 05 04	New Projects							
86 06 00	The Urban Governance Initiatives							
86 06 01	Monitoring of current quality of air, water, soil, etc							
86 06 02	Development of KMC Website							
86 06 03	Establishment of ECO clubs							
86 06 04	Activities related to Community Mobilization							
86 06 05	Institutional Strengthening with training and follow up							
86 06 06	Dissemination							
86 06 07	Contingency							
86 07 00	Kath Valley Mapping Programme							
86 07 01	Services/Local Technical Assistance							
86 07 02	Services/Evaluation							
86 07 03	Services/Studies							
86 07 04	Services Training							
86 07 05	Supplies/Equipment							

ANNEX 9
KMC Expenditures

Codes	Account Head	Actual 48/49	Budget 49/50	Actual 49/50	Budget 50/51	Actual 50/51	Budget 51/52	Actual 51/52
86 07 06	Supplies/Inputs							
86 07 07	Supplies/Transportation							
86 07 08	Works/Projects							
86 07 09	Information/Advertisements							
86 07 10	Information/Public Relations							
86 07 11	Information/Publications							
86 07 12	Information/Reports							
86 07 13	Operation/Salaries							
86 07 14	Operation/Extra Support							
86 07 15	Operation/Repair & Maintenance							
86 07 16	Operation/Office Expenses							
86 07 17	Utilities							
86 07 18	Insurances							
86 07 19	Contingency Fund							
86 08 00	Urban Dev Department							
86 08 01	Urban Planning							
86 08 02	Traffic and Transportation Management							
86 08 03	Housing Development							
86 09 00	City Development Strategy							
86 09 01	City Development Strategy							
86 10 00	ADB TA							
86 10 01	ADB TA							
86 11 00	Town Development Fund Projects				25,600,000	662,627		
86 11 01	Town Development Fund Projects				25,600,000	662,627		
86 12 00	Town Development	18,516,137	98,775,000	93,687,405	120,825,000	118,367,317	194,593,000	74,497,214
86 12 01	Town Development (Town Level Projects)	-	22,500,000	17,412,405	12,000,000	9,542,317	120,393,000	6,854,639
86 12 02	Town Development (Ward Level Projects)	18,516,137	76,275,000	76,275,000	108,825,000	108,825,000	74,200,000	67,642,575
86 12 03	Special Programs (Ward Level Projects)							
Grand Total		86,972,027	365,343,240	252,240,054	441,185,000	308,507,515	445,017,685	253,288,966

ANNEX 9
KMC Expenditures

Accounting Codes	Account Head	Budget 52/53	Actual 52/53	Budget 53/54	Actual 53/54	Budget 54/55	Actual 54/55	Budget 55/56
10 00 00	Land	500,000	-	1,000,000	295,000	1,000,000	305,000	4,000,000
10 01 00	Land Freehold	500,000	-	1,000,000	295,000	1,000,000	305,000	4,000,000
10 02 00	Land Leasehold	-	-	-	-	-	-	-
11 00 00	Building	22,500,000	2,688,975	32,500,000	21,188	5,000,000	792,677	10,000,000
11 01 00	Building on Freehold Land	22,500,000	2,688,975	32,500,000	21,188	5,000,000	792,677	10,000,000
11 02 00	Building on Leasehold Land	-	-	-	-	-	-	-
11 03 00	Building on custodian lands	-	-	-	-	-	-	-
12 00 00	Infrastructure and Civil Works	-	-	-	-	-	-	-
13 00 00	Office Equipment- Computers	7,000,000	3,606,302	10,000,000	399,025	10,000,000	4,100,386	1,458,000
14 00 00	Office Equipment- Others	1,100,000	1,029,069	1,000,000	588,665	2,820,000	2,749,376	1,825,000
15 00 00	Furniture and Fittings	10,500,000	1,838,059	14,400,000	1,484,456	9,000,000	1,397,979	10,000,000
16 00 00	Vehicles	-	-	-	-	-	-	-
17 00 00	Plant and Equipment	-	-	-	-	-	-	-
19 00 00	Capital Work-in-progress	-	-	-	-	-	-	-
19 11 00	Building	-	-	-	-	-	-	-
19 12 00	Infrastructure and Civil Works	-	-	-	-	-	-	-
19 12 01	Roads	-	-	-	-	-	-	-
19 12 02	Traffic Management	-	-	-	-	-	-	-
19 12 03	Street Lighting	-	-	-	-	-	-	-
19 12 04	Bus Parks	-	-	-	-	-	-	-
19 12 05	Bridges/ culverts	-	-	-	-	-	-	-
19 12 06	Drainage and sewerage	-	-	-	-	-	-	-
19 12 07	Water Supply	-	-	-	-	-	-	-
19 12 08	Public Toilet	-	-	-	-	-	-	-
19 18 00	Others MIIP, 4 P	40,800,000	12,100,000	109,996,000	30,964,487	180,000,000	57,075,580	204,305,000
19 18 01	MIIP	40,800,000	12,100,000	109,996,000	30,964,487	180,000,000	57,075,580	204,305,000
19 18 02	4 P Program	-	-	-	-	-	-	-
20 00 00	Long Term Investment	-	-	1,300,000	3,300,000	20,000,000	-	-
20 03 00	Equity Investment	-	-	1,300,000	3,300,000	20,000,000	-	-
70 01 00	Salaries & Wages	10,553,575	9,595,068	59,540,799	50,567,350	86,116,512	64,904,268	74,808,000
70 01 01	Elected Members	1,164,000	1,164,000	1,164,000	1,105,500	1,214,000	1,203,500	1,224,000
70 01 02	Permanent Staff	9,389,575	8,431,068	58,376,799	49,461,850	84,902,512	63,700,768	73,584,000
70 01 03	Tenoirat Staff	-	-	-	-	-	-	-
70 01 04	Contract Staff	-	-	-	-	-	-	-
70 01 05	Monthly Wage Staff	-	-	-	-	-	-	-
70 01 06	Daily Wage Staff	-	-	-	-	-	-	-

ANNEX 9
KMC Expenditures

Codes	Account Head	Budget 52/53	Actual 52/53	Budget 53/54	Actual 53/54	Budget 54/55	Actual 54/55	Budget 55/56
70 01 07	Others							
70 02 00	Allowances and Benefits-Elected Mem	3,092,300	2,039,298	2,457,200	1,839,371	5,173,500	2,532,950	5,000,000
70 02 01	Transportation Allowance	2,092,300	1,977,000	1,957,200	1,808,900	4,673,500	2,262,600	4,000,000
70 02 02	Telephone Allowance							
70 02 03	Medical Expenses	1,000,000	62,298	500,000	30,471	500,000	270,350	1,000,000
70 02 04	Dress Expenses/Allowances							
70 03 00	Uniform Expenses & Allowances	1,500,000	1,108,555	5,000,000	3,680,119	7,500,000	5,685,176	8,499,733
70 03 01	Uniform Expenses & Allowances	1,500,000	1,108,555	5,000,000	3,680,119	7,500,000	5,685,176	8,499,733
70 04 00	Employer's Contribution to Provident							
70 04 01	Provident Fund Contribution							
70 05 00	Head and Acting Allowance							
70 05 01	Department Head Allowances							
70 05 02	Kayam Mukayam (Acting) Allowance							
70 06 00	Overtime							
70 06 01	Staff Over Time							
70 07 00	Medical Allowances	50,000	33,335	50,000	38,127	100,000	79,694	1,308,000
70 07 01	Staff Medical Allowance	50,000	33,335	50,000	38,127	100,000	79,694	1,308,000
70 08 00	Dearness Allowances							
70 08 01	Permanent Staff							
70 08 02	Temporary Staff							
70 08 03	Contract Staff							
70 08 04	Monthly Wage Staff							
70 08 05	Daily Wage Staff							
70 09 00	Diet Allowances	2,700,000	1,961,501	2,500,000	1,996,409	4,804,000	2,551,859	2,153,248
70 09 01	Diet for Security Staff	2,700,000	1,961,501	2,500,000	1,996,409	4,804,000	2,551,859	2,153,248
70 10 00	Tiffin Allowances							
70 10 01	Permanent Staff							
70 10 02	Temporary Staff							
70 10 03	Contract Staff							
70 10 04	Monthly Wage Staff							
70 10 05	Daily Wage Staff							
70 11 00	Night Shift Allowances							
70 11 01	Night Overtime							
70 12 00	Other Allowances	2,300,000	2,217,973	2,830,000	2,726,086	7,462,500	6,681,005	8,346,000
70 12 01	Other Allowances	2,300,000	2,217,973	2,830,000	2,726,086	7,462,500	6,681,005	8,346,000
70 13 00	Staff Insurance	500,000	-	1,000,000	242,344	2,000,000	514,580	1,000,000
70 13 01	Group Insurance	500,000	-	1,000,000	242,344	2,000,000	514,580	1,000,000
70 14 00	Leave Encashment							

ANNEX 9

KMC Expenditures

Codes	Account Head	Budget 52/53	Actual 52/53	Budget 53/54	Actual 53/54	Budget 54/55	Actual 54/55	Budget 55/56
70 14 01	Permanent Staff							
70 14 02	Temporary Staff							
70 14 03	Contract Staff							
70 15 00	Retirement related Expenses	3,500,000	2,510,992	5,700,000	5,483,768	7,100,000	3,924,676	8,500,000
70 15 01	Gratuity							4,000,000
70 15 02	Pension	3,500,000	2,510,992	5,700,000	5,483,768	7,100,000	3,924,676	4,500,000
70 15 03	Accumulated Leave Encashment							
70 15 04	Accumulated Medical Benefits							
71 01 00	Utilities	1,600,000	980,056	500,000	351,902	1,000,000	921,883	1,800,000
71 01 01	Electricity	1,600,000	980,056	500,000	351,902	1,000,000	921,883	1,800,000
71 01 02	Water							
71 02 00	Goods	5,205,000	3,968,796	4,850,000	4,671,183	8,450,000	7,448,032	7,696,000
71 02 01	Printings & Stationery	2,850,000	1,838,404	1,900,000	1,776,720	2,850,000	2,617,374	3,740,000
71 02 02	Publication of Journal							
71 02 03	Newspaper, Periodicals and Books purch							
71 02 04	Small Assets	550,000	521,275	400,000	399,631	600,000	595,073	835,000
71 02 05	Office Supplies	1,800,000	1,609,117	2,500,000	2,448,688	4,500,000	4,172,708	3,000,000
71 02 06	Fuel-Heating, Cooking etc.	5,000	-	50,000	46,144	500,000	62,877	121,000
71 02 07	Medicine							
71 03 00	Training and Services	3,360,200	1,551,338	8,143,800	1,205,912	12,160,000	2,764,693	7,978,999
71 03 01	HRD (Training Expenses)	200,000	124,500	200,000	534,633	5,000,000	762,798	3,330,000
71 03 02	Study Tours							
71 03 03	Research and Surveys	1,800,000	846,566	4,500,000		5,000,000	375,261	2,924,999
71 03 04	Meeting Fees	1,000,200	221,825	2,943,800	215,325	660,000	348,000	524,000
71 03 05	Meeting Expenses	360,000	358,447	500,000	455,954	1,500,000	1,278,634	1,200,000
71 03 06	Audit Fees							
71 03 07	Audit Expenses							
71 03 08	Consultancy Fees							
71 03 09	Legal Fees							
71 03 10	Other Professional Fee							
71 03 11	Memberships, Registration and Renewal:							
71 03 12	Rewards and Prizes							
71 03 13	Staff Welfare							
71 03 14	Laundry expensnes							
71 04 00	Notification & Publicity	2,200,000	2,037,050	2,200,000	2,148,412	4,000,000	3,450,692	2,000,000
71 04 01	Administrative Notification	2,200,000	2,037,050	2,200,000	2,148,412	4,000,000	3,450,692	2,000,000
71 04 02	Publicity							
71 04 03	Others							
71 05 00	Travel and per diem	9,500,000	7,497,723	5,000,000	4,382,779	4,630,000	3,971,353	6,270,000

ANNEX 9
KMC Expenditures

Codes	Account Head	Budget 52/53	Actual 52/53	Budget 53/54	Actual 53/54	Budget 54/55	Actual 54/55	Budget 55/56
71 05 01	Travel Expenses	9,500,000	7,497,723	5,000,000	4,382,779	4,630,000	3,971,353	6,270,000
71 05 02	Daily Allowances							
71 05 03	Other Expenses							
71 06 00	Local Transportation	15,000	8,570	15,000	1,750	50,000	12,115	300,000
71 06 01	Local Transportation	15,000	8,570	15,000	1,750	50,000	12,115	300,000
71 06 02	Transport & Porter							
71 07 00	Operation of Vehicles	10,000,000	8,566,892	14,000,000	11,696,839	16,680,000	6,344,832	29,151,105
71 07 01	Annual Registration Fees							
71 07 02	Insurance							
71 07 03	Repairs and Maintenance	3,000,000	2,046,710	4,000,000	3,407,178	5,000,000	4,016,575	15,000,000
71 07 04	Fuel	7,000,000	6,520,182	10,000,000	8,289,661	11,680,000	2,328,257	14,151,105
71 07 05	Oil & Lubricants							
71 07 06	Repairs and Maintenance - staff							
71 07 07	Fuel - staff							
71 07 08	Oil & Lubricants - staff							
71 08 00	Communications	2,546,400	1,263,616	1,915,000	1,951,000	4,050,000	2,096,567	2,128,000
71 08 01	Postage & Couriers	14,000	12,899	15,000	13,032	50,000	39,961	271,000
71 08 02	Telephone & Fax							
71 08 03	E-mail/Internet	2,532,400	1,250,717	1,900,000	1,937,968	4,000,000	2,056,606	1,857,000
71 08 04	Others							
71 09 00	Repairs and Maintenance	350,000	311,646	400,000	341,117	1,000,000	587,798	8,930,000
71 09 01	Own Buildings							
71 09 02	Rented Buildings							
71 09 03	Office Equipment - Computers							
71 09 04	Office Equipment - others	150,000	145,059	200,000	217,908	500,000	154,902	250,000
71 09 05	Furniture and Fixtures							
71 09 06	Others	200,000	166,587	200,000	123,209	500,000	432,896	8,680,000
71 10 00	Rents, Royalties, Rates and Taxes	5,936,000	4,014,415	6,933,000	7,505,616	9,287,488	5,816,945	5,518,400
71 10 01	Rent - Buildings	5,936,000	4,014,415	6,933,000	7,505,616	9,287,488	5,816,945	5,518,400
71 10 02	Rent - Equipment							
71 10 03	Rent - Others							
71 10 04	Royalties							
71 10 05	Rates and Taxes							
71 10 06	License							
71 11 00	Financial Expenses	250,000	35,653	300,000	96,827	1,200,000	1,154,113	18,207,000
71 11 01	Bank Charges	50,000	35,653	100,000	96,827	200,000	154,113	225,000
71 11 02	Interest on Loans	200,000	-	200,000	-	1,000,000	1,000,000	17,982,000
71 11 03	Commitment Fees							
71 12 00	Operation of Plant & Equipment	-	-	-	-	-	-	-

ANNEX 9
KMC Expenditures

Codes	Account Head	Budget 52/53	Actual 52/53	Budget 53/54	Actual 53/54	Budget 54/55	Actual 54/55	Budget 55/56
71 12 01	Annual Registration Fees							
71 12 02	Insurance							
71 12 03	Repairs and Maintenance							
71 12 04	Fuel							
71 12 05	Oil & Lubricants							
71 13 00	Revenue Mobilisation Additional Expe	2,500,000	1,737,054	1,600,000	1,728,672	4,500,000	4,378,949	5,600,000
71 13 01	Business Tax Collection Expenses	2,500,000	1,737,054	1,600,000	1,728,672	4,500,000	4,378,949	2,000,000
71 13 02	Thankot Octroi Collection Expenses							3,600,000
72 00 00	Other Expenses	1,900,000	1,877,812	2,500,000	2,987,728	11,500,000	5,690,417	7,500,000
72 01 01	Donations - Cultural, Heritage Trust				980,209	4,000,000	2,598,877	2,500,000
72 02 02	Donation Others	1,900,000	1,877,812	2,500,000	2,007,519	7,500,000	3,091,540	5,000,000
72 03 03	Seminars and Workshops Expenses							
72 04 04	Participation Fees & Expenses							
72 05 05	Fair. Exhibitions							
72 06 06	Celebration							
72 07 00	Insurance							
72 07 01	Building							
72 07 02	Infrastructure and Civil Works							
72 07 03	Office Equipment - Computers							
72 07 04	Office Equipment - Others							
72 07 05	Furniture and Fittings							
72 07 07	Other Asset Insurance							
72 08 00	Entertainment/Guest Relation	5,775,000	5,700,791	3,800,000	4,265,182	4,000,000	3,714,858	3,772,000
72 08 01	Civic Reception	5,775,000	5,700,791	3,800,000	4,265,182	4,000,000	3,714,858	3,772,000
72 08 02	Sister City Relation							
72 08 03	Gifts							
72 08 04	Refreshment							
72 08 05	Other							
72 09 00	Puja Expenses	100,000	82,600	100,000	95,600	200,000	141,400	200,000
72 09 01	Dashain/Tihar Puja expenses	100,000	82,600	100,000	95,600	200,000	141,400	200,000
72 10 00	Other Miscellaneous Expenses	50,000	-	50,000	5,400	1,000,000	50,000	245,000
72 10 01	Other Miscellaneous Expenses	50,000	-	50,000	5,400	1,000,000	50,000	245,000
73 00 00	Other Charges							
73 01 01	Provision for inventory Losses							
73 01 02	Provision for Doubtful Debts							
73 01 03	Loss on Sale of Assets							
73 01 04	Loss on Sale of Investments							
74 00 00	Depreciation							
74 01 00	Lease - hold Land							

ANNEX 9
KMC Expenditures

Codes	Account Head	Budget 52/53	Actual 52/53	Budget 53/54	Actual 53/54	Budget 54/55	Actual 54/55	Budget 55/56
74 02 00	Building							
74 03 00	Infrastructure and Civil Works							
74 04 00	Office Equipment - Computers							
74 05 00	Office Equipment - Others							
74 06 00	Furniture and Fittings							
74 07 00	Vehicles							
74 08 00	Plant and Equipment							
75 00 00	Refund of Revenue	71,200,000	69,779,539	72,258,998	75,339,197	101,500,000	112,428,309	102,000,000
75 01 00	Refund of Revenue - For the Year	70,700,000	69,335,538	71,500,000	74,990,289	101,000,000	112,372,191	101,500,000
75 01 01	Land Revenue to DDC	700,000	674,535	1,500,000	137,181	1,000,000	700,000	1,500,000
75 01 02	Octroi to Other Municipalities	70,000,000	68,661,003	70,000,000	74,853,088	100,000,000	111,672,191	100,000,000
75 02 00	Refund of Revenue - Prior Years	500,000	444,001	758,998	348,928	500,000	56,118	500,000
75 02 01	Land Revenue to DDC			408,998				
75 02 02	Octroi to Other Municipalities							
75 02 03	Other Income	500,000	444,001	350,000	348,928	500,000	56,118	500,000
76 00 00	Prior Years Expenditure					20,000,000	894,687	28,498,758
76 00 01	Infrastructure and Civil Works - Centre							
76 00 02	Infrastructure and Civil Works - Wards for services							
76 00 03	Infrastructure and Civil Works - Wards for others					20,000,000	894,687	28,498,758
76 00 04								
77 00 00	Old Advances Cleared							
77 01 00	Expenditure from Old Advances							
77 02 00	Old Advance cleared by Statement of Ex							
80 00 00	Infrastructure and Civil Works	3,000,000	1,474,033	7,350,000	2,999,597	158,500,000	8,312,506	37,751,000
80 01 00	Roads/foot path	300,000		4,000,000				
80 02 00	Traffic management							
80 03 00	Street Lighting							
80 04 00	Bus Parks	2,500,000	1,474,033	3,000,000	2,999,597	27,500,000	444,815	5,000,000
80 05 00	Pavements							
80 06 00	Bridges/culverts							
80 07 00	Others	200,000		350,000		131,000,000	7,867,691	32,751,000
81 00 00	Environmental Services	46,000,000	43,365,590	12,600,000	6,556,043	206,000,000	29,264,657	65,500,000
81 01 00	Drainage and Sewerage					16,000,000		
81 02 00	River Control and Flood Protection	4,000,000	2,685,616	3,500,000	31,676			
81 03 00	Water Supply							
81 04 00	Parks				3,162,302	50,000,000	2,435,787	1,000,000
81 05 00	Public Toilet							
81 06 00	Landfill/transfer station management.							30,000,000
81 07 00	Service subsidy expenses							

ANNEX 9
KMC Expenditures

Codes	Account Head	Budget 52/53	Actual 52/53	Budget 53/54	Actual 53/54	Budget 54/55	Actual 54/55	Budget 55/56
81 08 00	Area/Street Cleaning Expenses							
81 09 00	Wastage Collection Expenses							
81 10 00	Community Mobilisation							
82 00 00	Area Development	42,000,000	40,679,974	9,100,000	3,362,065	140,000,000	26,828,870	33,000,000
82 01 01	Parking Areas							1,500,000
83 00 00	Social Services	2,600,000	2,490,670	5,000,000	105,800			
83 01 00	Restoration of Temples							
83 02 00	Restoration of Others							
83 03 00	Crematorium							
83 04 00	Schools							
83 05 00	Health Centers							
83 06 00	Clinics							
83 07 00	Hospitals							
83 08 00	Sports	2,600,000	2,490,670	5,000,000	105,800			
83 09 00	Scholarship							
83 10 00	Natural Calamity Relief							
84 00 00	Trade and Industry							
84 01 00	Markets							
84 02 00	Industrial Development							
84 03 00	Shops							
84 04 00	Others							
85 00 00	Public Health							
85 01 01	Burial Services							
85 01 02	Cows control Expenses							
85 01 03	Dogs Control Expenses							
86 00 00	Departments	9,700,000	6,050,886	13,306,000	2,089,308	266,500,000	21,004,242	57,182,985
86 01 00	Other services of Social Welfare Dept					111,500,000	12,823,035	13,288,000
	Community Development							
86 01 01	Capacity Building Training							
	New Projects							
86 01 02	NGO Resource Data Preparation					111,500,000	12,823,035	13,288,000
86 01 03	Ward Level Project for Women							
86 01 04	International Labor Organization (ILO)							
86 01 05	Situational Analysis of Squatters Area							
86 01 06	Data Collection of Elderly Citizens & Illite							
86 01 07	Implementation of adult literacy Classes							
86 01 08	Skill Development Training							
86 01 09	Saving & Credit Training							
	Disaster Management							

ANNEX 9
KMC Expenditures

Codes	Account Head	Budget 52/53	Actual 52/53	Budget 53/54	Actual 53/54	Budget 54/55	Actual 54/55	Budget 55/56
86 01 10	Community based disaster mgmt. Training							
86 01 11	Vulnerability Assessment Survey							
86 01 12	Public Awareness Campaign							
86 01 13	GIS Mapping							
86 01 14	Publicity							
86 01 15	Publication of Education materials							
86 01 16	Observation of Earthquake Safety Day New Projects							
86 01 17	Awareness on Disaster Prevention in Dis							
86 01 18	Application of building code in coordinatic							
86 01 19	Establish Disaster Relief Fund							
86 01 20	Formation of Disaster Rescue Team in V							
86 01 21	School Level Awareness Program on Dis							
86 01 22	Formation of First Aid Volunteers Group							
86 01 23	Establish of Student Disaster Preparedne							
Sports & Education								
86 01 24	Inter-School Sports Competition							
86 01 25	Inter-Ward Sports Competition							
86 01 26	Formation of Ward Level Sports Deve. C							
86 01 27	Workshop/Seminar on Sports Deve. with							
86 01 28	Campaign to enforce the Children of 6-10							
86 01 29	Establish KMC scholarship to the underp							
86 01 30	Establish Children library in different War							
86 01 31	Organize School level Quiz Contest							
86 02 00	Other Services of Public Health Dept.	4,700,000	3,172,499	8,306,000	2,089,308			
86 02 01	National Vitamin "A" Programme							
86 02 02	National Immunization day Prg.							
86 02 03	Epidemic Control Programme							
86 02 04	Establishment of New UHC	3,200,000	1,672,499	8,306,000	2,089,308			
86 02 05	Food Adultration Control Prg.							
86 02 06	Medical Camp							
86 02 07	Awareness on Health Prevention							
86 02 08	Nutrition Programme							
86 02 09	Rebies & Stray Dog Control Prg.							
86 02 10	Community Health Prg. At Ward							
86 02 11	Urban Health Clinic Ward #	1,500,000	1,500,000					
86 03 00	Other services of Culture, Heritage an					40,000,000	5,202,393	13,854,000
86 03 01	Collection Booths					40,000,000	5,202,393	13,854,000
86 03 02	Tourist Rest Room							

ANNEX 9
KMC Expenditures

Codes	Account Head	Budget 52/53	Actual 52/53	Budget 53/54	Actual 53/54	Budget 54/55	Actual 54/55	Budget 55/56
86 03 03	Heritage Clubs Trust Fund							
86 03 04	Heritage Site cleanup Program							
86 03 05	Cleaning Equipment 4 site							
86 03 06	Eassy & Art Competition							
86 03 07	Motor fare & lunch expenses							
86 03 08	Interaction Program							
86 03 09	Documentation Culture Heritage							
86 03 10	Promotion of Culture & Festival							
86 03 11	Preparation of FM Program							
86 03 12	FM Program Audio Materials							
86 04 00	Information and Communication Dept			115,000,000	2,978,814	115,000,000	2,978,814	24,640,985
86 04 01	KMC Home Page					115,000,000	2,978,814	24,640,985
86 04 02	Repair Maintenance of the Equipments							
86 04 03	Live Programs							
86 04 04	Photo Exhibition 2 nos.							
86 04 05	Meet the Press Programme 3 nos.							
86 04 06	Publication of Mahanagar Bulletin							
86 04 07	Dev. & Preparation of City Profile of Kath							
86 05 00	Public Works Department	5,000,000	2,878,387	5,000,000				
86 05 01	A. Ongoing Projects	5,000,000	2,878,387	5,000,000				
86 05 02	B. Committed Projects							
86 05 03	C. Project Submitted for Approval (but no information received about it's decision yet)							
86 05 04	New Projects							
86 06 00	The Urban Governance Initiatives							
86 06 01	Monitoring of current quality of air, water,							
86 06 02	Development of KMC Website							
86 06 03	Establishment of ECO clubs							
86 06 04	Activities related to Community Mobilizati							
86 06 05	Institutional Strengthening with training a							
86 06 06	Dissemination							
86 06 07	Contingency							
86 07 00	Kath Valley Mapping Programme							
86 07 01	Services/Local Technical Assistance							
86 07 02	Services/Evaluation							
86 07 03	Services/Studies							
86 07 04	Services Training							
86 07 05	Supplies/Equipment							

ANNEX 9
KMC Expenditures

Codes	Account Head	Budget 52/53	Actual 52/53	Budget 53/54	Actual 53/54	Budget 54/55	Actual 54/55	Budget 55/56
86 07 06	Supplies/Inputs							
86 07 07	Supplies/Transportation							
86 07 08	Works/Projects							
86 07 09	Information/Advertisements							
86 07 10	Information/Public Relations							
86 07 11	Information/Publications							
86 07 12	Information/Reports							
86 07 13	Operation/Salaries							
86 07 14	Operation/Extra Support							
86 07 15	Operation/Repair & Maintenance							
86 07 16	Operation/Office Expenses							
86 07 17	Utilities							
86 07 18	Insurances							
86 07 19	Contingency Fund							
86 08 00	Urban Dev Department							5,400,000
86 08 01	Urban Planning							
86 08 02	Traffic and Transportation Management							5,400,000
86 08 03	Housing Development							
86 09 00	City Development Strategy							
86 09 01	City Development Strategy							
86 10 00	ADB TA							
86 10 01	ADB TA							
86 11 00	Town Development Fund Projects							
86 11 01	Town Development Fund Projects							
86 12 00	Town Development	152,946,000	99,228,966	161,596,000	79,985,949	98,216,000	64,853,874	384,631,550
86 12 01	Town Development (Town Level Projects)	37,750,000	8,135,192	46,400,000	4,524,360			221,259,000
86 12 02	Town Development (Ward Level Projects)	115,196,000	91,093,774	115,196,000	75,461,589	98,216,000	64,853,874	163,372,550
86 12 03	Special Programs (Ward Level Projects)							
Grand Total		443,329,475	302,752,823	573,691,797	314,138,208	1,282,500,000	438,598,128	1,124,063,778

ANNEX 9
KMC Expenditures

Accounting Codes	Account Head	Actual 55/56	Budget 56/57	Actual 56/57	Budget 57/58
10 00 00	Land	-	4,000,000	265,625	37,000,000
10 01 00	Land Freehold	-	4,000,000	265,625	37,000,000
10 02 00	Land Leasehold	-	-	-	-
11 00 00	Building	-	28,500,000	-	80,850,000
11 01 00	Building on Freehold Land	-	23,500,000	-	80,850,000
11 02 00	Building on Leasehold Land	-	-	-	-
11 03 00	Building on custodian lands	-	5,000,000	-	-
12 00 00	Infrastructure and Civil Works	-	-	-	-
13 00 00	Office Equipment- Computers	-	-	-	-
14 00 00	Office Equipment- Others	489,500	-	-	26,900,000
15 00 00	Furniture and Fittings	506,988	1,525,000	169,029	2,040,000
16 00 00	Vehicles	173,727	10,000,000	296,884	5,995,000
17 00 00	Plant and Equipment	-	11,900,000	2,112,219	800,000
19 00 00	Capital Work-in-progress	-	20,400,000	-	20,002,000
19 11 00	Building	-	12,400,000	-	10,388,000
19 12 00	Infrastructure and Civil Works	-	4,000,000	-	-
19 12 01	Roads	-	1,000,000	-	3,214,000
19 12 02	Traffic Management	-	-	-	-
19 12 03	Street Lighting	-	-	-	-
19 12 04	Bus Parks	-	-	-	-
19 12 05	Bridges/ culverts	-	-	-	400,000
19 12 06	Drainage and sewerage	-	-	-	3,000,000
19 12 07	Water Supply	-	3,000,000	-	2,000,000
19 12 08	Public Toilet	-	-	-	1,000,000
19 18 00	Others MIIP, 4 P	39,549,173	38,520,000	21,010,000	-
19 18 01	MIIP	39,549,173	27,520,000	21,010,000	-
19 18 02	4 P Program	-	11,000,000	-	-
20 00 00	Long Term Investment	-	-	-	-
20 03 00	Equity Investment	-	-	-	-
70 01 00	Salaries & Wages	72,406,145	85,509,500	74,610,614	125,059,000
70 01 01	Elected Members	1,129,800	1,224,000	1,320,681	330,000
70 01 02	Permanent Staff	71,276,345	-	49,272,745	86,459,000
70 01 03	Tenoirart Staff	-	-	11,099,429	20,682,000
70 01 04	Contract Staff	-	-	2,336,194	1,633,000
70 01 05	Monthly Wage Staff	-	-	10,581,565	9,062,000
70 01 06	Daily Wage Staff	-	-	-	5,886,000

ANNEX 9
KMC Expenditures

Codes	Account Head	Actual 55/56	Budget 56/57	Actual 56/57	Budget 57/58
70 01 07	Others		84,285,500		1,007,000
70 02 00	Allowances and Benefits-Elected Mem	3,198,685	11,216,000	9,876,147	19,790,000
70 02 01	Transportation Allowance	2,386,300	10,216,000	8,734,600	17,280,000
70 02 02	Telephone Allowance			222,000	309,000
70 02 03	Medical Expenses	812,385	1,000,000	919,547	1,201,000
70 02 04	Dress Expenses/Allowances				1,000,000
70 03 00	Uniform Expenses & Allowances	4,862,344	8,000,000	3,798,412	5,005,000
70 03 01	Uniform Expenses & Allowances	4,862,344	8,000,000	3,798,412	5,005,000
70 04 00	Employer's Contribution to Provident	-	-	-	9,142,000
70 04 01	Provident Fund Contribution	-	-	-	9,142,000
70 05 00	Head and Acting Allowance	-	-	-	14,000
70 05 01	Department Head Allowances	-	-	-	14,000
70 05 02	Kayam Mukayam (Acting) Allowance	-	-	-	14,000
70 06 00	Overtime	-	-	4,392,961	16,995,000
70 06 01	Staff Over Time	-	-	4,392,961	16,995,000
70 07 00	Medical Allowances	138,884	1,000,000	161,748	1,000,000
70 07 01	Staff Medical Allowance	138,884	1,000,000	161,748	1,000,000
70 08 00	Dearness Allowances	-	-	-	-
70 08 01	Permanent Staff	-	-	-	-
70 08 02	Temporary Staff	-	-	-	-
70 08 03	Contract Staff	-	-	-	-
70 08 04	Monthly Wage Staff	-	-	-	-
70 08 05	Daily Wage Staff	-	-	-	-
70 09 00	Diet Allowances	1,761,052	2,330,000	1,681,365	1,545,000
70 09 01	Diet for Security Staff	1,761,052	2,330,000	1,681,365	1,545,000
70 10 00	Tiffin Allowances	-	-	14,781,338	10,726,000
70 10 01	Permanent Staff	-	-	14,781,338	6,884,000
70 10 02	Temporary Staff	-	-	-	1,622,000
70 10 03	Contract Staff	-	-	-	267,000
70 10 04	Monthly Wage Staff	-	-	-	1,213,000
70 10 05	Daily Wage Staff	-	-	-	740,000
70 11 00	Night Shift Allowances	-	-	-	-
70 11 01	Night Overtime	-	-	-	-
70 12 00	Other Allowances	7,060,784	20,761,000	-	914,000
70 12 01	Other Allowances	7,060,784	20,761,000	-	914,000
70 13 00	Staff Insurance	696,051	1,000,000	317,107	1,000,000
70 13 01	Group Insurance	696,051	1,000,000	317,107	1,000,000
70 14 00	Leave Encashment	-	-	-	-

ANNEX 9
KMC Expenditures

Codes	Account Head	Actual 55/56	Budget 56/57	Actual 56/57	Budget 57/58
70 14 01	Permanent Staff				
70 14 02	Temporary Staff				
70 14 03	Contract Staff				
70 15 00	Retirement related Expenses	3,795,168	4,500,000	4,442,698	10,500,000
70 15 01	Gratuity		2,250,000	2,248,634	5,000,000
70 15 02	Pension	3,795,168	1,125,000	2,194,064	2,500,000
70 15 03	Accumulated Leave Encashment		675,000		1,500,000
70 15 04	Accumulated Medical Benefits		450,000		1,500,000
71 01 00	Utilities	1,741,426	2,000,000	1,496,396	4,741,000
71 01 01	Electricity	1,741,426	1,200,000	760,741	3,059,000
71 01 02	Water		800,000	735,655	1,682,000
71 02 00	Goods	4,586,730	8,580,000	6,777,899	10,227,000
71 02 01	Printings & Stationery	2,095,074	3,920,000	2,695,907	3,358,000
71 02 02	Publication of Journal				1,207,000
71 02 03	Newspaper, Periodicals and Boods purch	808,869	1,220,000	824,791	1,086,000
71 02 04	Small Assets				1,000,000
71 02 05	Office Supplies	1,635,885	3,340,000	3,185,633	3,000,000
71 02 06	Fuel-Heating, Cooking etc.	46,902	100,000	71,568	100,000
71 02 07	Medicine				476,000
71 03 00	Training and Services	1,491,230	12,569,000	4,663,609	20,640,000
71 03 01	HRD (Training Expenses)	241,516	3,300,000	1,140,928	1,500,000
71 03 02	Study Tours				500,000
71 03 03	Research and Surveys	277,075	2,925,000	34,427	2,500,000
71 03 04	Meeting Fees	212,550	2,344,000	878,000	4,030,000
71 03 05	Meeting Expenses	760,089		1,408,254	1,625,000
71 03 06	Audit Fees				200,000
71 03 07	Audit Expenses				85,000
71 03 08	Consultancy Fees				1,200,000
71 03 09	Legal Fees				150,000
71 03 10	Other Professional Fee				100,000
71 03 11	Memberships, Registration and Renewal				250,000
71 03 12	Rewards and Prizes				200,000
71 03 13	Staff Welfare		4,000,000	1,202,000	8,000,000
71 03 14	Laundry expenses				300,000
71 04 00	Notification & Publicity	1,970,325	9,757,000	2,442,843	3,850,000
71 04 01	Administrative Notification	1,970,325	2,500,000	2,196,277	2,000,000
71 04 02	Publicity		7,257,000	246,566	1,000,000
71 04 03	Others				850,000
71 05 00	Travel and per diem	3,394,158	5,000,000	4,405,350	3,500,000

ANNEX 9
KMC Expenditures

Codes	Account Head	Actual 55/56	Budget 56/57	Actual 56/57	Budget 57/58
71 05 01	Travel Expenses	3,394,158	5,000,000	2,273,614	1,500,000
71 05 02	Daily Allowances			2,131,736	1,500,000
71 05 03	Other Expenses				500,000
71 06 00	Local Transportation	63,756	300,000	150,761	100,000
71 06 01	Local Transportation	63,756	300,000	150,761	50,000
71 06 02	Transport & Porter				50,000
71 07 00	Operation of Vehicles	14,938,253	15,651,000	21,844,616	6,660,000
71 07 01	Annual Registration Fees				30,000
71 07 02	Insurance				100,000
71 07 03	Repairs and Maintenance	854,780	1,500,000	1,249,591	800,000
71 07 04	Fuel	14,083,473	14,151,000	20,595,025	3,500,000
71 07 05	Oil & Lubricants				1,000,000
71 07 06	Repairs and Maintenance - staff				400,000
71 07 07	Fuel - staff				575,000
71 07 08	Oil & Lubricants - staff				255,000
71 08 00	Communications	1,568,277	4,525,000	2,563,032	3,623,000
71 08 01	Postage & Couriers	33,350	50,000	30,479	108,000
71 08 02	Telephone & Fax	1,534,927	4,475,000	2,532,553	3,350,000
71 08 03	E-mail/Internet				115,000
71 08 04	Others				50,000
71 09 00	Repairs and Maintenance	378,232	2,800,000	2,351,360	2,475,000
71 09 01	Own Buildings				700,000
71 09 02	Rented Buildings		2,500,000		300,000
71 09 03	Office Equipment - Computers				550,000
71 09 04	Office Equipment - others	242,158	300,000	219,340	500,000
71 09 05	Furniture and Fixtures			217,157	400,000
71 09 06	Others	136,074		1,914,863	25,000
71 10 00	Rents, Royalties, Rates and Taxes	4,973,124	6,500,000	5,058,512	5,216,000
71 10 01	Rent - Buildings	4,973,124	6,500,000	5,058,512	3,270,000
71 10 02	Rent - Equipment				1,840,000
71 10 03	Rent - Others				100,000
71 10 04	Royalties				
71 10 05	Rates and Taxes				
71 10 06	License				6,000
71 11 00	Financial Expenses	210,616	32,595,586	11,190,376	30,263,000
71 11 01	Bank Charges				263,000
71 11 02	Interest on Loans	210,616	250,000	392,397	30,000,000
71 11 03	Commitment Fees		32,345,586	10,797,979	
71 12 00	Operation of Plant & Equipment	-	2,200,000	-	32,275,000

ANNEX 9
KMC Expenditures

Codes	Account Head	Actual 55/56	Budget 56/57	Actual 56/57	Budget 57/58
71 12 01	Annual Registration Fees				150,000
71 12 02	Insurance		500,000		900,000
71 12 03	Repairs and Maintenance		1,700,000		8,525,000
71 12 04	Fuel				20,000,000
71 12 05	Oil & Lubricants				2,700,000
71 13 00	Revenue Mobilisation Additional Expe	2,926,630	1,200,000	672,287	1,200,000
71 13 01	Business Tax Collection Expenses	2,926,630	1,200,000	672,287	1,200,000
71 13 02	Thankot Octroi Collection Expenses				
72 00 00	Other Expenses	2,124,805	11,573,000	7,197,422	12,800,000
72 01 01	Donations - Cultural, Heritage Trust	573,700	4,125,000	2,623,530	4,250,000
72 02 02	Donation Others	1,551,105	5,125,000	2,687,620	4,250,000
72 03 03	Seminars and Workshops Expenses		2,323,000	1,886,272	3,000,000
72 04 04	Participation Fees & Expenses				200,000
72 05 05	Fair. Exhibitions				300,000
72 06 06	Celebration				800,000
72 07 00	Insurance	-	-	-	10,000
72 07 01	Building				
72 07 02	Infrastructure and Civil Works				10,000
72 07 03	Office Equipment - Computers				
72 07 04	Office Equipment - Others				
72 07 05	Furniture and Fittings				
72 07 07	Other Asset Insurance				
72 08 00	Entertainment/Guest Relation	2,410,101	5,250,000	3,449,369	5,900,000
72 08 01	Civic Reception	2,410,101	5,250,000	3,449,369	500,000
72 08 02	Sister City Relation				500,000
72 08 03	Gifts				300,000
72 08 04	Refreshment				4,500,000
72 08 05	Other				100,000
72 09 00	Puja Expenses	161,300	270,000	250,000	300,000
72 09 01	Dashain/Tihar Puja expenses	161,300	270,000	250,000	300,000
72 10 00	Other Miscellaneous Expenses	-	2,200,000	130,698	-
72 10 01	Other Miscellaneous Expenses	-	2,200,000	130,698	-
73 00 00	Other Charges	-	-	-	10,000
73 01 01	Provision for inventory Losses				10,000
73 01 02	Provision for Doubtful Debts				
73 01 03	Loss on Sale of Assets				
73 01 04	Loss on Sale of Investments				
74 00 00	Depreciation	-	-	-	9,006,000
74 01 00	Lease - hold Land				9,006,000

ANNEX 9
KMC Expenditures

Codes	Account Head	Actual 55/56	Budget 56/57	Actual 56/57	Budget 57/58
74 02 00	Building				
74 03 00	Infrastructure and Civil Works				
74 04 00	Office Equipment - Computers				
74 05 00	Office Equipment - Others				
74 06 00	Furniture and Fittings				9,006,000
74 07 00	Vehicles				
74 08 00	Plant and Equipment				
75 00 00	Refund of Revenue	40,096,967	10,995,305	4,380,329	9,428,000
75 01 00	Refund of Revenue - For the Year	40,066,603	-	-	1,400,000
75 01 01	Land Revenue to DDC				1,200,000
75 01 02	Octroi to Other Municipalities	40,066,603			200,000
75 02 00	Refund of Revenue - Prior Years	30,364	10,995,305	4,380,329	8,028,000
75 02 01	Land Revenue to DDC		2,245,305		3,500,000
75 02 02	Octroi to Other Municipalities		8,750,000	4,380,329	4,328,000
75 02 03	Other Income	30,364			200,000
76 00 00	Prior Years Expenditure	590,935	30,000,000	27,679,899	37,367,000
76 00 01	Infrastructure and Civil Works - Centre				5,717,000
76 00 02	Infrastructure and Civil Works - Wards		30,000,000	27,679,899	25,000,000
76 00 03	for services				3,150,000
76 00 04	for others	590,935			3,500,000
77 00 00	Old Advances Cleared				
77 01 00	Expenditure from Old Advances				
77 02 00	Old Advance cleared by Statement of Ex				
80 00 00	Infrastructure and Civil Works	1,866,325	371,535,550	33,112,792	74,050,000
80 01 00	Roads/foot path				1,750,000
80 02 00	Traffic management		5,400,000		
80 03 00	Street Lighting				2,000,000
80 04 00	Bus Parks	1,287,999	5,000,000	101,063	1,000,000
80 05 00	Pavements				800,000
80 06 00	Bridges/culverts				68,500,000
80 07 00	Others	578,326	361,135,550	33,011,729	
81 00 00	Environmental Services	31,554,761	38,000,000	35,071,866	29,670,000
81 01 00	Drainage and Sewerage				3,000,000
81 02 00	River Control and Flood Protection				
81 03 00	Water Supply				
81 04 00	Parks		3,500,000		4,000,000
81 05 00	Public Toilet				800,000
81 06 00	Landfill/transfer station management.	6,500,000	30,000,000	35,030,166	6,400,000
81 07 00	Service subsidy expenses		1,500,000		1,100,000

ANNEX 9
KMC Expenditures

Codes	Account Head	Actual 55/56	Budget 56/57	Actual 56/57	Budget 57/58
81 08 00	Area/Street Cleaning Expenses				10,870,000
81 09 00	Wastage Collection Expenses				3,500,000
81 10 00	Community Mobilisation	25,054,761	3,000,000	41,700	
82 00 00	Area Development		2,000,000		
82 01 01	Parking Areas		2,000,000		
83 00 00	Social Services		16,513,000	2,816,738	47,082,000
83 01 00	Restoration of Temples				14,750,000
83 02 00	Restoration of Others				5,707,000
83 03 00	Crematorium				10,000,000
83 04 00	Schools		1,000,000		
83 05 00	Health Centers				500,000
83 06 00	Clinics		6,518,000	1,668,112	
83 07 00	Hospitals		4,000,000		10,000,000
83 08 00	Sports		2,750,000	988,646	4,250,000
83 09 00	Scholarship		875,000	31,980	1,375,000
83 10 00	Natural Calamity Relief		1,370,000	128,000	500,000
84 00 00	Trade and Industry		100,000		
84 01 00	Markets				
84 02 00	Industrial Development				
84 03 00	Shops				
84 04 00	Others		100,000		
85 00 00	Public Health		351,000		867,000
85 01 01	Burial Services				367,000
85 01 02	Cows control Expenses		351,000		500,000
85 01 03	Dogs Control Expenses				
86 00 00	Departments	13,551,696	33,959,000	9,562,335	82,950,000
86 01 00	Other services of Social Welfare Dept	2,192,979	14,700,000	6,906,624	7,625,000
	Community Development		14,700,000	6,906,624	
86 01 01	Capacity Building Training				200,000
	New Projects	2,192,979			
86 01 02	NGO Resource Data Preparation				
86 01 03	Ward Level Project for Women				1,750,000
86 01 04	International Labor Organization (ILO)				3,850,000
86 01 05	Situational Analysis of Squatters Area				
86 01 06	Data Collection of Elderly Citizens & Illiter				
86 01 07	Implementation of adult literacy Classes				
86 01 08	Skill Development Training				
86 01 09	Saving & Credit Training				
	Disaster Management				

ANNEX 9
KMC Expenditures

Codes	Account Head	Actual 55/56	Budget 56/57	Actual 56/57	Budget 57/58
86 01 10	Community based disaster mgmt. Trainin				150,000
86 01 11	Vulnerability Assessment Survey				25,000
86 01 12	Public Awareness Campaign				
86 01 13	GIS Mapping				
86 01 14	Publicity				
86 01 15	Publication of Education materials				50,000
86 01 16	Observation of Earthquake Safety Day				50,000
	New Projects				
86 01 17	Awareness on Disaster Prevention in Dis				350,000
86 01 18	Application of building code in coordinatic				200,000
86 01 19	Establish Disaster Relief Fund				
86 01 20	Formation of Disaster Rescue Team in V				250,000
86 01 21	School Level Awareness Program on Dis				
86 01 22	Formation of First Aid Volunteers Group 1				
86 01 23	Establish of Student Disaster Preparedne				
	Sports & Education				
86 01 24	Inter-School Sports Competition				500,000
86 01 25	Inter-Ward Sports Competition				
86 01 26	Formation of Ward Level Sports Deve. C				
86 01 27	Workshop/Seminar on Sports Deve. with				
86 01 28	Campaign to enforce the Children of 6-1C				
86 01 29	Establish KMC scholarship to the underp				
86 01 30	Establish Children library in different War				
86 01 31	Organize School level Quiz Contest				250,000
86 02 00	Other Services of Public Health Dept.				2,077,000
86 02 01	National Vitamin "A" Programme				250,000
86 02 02	National Immunization day Prg.				277,000
86 02 03	Epidemic Control Programme				400,000
86 02 04	Establishment of New UHC				150,000
86 02 05	Food Adultration Control Prg.				500,000
86 02 06	Medical Camp				100,000
86 02 07	Awareness on Health Prevention				100,000
86 02 08	Nutrition Programme				
86 02 09	Rebies & Stray Dog Control Prg.				300,000
86 02 10	Community Health Prg. At Ward				
86 02 11	Urban Health Clinic Ward #				
86 03 00	Other services of Culture, Heritage an	2,289,278	13,525,000	2,655,711	2,232,000
86 03 01	Collection Booths	2,289,278	13,525,000	2,655,711	640,000
86 03 02	Tourist Rest Room				1,000,000

ANNEX 9
KMC Expenditures

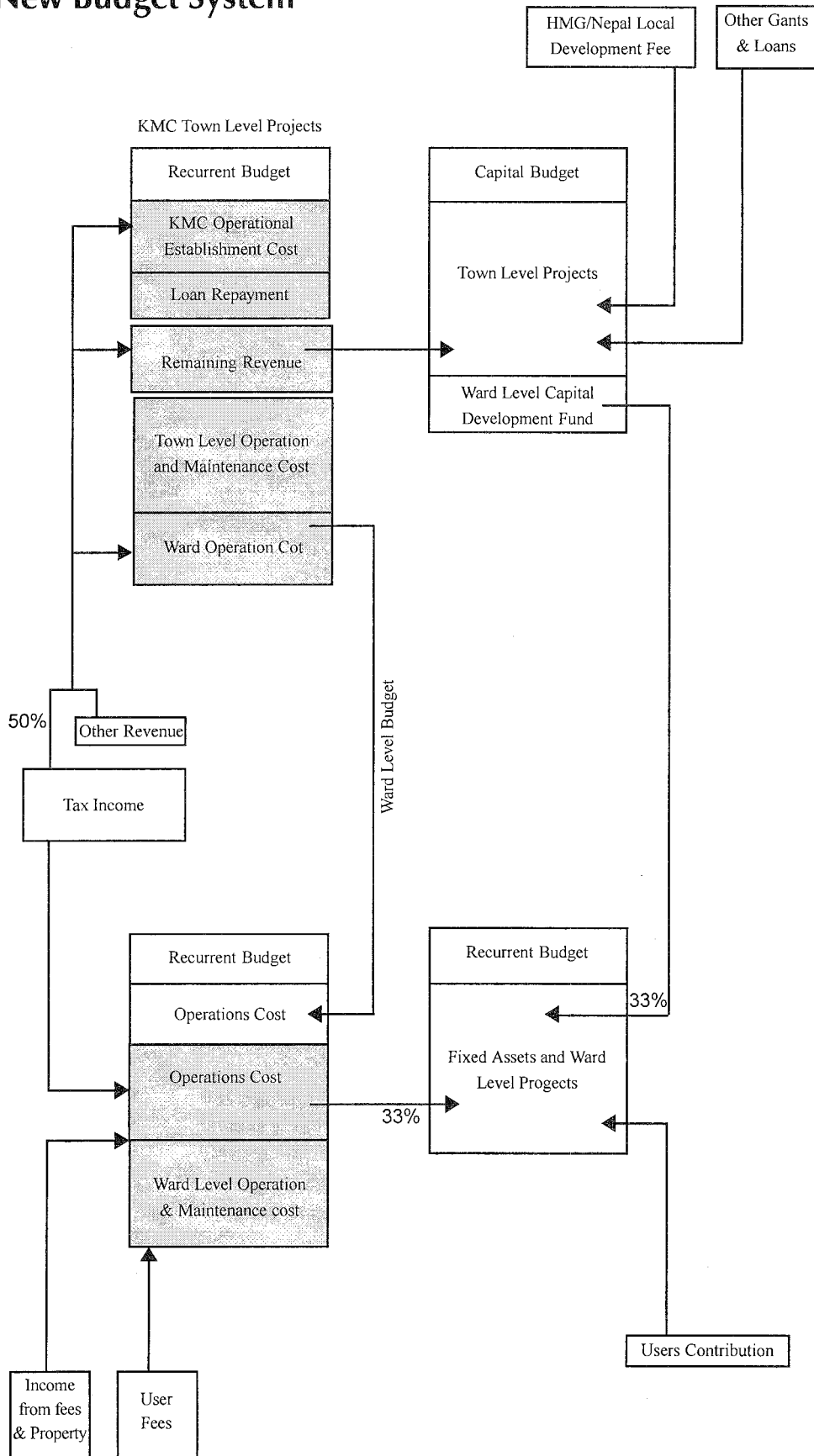
Codes	Account Head	Actual 55/56	Budget 56/57	Actual 56/57	Budget 57/58
86 03 03	Heritage Clubs Trust Fund				32,000
86 03 04	Heritage Site cleanup Program				
86 03 05	Cleaning Equipment 4 site				50,000
86 03 06	Essay & Art Competition				160,000
86 03 07	Motor fare & lunch expenses				200,000
86 03 08	Interaction Program				100,000
86 03 09	Documentation Culture Heritage				50,000
86 03 10	Promotion of Culture & Festival				
86 03 11	Preparation of FM Program				
86 03 12	FM Program Audio Materials				
86 04 00	Information and Communication Dept	9,069,439	5,734,000	-	1,480,000
86 04 01	KMC Home Page	9,069,439	5,734,000		500,000
86 04 02	Repair Maintenance of the Equipments				200,000
86 04 03	Live Programs				30,000
86 04 04	Photo Exhibition 2 nos.				100,000
86 04 05	Meet the Press Programme 3 nos.				150,000
86 04 06	Publication of Mahanagar Bulletin				300,000
86 04 07	Dev. & Preparation of City Profile of Kath				200,000
86 05 00	Public Works Department	-	-	-	68,336,000
86 05 01	A. Ongoing Projects				2,063,000
86 05 02	B. Committed Projects				3,728,000
86 05 03	C. Project Submitted for Approval (but no information received about it's decision yet)				18,445,000
86 05 04	New Projects				44,100,000
86 06 00	The Urban Governance Initiatives	-	-	-	1,876,000
86 06 01	Monitoring of current quality of air, water,				205,000
86 06 02	Development of KMC Website				137,000
86 06 03	Establishment of ECO clubs				274,000
86 06 04	Activities related to Community Mobilizati				410,000
86 06 05	Institutional Strengthening with training a				342,000
86 06 06	Dissemination				303,000
86 06 07	Contingency				205,000
86 07 00	Kath Valley Mapping Programme	-	-	-	134,795,000
86 07 01	Services/Local Technical Assistance				5,250,000
86 07 02	Services/Evaluation				325,000
86 07 03	Services/Studies				4,500,000
86 07 04	Services Training				5,525,000
86 07 05	Supplies/Equipment				5,330,000

ANNEX 9
KMC Expenditures

Codes	Account Head	Actual 55/56	Budget 56/57	Actual 56/57	Budget 57/58
86 07 06	Supplies/Inputs				2,080,000
86 07 07	Supplies/Transportation				13,812,000
86 07 08	Works/Projects				80,925,000
86 07 09	Information/Advertisments				390,000
86 07 10	Information/Public Relations				1,365,000
86 07 11	Information/Publications				325,000
86 07 12	Information/Reports				487,000
86 07 13	Operation/Salaries				8,310,000
86 07 14	Operation/Extra Support				264,000
86 07 15	Operation/Repair & Maintenance				780,000
86 07 16	Operation/Office Expenses				4,217,000
86 07 17	Utilities				120,000
86 07 18	Insurances				790,000
86 07 19	Contingency Fund				
86 08 00	Urban Dev Department				1,200,000
86 08 01	Urban Planning				400,000
86 08 02	Traffic and Transportation Management				200,000
86 08 03	Housing Development				600,000
86 09 00	City Development Strategy				4,900,000
86 09 01	City Development Strategy				4,900,000
86 10 00	ADB TA				20,000,000
86 10 01	ADB TA				20,000,000
86 11 00	Town Development Fund Projects				
86 11 01	Town Development Fund Projects				
86 12 00	Town Development	19,484,798			39,175,000
86 12 01	Town Development (Town Level Projects)	904,969			
86 12 02	Town Development (Ward Level Project)	18,579,829			22,000,000
86 12 03	Special Programs (Ward Level Projects)				17,175,000
Grand Total		284,722,946	875,585,941	325,184,636	1,054,016,000

ANNEX: 10

KMC New Budget System



ANNEX: 11

**Kathmandu Metropolitan City
Summary of Budget for Fiscal Year 2057/58 (2000/01)**

Code no.	Estimated Income & Expenditures	Budget
90 04 00	Tax Income	146,051,000.00
91 00 00	Income From Fees	98,700,000.00
92 00 00	Income From Property	11,676,610.00
93 00 00	Income From Investment	-
94 00 00	Sundry Income	84,013,000.00
95 00 00	Grants & Donations	431,029,390.00
96 00 00	Income From Receipts Contracts	-
97 00 00	Prior Year Income	47,000,000.00
98 00 00	Liabilities Written Back	-
Total Income		818,470,000.00
70 00 00	Salaries & Benefits	201,690,000.00
71 00 00	Operational Expenses	199,591,000.00
80 00 00	O & M of Infra & Services	435,365,000.00
10 00 00	Capital Expenditure	217,370,000.00
Total Expenditures		1,054,016,000.00
BUDGET DEFICIT		(235,546,000.00)
Sources of financing		
50 01 00	Long Term Loan	171,387,000.00
	Other Assistance	59,343,000.00
		230,730,000.00

ANNEX: 11

KMC Annual Budget 2057/058 (2000/01)

Kathmandu Metropolitan City

Statement of Estimated Revenues for Fiscal Year 2057/58 (2000/01)

Codes	Account Head	Actual Revenue 2055/56 (98/99)	Revenue for 56/57 (99/00)		Budgeted for 57/58 (00/01)
			Budgeted	Actual	
90 04 00	TAX INCOME	10,329,501	53,400,000	25,493,068	146,051,000
90 01 00	LAND REVENUE/HOUSE & LAND TAX	3,721,796	25,000,000	4,072,151	65,000,000
90 01 01	Land Revenue	3,721,796	5,000,000	4,072,151	4,000,000
90 01 02	House & Land Tax	-	10,000,000	-	60,000,000
90 01 03	Land Tax	-	-	-	1,000,000
90 01 04	Tax on Sale of House and Land	-	10,000,000	-	-
90 02 00	RENT TAX	-	-	-	2,500,000
90 02 01	Property Rent Tax	-	-	-	2,500,000
90 02 02					
90 04 00	VEHICLE TAX	4,799,229	15,025,000	6,208,126	7,051,000
90 04 01	Bus, Truck, Lorry	614,000	3,000,000	666,500	
90 04 02	Mini Truck	394,150	1,300,000	385,200	
90 04 03	Mini Bus - other (Public)				
90 04 04	Car - other (Public)				
90 04 05	Jeep, Van - other (Public)	620,200	1,300,000	568,400	
90 04 06	Tempo - other (Public)	259,660	500,000	184,770	
90 04 07	Mini Bus - Private				
90 04 08	Car - Private				
90 04 09	Jeep, Van - Private	2,116,580	4,500,000	2,234,380	
90 04 10	Tempo - Private	21,900	100,000	12,150	
90 04 11	Scooter & Motor Cycle	703,844	3,800,000	2,076,661	
90 04 12	Tractor and Power Tiller	61,600	500,000	57,100	
90 04 13	Rickshaw & Cart	7,295	25,000	22,965	
90 05 00	INTEGRATED PROPERTY TAX	-	-	-	2,500,000
90 05 01	Integrated Property Tax	-	-	-	2,500,000
90 06 00	ENTERTAINMENT TAX	-	-	-	4,000,000
90 06 01	Cinema Hall				
90 06 02	Video Hall				
90 06 03	Cultural Exhibition Hall				
90 06 04	Theatre, Music Concert				
90 06 05	Circus, Magic, Acrobatic Show				
90 07 00	COMMERCIAL VIDEO SHOW TAX	-	-	-	-
90 07 01	Cable Operator				
90 07 02	Video				
90 07 03	Projector				
90 08 00	ADVERTISEMENT TAX	363,621	6,000,000	3,797,955	10,000,000
90 08 01	Sign Board	198,709	1,000,000	1,343,412	
90 08 02	Neon Boards	7,600	2,500,000	2,223,973	
90 08 03	Hoarding Boards	157,312	2,500,000	230,570	
90 08 04	Banners & Posters				
90 10 00	BUSINESS PROFESSION TAX	1,444,855	7,375,000	11,414,836	55,000,000
90 10 01	Trading Business	7,000			
90 10 02	Professionals	5,200			
90 10 03	Construction Business	3,200			
90 10 04	Manufacturing Industries Business	174,850			
90 10 05	Energy and Power Generating Business	64,000			
90 10 06	Agro-Forestry Based Business	27,700			
90 10 07	Mining and Minerals Processing Business	59,400			
90 10 08	Tourism Based Business	723,045			
90 10 09	Service Business	380,460			
90 10 10	Property /Estate Leasing Business				
90 10 11	Communication Business				
90 10 12	Financial Service Business				

ANNEX: 11
KMC Annual Budget 2057/058 (2000/01)

Codes	Account Head	Actual Revenue 2055/56 (98/99)	Revenue for 56/57 (99/00)		Budgeted for 57/58 (00/01)
			Budgeted	Actual	
90 10 13	Health Services Business				
90 10 14	Educational and Training Business				
90 10 15	Repair & Maintenance Service Business				
90 10 16	Other Services				
90 10 17	Other Business				
90 10 18	Temporary Haat Bazar & Mobile Shops				
90 10 19	Others				
91 00 00	INCOME FROM FEES	18,984,460	24,210,065	36,221,356	98,700,000
91 01 01	Vehicle Entrance Fee- Thankot	2,976,750	3,500,000	4,212,850	4,000,000
91 01 02	Old Bus Park	112,237	200,000	1,177,835	1,300,000
91 01 08	New Bus Park Fee	4,705,725	5,000,000	6,057,375	5,100,000
91 01 03	Parking Fee	3,301,994	5,000,000	1,960,205	4,500,000
91 01 04	Property Valuation Fee	6,467	10,000	36,069	2,000,000
91 01 05	Building Map Approval Fee	7,320,895	10,000,000	22,218,150	80,000,000
91 01 06	Shop at Public Land (Hyumata)	10,000		411,100	1,500,000
91 01 07	Buspark Terminal, Bhugol Park Toilet	550,392	500,065	147,772	300,000
92 00 00	INCOME FROM PROPERTY	4,031,351	4,304,765	3,662,111	11,676,610
92 01 00	INCOME FROM RENTAL	4,031,351	4,304,765	3,662,111	10,776,610
92 01 01	Income from Rental - Bhugol Park 1st floor	816,018	902,500	1,116,705	763,283
92 01 02	Income from Rental - Bhugol Park Ground Fl	676,875	816,018	632,415	774,165
92 01 03	Income from Rental - Bhugol Park Beneath S	331,152	331,151	331,151	348,966
92 01 04	Income from Rental - Hawker Shed near NEA	329,940	219,960	329,940	390,196
92 01 05	Income from Rental - Old Buspark shops	1,877,366	1,935,136	1,244,700	2,300,000
92 01 06	Income from Rental - Overhead Bridge				2,000,000
92 01 07	Income from Rental - Sub-way				-
92 01 08	Income from Rental - Slaughter House				3,500,000
92 01 09	Income from Rental - Advertisement Spots				500,000
92 01 10	Income from Rental - Equipment				200,000
92 01 11	Income from Rental - Ward property	-	100,000	7,200	-
92 02 00	INCOME FROM FM STUDIO	-	-	-	900,000
92 02 01	Income from Rental - Studio				
92 02 02	Income from Program Sponsorship				
92 02 03	Income from Advertisement				
93 00 00	INCOME FROM INVESTMENT	552,202	500,000	-	-
93 00 01	Interest from Bank Deposit	552,202	500,000		
93 00 01	Interest from Revolving Fund	-			
93 00 02	Interest Income from Govt. Bonds				
93 00 03	Dividend Income from Equity Investment				
93 00 04	Gain on Sale of Investment				
94 00 00	SUNDRY INCOME	7,538,104	26,681,000	14,899,491	84,013,000
94 01 00	MINOR FEES	5,735,200	9,471,000	13,051,976	31,426,000
94 01 01	Application Fee	47,043	100,000	242,675	250,000
94 01 02	Registration & Other fee/charges	1,212,990	2,500,000	4,838,633	5,000,000
94 01 03	Environment & Sanitation Fee	3,512,194	5,000,000	4,924,858	22,240,000
94 01 04	Tender Document Fee	-	500,000	53,770	360,000
94 01 04	Tender Document Fee	626,600			
94 01 05	Map Form Fee	165,875	200,000	2,941,000	3,000,000
94 01 06	Certification Fee		1,020,000	22,026	25,000
94 01 07	Other Fee (Copy)	14,983	1,000	629	1,000
94 01 08	Other Form Fee	155,515	150,000	28,385	50,000
94 01 09	Pet Animal (Dog) Registration				500,000
94 02 00	CHARGES	9,000	15,010,000	4,700	50,105,000
94 02 01	Miscellaneous/Tourism Fee	-	10,000,000		50,000,000
94 02 02	Wastage Disposal Charge	-	5,000,000		
94 02 03	Block Number Plate	9,000	10,000	4,700	5,000
94 02 04	Road Maintenance Charge				100,000
94 03 00	OTHER - SALES	385,630	400,000	298,134	782,000
94 03 01	Auction of Animals	250,474	250,000	161,464	150,000
94 03 02	Auction of Materials				532,000

CITY DIAGNOSTIC REPORT

ANNEX: 11
KMC Annual Budget 2057/058 (2000/01)

Codes	Account Head	Actual Revenue 2055/56 (98/99)	Revenue for 56/57 (99/00)		Budgeted for 57/58 (00/01)
			Budgeted	Actual	
94 03 03	Sale of Scraps				100,000
94 03 04	Sale of Trees				0
94 03 05	Sale of Compost				0
94 03 06	Gain on Sale of Assets				0
94 03 07	Recovery from Bus Terminal Telephone	135,156	150,000	136,670	-
94 04 00	FINE AND PENALTY	1,408,274	1,800,000	1,544,681	1,700,000
94 04 01	Contractor Performance Penalty				
94 04 02	Late Fee Penalty	1,207,055			
94 04 03	Arbitration Fee	465			
94 04 04	Other Penalty		1500000	1500244	1500000
94 04 05	Forfeiture of Deposit Payable	-	100,000		100,000
94 04 06	Miscellaneous/ Insurance claim received	200,754	200,000	44,437	100,000
	OCTROI	166,005,009	-	-	-
	1. Thankot Depot	147,764,306			
	2. Tribhubhan Int'l Airport Depot	16,123,630			
	3. Banepa-Dhulikhel	2,017,073			
	4. Bidur	100,000			
	5. Janakpur Cigarette Factory	-			
	6. Nepal Oil Corporation	-			
	7. Miscellaneous	-			
	TOTAL OWN SOURCE REVENUE	207,440,626	109,095,830	80,276,026	340,440,610
95 00 00	GRANTS AND DONATIONS	34,437,596	351,177,985	229,234,744	431,029,390
95 01 00	GRANTS FROM HMG	33,499,600	206,988,544	221,047,837	250,400,000
95 01 01	HMG - Administration	300,000	400,000	4,620,000	400,000
95 02 02	Local Dev. Fee (Tax)	33,199,600	206,588,544	216,427,837	250,000,000
95 03 00	GRANT-IN-AID (FOREIGN)	937,996	143,101,890	6,057,700	170,529,390
95 03 01	ADB Grant	-	20,000,000		20,000,000
95 03 02	EU Grant	-	100,000,000		130,000,000
95 03 03	Grant from other international agencies	937,996	19,100,000	3,757,200	8,750,000
95 03 04	Grant from TUGI		3,500,000	2,082,000	2,746,000
95 03 05	Grant from ILO				3,850,000
95 03 06	Grant from World Bank (CDS)				4,900,000
95 03 07	Grant from RUDO/USAID		501,890	218,500	283,390
95 04 00	GRANT-IN-AID (NATIONAL)	-	1,087,551	2,129,207	10,100,000
95 04 01	Grant from other organizations/municipalities		1,087,551	2,099,207	
95 04 02	Grant from national organizations			30,000	100,000
95 04 03	User's Group/People's participation	-			10,000,000
96 00 00	INCOME FROM RECEIPT CONTRACTS	-	-	-	-
96 00 01	Receipts from Contract 1				
96 00 02	Receipts from Contract 2				
96 00 03	Receipts from Contract 3				
97 00 00	PRIOR YEAR INCOME	1,747,915	2,000,000	5,810,363	47,000,000
97 01 00	Loan/Advance Refund	1,747,915	2,000,000	5,810,363	47,000,000
98 00 00	LIABILITIES WRITTEN BACK	-	-	-	-
98 01 00	Liabilities Written Back				
60 00 00	LOANS	32,149,173	247,813,000	14,700,000	-
60 01 00	ADB Loan	26,949,173	17,813,000		
60 02 00	Loan from Local Banks	-	230,000,000	10,000,000	
60 02 00	Town Development Fund	-			
60 03 00	Loan from Deposit Accounts	5,200,000		4,700,000	
35 00 00	LAST YEAR'S BALANCE	12,943,758	3,996,122	4,007,185	-
35 00 01	KMC Fund Balance	-	3,996,122	3,963,902	
	1. NRB A/C # 23	7,233,445			
	2. NRB A/C # 81	437,328			
	3. NRB A/C # 230	368,133			

ANNEX: 11
KMC Annual Budget 2057/058 (2000/01)

Codes	Account Head	Actual Revenue 2055/56 (98/99)	Revenue for 56/57 (99/00)		Budgeted for 57/58 (00/01)	
			Budgeted	Actual		
36 01 01	4. Himalayan Bank (Octroi)	4,861,519				
	5. Himalayan Bank (Parking Fee)	43,334				
	6. Nepal Bangladesh Bank 2001 C	-				
	7. Nepal Bangladesh Bank 1991 C	-				
	8. Rastriya Baniya Bank 3782					
	9. UNICEF Grant A/C Balance					
	10. Grant A/C Balance	-				
	Cash Balance			43,283		
	GRAND TOTAL		288,719,068	714,082,937	334,028,318	818,470,000

ANNEX: 11

KMC Annual Budget 2057/058 (2000/01)

Kathmandu Metropolitan City

Statement of Estimated Expenditures for Fiscal Year 2057/58 (2000/01)

Codes	Account Head	Actual Expenditures 2055/56 (98/99)	Expenditures for 56/57 (99/00)		Budgeted for 57/58 (00/01)
			Budgeted	Actual	
10 00 00	Land	-	4,000,000	265,625	37,000,000
10 01 00	Land Freehold	-	4,000,000	265,625	37,000,000
10 02 00	Land Leasehold				
11 00 00	Building	-	28,500,000	-	80,850,000
11 01 00	Building on Freehold Land		23,500,000		80,850,000
11 02 00	Building on Leasehold Land				
11 03 00	Building on custodian lands		5,000,000		
12 00 00	Infrastructure and Civil Works				26,900,000
13 00 00	Office Equipment- Computers				2,040,000
14 00 00	Office Equipment- Others	489,500			5,995,000
15 00 00	Furniture and Fittings	506,988	1,525,000	169,029	800,000
16 00 00	Vehicles	173,727	10,000,000	296,884	10,954,000
17 00 00	Plant and Equipment		11,900,000	2,112,219	32,829,000
19 00 00	Capital Work-in-progress	-	20,400,000	-	20,002,000
19 11 00	Building		12,400,000		10,388,000
19 12 00	Infrastructure and Civil Works		4,000,000		-
19 12 01	Roads		1,000,000	-	3,214,000
19 12 02	Traffic Management				
19 12 03	Street Lighting				
19 12 04	Bus Parks				
19 12 05	Bridges/ culverts				400,000
19 12 06	Drainage and sewerage				3,000,000
19 12 07	Water Supply		3,000,000		2,000,000
19 12 08	Public Toilet				1,000,000
19 18 00	Others MIIP, 4 P	39,549,173	38,520,000	21,010,000	-
19 18 01	MIIP	39,549,173	27,520,000	21,010,000	
19 18 02	4 P Program		11,000,000		
20 00 00	Long Term Investment	-	-	-	-
20 03 00	Equity Investment				
70 01 00	Salaries & Wages	72,406,145	85,509,500	74,610,614	125,059,000
70 01 01	Elected Members	1,129,800	1,224,000	1,320,681	330,000
70 01 02	Permanent Staff	71,276,345		49,272,745	86,459,000
70 01 03	Tenoirart Staff			11,099,429	20,682,000
70 01 04	Contract Staff			2,336,194	1,633,000
70 01 05	Monthly Wage Staff			10,581,565	9,062,000
70 01 06	Daily Wage Staff				5,886,000
70 01 07	Others		84,285,500		1,007,000
70 02 00	Allowances and Benefits-Elected Men	3,198,685	11,216,000	9,876,147	19,790,000
70 02 01	Transportation Allowance	2,386,300	10,216,000	8,734,600	17,280,000
70 02 02	Telephone Allowance			222,000	309,000
70 02 03	Medical Expenses	812,385	1,000,000	919,547	1,201,000
70 02 04	Dress Expenses/Allowances				1,000,000
70 03 00	Uniform Expenses & Allowances	4,862,344	8,000,000	3,798,412	5,005,000
70 03 01	Uniform Expenses & Allowances	4,862,344	8,000,000	3,798,412	5,005,000
70 04 00	Employer's Contribution to Provident	-	-	-	9,142,000
70 04 01	Provident Fund Contribution				9,142,000
70 05 00	Head and Acting Allowance	-	-	-	14,000
70 05 01	Department Head Allowances				14,000
70 05 02	Kayam Mukayam (Acting) Allowance				
70 06 00	Overtime	-	-	4,392,961	16,995,000
70 06 01	Staff Over Time			4,392,961	16,995,000

ANNEX: 11

KMC Annual Budget 2057/058 (2000/01)

Codes	Account Head	Actual Expenditures 2055/56 (98/99)	Expenditures for 56/57 (99/00)		Budgeted for 57/58 (00/01)
			Budgeted	Actual	
70 07 00	Medical Allowances	138,884	1,000,000	161,748	1,000,000
70 07 01	Staff Medicdal Allownce	138,884	1,000,000	161,748	1,000,000
70 08 00	Dearness Allowances	-	-	-	-
70 08 01	Permanent Staff				
70 08 02	Temporary Staff				
70 08 03	Contract Staff				
70 08 04	Monthly Wage Staff				
70 08 05	Daily Wage Staff				
70 09 00	Diet Allowances	1,761,052	2,330,000	1,681,365	1,545,000
70 09 01	Diet for Security Staff	1,761,052	2,330,000	1,681,365	1,545,000
70 10 00	Tiffin Allowances	-	-	14,781,338	10,726,000
70 10 01	Permanent Staff			14,781,338	6,884,000
70 10 02	Temporary Staff				1,622,000
70 10 03	Contract Staff				267,000
70 10 04	Monthly Wage Staff				1,213,000
70 10 05	Daily Wage Staff				740,000
70 11 00	Night Shift Allowances	-	-	-	-
70 11 01	Night Overtime				
70 12 00	Other Allowances	7,060,784	20,761,000	-	914,000
70 12 01	Other Allowances	7,060,784	20,761,000		914,000
70 13 00	Staff Insurance	696,051	1,000,000	317,107	1,000,000
70 13 01	Group Insurance	696,051	1,000,000	317,107	1,000,000
70 14 00	Leave Encashment	-	-	-	-
70 14 01	Permanent Staff				
70 14 02	Temporary Staff				
70 14 03	Contract Staff				
70 15 00	Retirement related Expenses	3,795,168	4,500,000	4,442,698	10,500,000
70 15 01	Gratuity		2,250,000	2,248,634	5,000,000
70 15 02	Pension	3,795,168	1,125,000	2,194,064	2,500,000
70 15 03	Accumulated Leave Encashment		675,000		1,500,000
70 15 04	Accumulated Medical Benefits		450,000		1,500,000
71 01 00	Utilities	1,741,426	2,000,000	1,496,396	4,741,000
71 01 01	Electricity	1,741,426	1,200,000	760,741	3,059,000
71 01 02	Water		800,000	735,655	1,682,000
71 02 00	Goods	4,586,730	8,580,000	6,777,899	10,227,000
71 02 01	Printings & Stationery	2,095,074	3,920,000	2,695,907	3,358,000
71 02 02	Publication of Journal				1,207,000
71 02 03	Newspaper, Periodicals and Boods purch	808,869	1,220,000	824,791	1,086,000
71 02 04	Small Assets				1,000,000
71 02 05	Office Supplies	1,635,885	3,340,000	3,185,633	3,000,000
71 02 06	Fuel-Heating, Cooking etc.	46,902	100,000	71,568	100,000
71 02 07	Medicine				476,000
71 03 00	Training and Services	1,491,230	12,569,000	4,663,609	20,640,000
71 03 01	HRD (Training Expenses)	241,516	3,300,000	1,140,928	1,500,000
71 03 02	Study Tours				500,000
71 03 03	Research and Surveys	277,075	2,925,000	34,427	2,500,000
71 03 04	Meeting Fees	212,550	2,344,000	878,000	4,030,000
71 03 05	Meeting Expenses	760,089		1,408,254	1,625,000
71 03 06	Audit Fees				200,000
71 03 07	Audit Expenses				85,000
71 03 08	Consultancy Fees				1,200,000
71 03 09	Legal Fees				150,000
71 03 10	Other Professional Fee				100,000
71 03 11	Memberships, Registration and Renewals				250,000
71 03 12	Rewards and Prizes				200,000
71 03 13	Staff Welfare		4,000,000	1,202,000	8,000,000
71 03 14	Laundry expenses				300,000

ANNEX: 11

KMC Annual Budget 2057/058 (2000/01)

Codes	Account Head	Actual Expenditures 2055/56 (98/99)	Expenditures for 56/57 (99/00)		Budgeted for 57/58 (00/01)
			Budgeted	Actual	
71 04 00	Notification & Publicity	1,970,325	9,757,000	2,442,843	3,850,000
71 04 01	Administrative Notification	1,970,325	2,500,000	2,196,277	2,000,000
71 04 02	Publicity		7,257,000	246,566	1,000,000
71 04 03	Others				850,000
71 05 00	Travel and per diem	3,394,158	5,000,000	4,405,350	3,500,000
71 05 01	Travel Expenses	3,394,158	5,000,000	2,273,614	1,500,000
71 05 02	Daily Allowances			2,131,736	1,500,000
71 05 03	Other Expenses				500,000
71 06 00	Local Transportation	63,756	300,000	150,761	100,000
71 06 01	Local Transportation	63,756	300,000		50,000
71 06 02	Transport & Porter			150,761	50,000
71 07 00	Operation of Vehicles	14,938,253	15,651,000	21,844,616	6,660,000
71 07 01	Annual Registration Fees				30,000
71 07 02	Insurance				100,000
71 07 03	Repairs and Maintenance	854,780	1,500,000	1,249,591	800,000
71 07 04	Fuel	14,083,473	14,151,000	20,595,025	3,500,000
71 07 05	Oil & Lubricants				1,000,000
71 07 06	Repairs and Maintenance - staff				400,000
71 07 07	Fuel - staff				575,000
71 07 08	Oil & Lubricants - staff				255,000
71 08 00	Communications	1,568,277	4,525,000	2,563,032	3,623,000
71 08 01	Postage & Couriers	33,350	50,000	30,479	108,000
71 08 02	Telephone & Fax	1,534,927	4,475,000	2,532,553	3,350,000
71 08 03	E-mail/Internet				115,000
71 08 04	Others				50,000
71 09 00	Repairs and Maintenance	378,232	2,800,000	2,351,360	2,475,000
71 09 01	Own Buildings				700,000
71 09 02	Rented Buildings		2,500,000		300,000
71 09 03	Office Equipment - Computers				550,000
71 09 04	Office Equipment - others	242,158	300,000	219,340	500,000
71 09 05	Furniture and Fixtures			217,157	400,000
71 09 06	Others	136,074		1,914,863	25,000
71 10 00	Rents, Royalties, Rates and Taxes	4,973,124	6,500,000	5,058,512	5,216,000
71 10 01	Rent - Buildings	4,973,124	6,500,000	5,058,512	3,270,000
71 10 02	Rent - Equipment				1,840,000
71 10 03	Rent - Others				100,000
71 10 04	Royalties				
71 10 05	Rates and Taxes				
71 10 06	License				6,000
71 11 00	Financial Expenses	210,616	32,595,586	11,190,376	30,263,000
71 11 01	Bank Charges	210,616	250,000	392,397	263,000
71 11 02	Interest on Loans		32,345,586	10,797,979	30,000,000
71 11 03	Commitment Fees				
71 12 00	Operation of Plant & Equipment	-	2,200,000	-	32,275,000
71 12 01	Annual Registration Fees				150,000
71 12 02	Insurance		500,000		900,000
71 12 03	Repairs and Maintenance		1,700,000		8,525,000
71 12 04	Fuel				20,000,000
71 12 05	Oil & Lubricants				2,700,000
71 13 00	Revenue Mobilisation Additional Expe	2,926,630	1,200,000	672,287	1,200,000
71 13 01	Business Tax Collection Expenses		1,200,000	672,287	1,200,000
71 13 02	Thankot Octroi Collection Expenses	2,926,630	-	-	-
72 00 00	Other Expenses	2,124,805	11,573,000	7,197,422	12,800,000
72 01 01	Donations - Cultural, Heritage Trust	573,700	4,125,000	2,623,530	4,250,000
72 02 02	Donation Others	1,551,105	5,125,000	2,687,620	4,250,000
72 03 03	Seminars and Workshops Expenses		2,323,000	1,886,272	3,000,000
72 04 04	Participation Fees & Expenses				200,000

ANNEX: 11

KMC Annual Budget 2057/058 (2000/01)

Codes	Account Head	Actual Expenditures 2055/56 (98/99)	Expenditures for 56/57 (99/00)		Budgeted for 57/58 (00/01)
			Budgeted	Actual	
72 05 05	Fair, Exhibitions				300,000
72 06 06	Celebration				800,000
72 07 00	Insurance	-	-	-	10,000
72 07 01	Building				
72 07 02	Infrastructure and Civil Works				
72 07 03	Office Equipment - Computers				10,000
72 07 04	Office Equipment - Others				
72 07 05	Furniture and Fittings				
72 07 07	Other Asset Insurance				
72 08 00	Entertainment/Guest Relation	2,410,101	5,250,000	3,449,369	5,900,000
72 08 01	Civic Reception	2,410,101	5,250,000	3,449,369	500,000
72 08 02	Sister City Relation				500,000
72 08 03	Gifts				300,000
72 08 04	Refreshment				4,500,000
72 08 05	Other				100,000
72 09 00	Puja Expenses	161,300	270,000	250,000	300,000
72 09 01	Dashain/Tihar Puja expenses	161,300	270,000	250,000	300,000
72 10 00	Other Miscellaneous Expenses	-	2,200,000	130,698	-
72 10 01	Other Miscellaneous Expenses	-	2,200,000	130,698	
73 00 00	Other Charges	-	-	-	10,000
73 01 01	Provision for inventory Losses				10,000
73 01 02	Provision for Doubtful Debts				
73 01 03	Loss on Sale of Assets				
73 01 04	Loss on Sale of Investments				
74 00 00	Depreciation	-	-	-	9,006,000
74 01 00	Lease - hold Land				
74 02 00	Building				
74 03 00	Infrastructure and Civil Works				
74 04 00	Office Equipment - Computers				
74 05 00	Office Equipment - Others				
74 06 00	Furniture and Fittings				
74 07 00	Vehicles				9,006,000
74 08 00	Plant and Equipment				
75 00 00	Refund of Revenue	40,096,967	10,995,305	4,380,329	9,428,000
75 01 00	Refund of Revenue - For the Year	40,066,603	-	-	1,400,000
75 01 01	Land Revenue to DDC	-			1,200,000
75 01 02	Octroi to Other Municipalities	40,066,603			200,000
75 02 00	Refund of Revenue - Prior Years	30,364	10,995,305	4,380,329	8,028,000
75 02 01	Land Revenue to DDC		2,245,305		3,500,000
75 02 02	Octroi to Other Municipalities		8,750,000	4,380,329	4,328,000
75 02 03	Other Income	30,364			200,000
76 00 00	Prior Years Expenditure	590,935	30,000,000	27,679,899	37,367,000
76 00 01	Infrastructure and Civil Works - Centre				5,717,000
76 00 02	Infrastructure and Civil Works - Wards		30,000,000	27,679,899	25,000,000
76 00 03	for services				3,150,000
76 00 04	for others	590,935			3,500,000
77 00 00	Old Advances Cleared	-	-	-	-
77 01 00	Expenditure from Old Advances				
77 02 00	Old Advance cleared by Statement of Exp.				
80 00 00	Infrastructure and Civil Works	1,866,325	371,535,550	33,112,792	74,050,000
80 01 00	Roads/foot path				1,750,000
80 02 00	Traffic management		5,400,000		
80 03 00	Street Lighting				2,000,000
80 04 00	Bus Parks	1,287,999	5,000,000	101,063	
80 05 00	Pavements				1,000,000
80 06 00	Bridges/culverts				800,000
80 07 00	Others	578,326	361,135,550	33,011,729	68,500,000

ANNEX: 11

KMC Annual Budget 2057/058 (2000/01)

Codes	Account Head	Actual Expenditures 2055/56 (98/99)	Expenditures for 56/57 (99/00)		Budgeted for 57/58 (00/01)
			Budgeted	Actual	
81 00 00	Environmental Services	31,554,761	38,000,000	35,071,866	29,670,000
81 01 00	Drainage and Sewerage				
81 02 00	River Control and Flood Protection				3,000,000
81 03 00	Water Supply				
81 04 00	Parks	-	3,500,000		4,000,000
81 05 00	Public Toilet				800,000
81 06 00	Landfill/transfer station management.	6,500,000	30,000,000	35,030,166	6,400,000
81 07 00	Service subsidy expenses		1,500,000		1,100,000
81 08 00	Area/Street Cleaning Expenses				10,870,000
81 09 00	Wastage Collection Expenses	25,054,761	3,000,000	41,700	3,500,000
81 10 00	Community Mobilisation	-			
82 00 00	Area Development	-	2,000,000	-	-
82 01 01	Parking Areas		2,000,000		
83 00 00	Social Services	-	16,513,000	2,816,738	47,082,000
83 01 00	Restoration of Temples				14,750,000
83 02 00	Restoration of Others				5,707,000
83 03 00	Crematorium				10,000,000
83 04 00	Schools		1,000,000		
83 05 00	Health Centers				500,000
83 06 00	Clinics		6,518,000	1,668,112	-
83 07 00	Hospitals		4,000,000		10,000,000
83 08 00	Sports		2,750,000	988,646	4,250,000
83 09 00	Scholarship		875,000	31,980	1,375,000
83 10 00	Natural Calamity Relief		1,370,000	128,000	500,000
84 00 00	Trade and Industry	-	100,000	-	-
84 01 00	Markets				
84 02 00	Industrial Development				
84 03 00	Shops				
84 04 00	Others		100,000		
85 00 00	Public Health	-	351,000	-	867,000
85 01 01	Burial Services				
85 01 02	Cows control Expenses		351,000		367,000
85 01 03	Dogs Control Expenses				500,000
86 00 00	Departments	13,551,696	33,959,000	9,562,335	82,950,000
86 01 00	Other services of Social Welfare Dept	2,192,979	14,700,000	6,906,624	7,625,000
	Community Development		14,700,000	6,906,624	
86 01 01	Capacity Building Training				200,000
	New Projects	2,192,979			
86 01 02	NGO Resource Data Preparation				
86 01 03	Ward Level Project for Women				1,750,000
86 01 04	International Labor Organization (ILO)				3,850,000
86 01 05	Situational Analysis of Squatters Area				
86 01 06	Data Collection of Elderly Citizens & Illiterate Women				
86 01 07	Implementation of adult literacy Classes				
86 01 08	Skill Development Training				
86 01 09	Saving & Credit Training				
	Disaster Management				
86 01 10	Community based disaster mgmt. Training				150,000
86 01 11	Vulnerability Assesment Survey				
86 01 12	Public Awareness Campaign				25,000
86 01 13	GIS Mapping				
86 01 14	Publicity				
86 01 15	Publication of Education materials				50,000
86 01 16	Observation of Earthquake Safety Day				50,000
	New Projects				
86 01 17	Awareness on Disaster Prevention in Disaster Prone areas				350,000
86 01 18	Application of building code in coordination with KMC & UDD				200,000

ANNEX: 11

KMC Annual Budget 2057/058 (2000/01)

Codes	Account Head	Actual Expenditures	Expenditures for 56/57 (99/00)		Budgeted for 57/58
		2055/56 (98/99)	Budgeted	Actual	(00/01)
86 01 19	Establish Disaster Relief Fund				
86 01 20	Formation of Disaster Rescue Team in Ward Level				250,000
86 01 21	School Level Awareness Program on Disaster Preparedness				
86 01 22	Formation of First Aid Volunteers Group for Emergency				
86 01 23	Establish of Student Disaster Preparedness Club				
Sports & Education					
86 01 24	Inter-School Sports Competition				500,000
86 01 25	Inter-Ward Sports Competition				
86 01 26	Formation of Ward Level Sports Deve. Committee				
86 01 27	Workshop/Seminar on Sports Deve. within KMC				
86 01 28	Campaign to enforce the Children of 6-10 yrs. to enroll in the School				
86 01 29	Establish KMC scholarship to the underprivileged group children				
86 01 30	Establish Children library in different Wards				
86 01 31	Organize School level Quiz Contest				250,000
86 02 00	Other Services of Public Health Dept.	-	-	-	2,077,000
86 02 01	National Vitamin "A" Programme				250,000
86 02 02	National Immunization day Prg.				277,000
86 02 03	Epidemic Control Programme				400,000
86 02 04	Establishment of New UHC				150,000
86 02 05	Food Adultration Control Prg.				500,000
86 02 06	Medical Camp				100,000
86 02 07	Awareness on Health Prevention				100,000
86 02 08	Nutrition Programme				
86 02 09	Rebies & Stray Dog Control Prg.				
86 02 10	Community Health Prg. At Ward				300,000
86 02 11	Urban Health Clinic Ward #				
86 03 00	Other services of Culture, Heritage an	2,289,278	13,525,000	2,655,711	2,232,000
86 03 01	Collection Booths	2,289,278	13,525,000	2,655,711	640,000
86 03 02	Tourist Rest Room				1,000,000
86 03 03	Heritage Clubs Trust Fund				32,000
86 03 04	Heritage Site cleanup Program				
86 03 05	Cleaning Equipment 4 site				
86 03 06	Eassy & Art Competition				50,000
86 03 07	Motor fare & lunch expenses				
86 03 08	Interaction Program				160,000
86 03 09	Documentation Culture Heritage				200,000
86 03 10	Promotion of Culture & Festival				
86 03 11	Preparation of FM Program				100,000
86 03 12	FM Program Audio Materials				50,000
86 04 00	Information and Communication Dept.	9,069,439	5,734,000	-	1,480,000
86 04 01	KMC Home Page	9,069,439	5,734,000		500,000
86 04 02	Repair Maintenance of the Equipments				200,000
86 04 03	Live Programs				30,000
86 04 04	Photo Exhibition 2 nos.				100,000
86 04 05	Meet the Press Programme 3 nos.				150,000
86 04 06	Publication of Mahanagar Bulletin				300,000
86 04 07	Dev. & Preparation of City Profile of Kath.				200,000
86 05 00	Public Works Department	-	-	-	68,336,000
86 05 01	A. Ongoing Projects				2,063,000
86 05 02	B. Committed Projects				3,728,000
86 05 03	C. Project Submitted for Approval (but no information received about it's decision yet)				18,445,000
86 05 04	New Projects				44,100,000
86 06 00	The Urban Governance Initiatives	-	-	-	1,876,000
86 06 01	Monitoring of current quality of air, water, soil, etc				205,000
86 06 02	Development of KMC Website				137,000
86 06 03	Establishment of ECO clubs				274,000

ANNEX: 11
KMC Annual Budget 2057/058 (2000/01)

Codes	Account Head	Actual Expenditures 2055/56 (98/99)	Expenditures for 56/57 (99/00)		Budgeted for 57/58 (00/01)
			Budgeted	Actual	
86 06 04	Activities related to Community Mobilization				410,000
86 06 05	Institutional Strengthening with training and follow up				342,000
86 06 06	Dissemination				303,000
86 06 07	Contingency				205,000
86 07 00	Kath Vallery Mapping Programme	-	-	-	134,795,000
86 07 01	Services/Local Technical Assistance				5,250,000
86 07 02	Services/Evaluation				325,000
86 07 03	Services/Studies				4,500,000
86 07 04	Services Training				5,525,000
86 07 05	Supplies/Equipment				5,330,000
86 07 06	Supplies/Inputs				2,080,000
86 07 07	Supplies/Transportation				13,812,000
86 07 08	Works/Projects				80,925,000
86 07 09	Information/Advertisements				390,000
86 07 10	Information/Public Relations				1,365,000
86 07 11	Information/Publications				325,000
86 07 12	Information/Reports				487,000
86 07 13	Operation/Salaries				8,310,000
86 07 14	Operation/Extra Support				264,000
86 07 15	Operation/Repair & Maintenance				780,000
86 07 16	Operation/Office Expenses				4,217,000
86 07 17	Utilities				120,000
86 07 18	Insurances				790,000
86 07 19	Contingency Fund				-
86 08 00	Urban Dev Department	-	-	-	1,200,000
86 08 01	Urban Planning				400,000
86 08 02	Traffic and Transportation Management	-			200,000
86 08 03	Housing Development				600,000
86 09 00	City Development Strategy	-	-	-	4,900,000
86 09 01	City Development Strategy				4,900,000
86 10 00	ADB TA	-	-	-	20,000,000
86 10 01	ADB TA				20,000,000
86 11 00	Town Development Fund Projects	-	-	-	-
86 11 01	Town Development Fund Projects				
86 12 00	Town Development	19,484,798	-	-	39,175,000
86 12 01	Town Development (Town Level Projects)	904,969			
86 12 02	Town Development (Ward Level Projects)	18,579,829			22,000,000
86 12 03	Special Programs (Ward Level Projects)				17,175,000
Grand Total		284,722,946	875,585,941	325,184,636	1,054,016,000

Annex 12

BUDGET PREPARATION PROCEDURE : SHOWING ASSISTANCE FROM ADB AND WORLD BANK

Task	MUNICIPAL FINANCE											
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sravan	Responsibility For Task	Process Participants	Approval
Revenue												
1 Analyses of previous revenues and expenditures										Revenue dept	All depts	C.E.O
2 Projection of own source revenues										Revenue dept	Wards	C.E.O
3 Projection of grants, donations and loans										Revenue dept	HMG, donors, TDF and others	C.E.O
4 Determine ward and town level budgets										Revenue and Finance depts	All depts and wards	Board
Expenditure												
Town Level												
1 Discuss and agree development vision for KMC										Urban Dev Dept	KMC staff Elected Reps HMG, NGOs CBOs and the people	Council
2 Determine operational goals in line with vision (Preparation of a simple urban development plan)										Urban Dev Dept	KMC staff Elected Reps HMG, NGOs CBOs and the people	Board
3 Identification and prioritisation of town level projects										Urban Dev Dept	KMC Depts	Board
Ward Level												
1 Consultations at ward level										Ward offices with support from Urban Dev Dept	Kmc Depts NGOs, CBOs ward residents	C.E.O.
2 Identification and prioritisation of ward level projects										Ward offices with support from Urban Dev Dept	Kmc Depts NGOs, CBOs ward residents	C.E.O.
Consolidated Revenue and Expenditure												
1 Prepare 5 year multi-sector investment programme										Finance & Urban Dev Depts	KMC Depts Ward Offices	Board
2 Identify priority projects for 1st year (annual dev budget)										Finance & Urban Dev Depts	KMC Depts Ward Offices	Board and Council

Assistance

ADB TA 3185 NEP

World Bank CDS

Both

ANNEX 14

Kathmandu Metropolitan City
Information and Communication Strategy*Goal: Efficiency & Empowerment through Information*

OBJECTIVE	STRATEGY	EXPECTED OUTPUTS
Effective and Efficient Information Dissemination. Raise public Awareness	<ul style="list-style-type: none"> <input type="checkbox"/> Publication of Newsletter and Magazine in Nepal/ English/Nepal Bhasa <input type="checkbox"/> Metro FM <input type="checkbox"/> Audio-Visual Program Production 	<ul style="list-style-type: none"> <input type="checkbox"/> Timely accessibility of up-to date Information KMC's Activities in Local development. <input type="checkbox"/> Greater peoples participation in local development. <input type="checkbox"/> Epidemic and natural disaster preparedness
Improve Department Efficiency through Systematic Management of Information	<ul style="list-style-type: none"> <input type="checkbox"/> Introducing Management Information System <input type="checkbox"/> Introducing Geographic Information System 	<ul style="list-style-type: none"> <input type="checkbox"/> Up-to-date information required for planners, managers, decision-makers will be available at any time. <input type="checkbox"/> Systematic flow of authentic Information <input type="checkbox"/> Maximum utilization of available Resources. <input type="checkbox"/> Potential for working with the Integrated Information System <input type="checkbox"/> Efficient and effective planning and management of municipal's properties, services and other resources.
Motivate young Journalists for Reporting on Urban issues	<ul style="list-style-type: none"> <input type="checkbox"/> Urban Reporting Training <input type="checkbox"/> Creative writing competition on Urban issues <input type="checkbox"/> Fellowship program on Urban issues 	<ul style="list-style-type: none"> <input type="checkbox"/> Media support to KMC's activities <input type="checkbox"/> Sound feed-back mechanism for planning <input type="checkbox"/> Career development for young Journalists
Provide information on regular activities of KMC to media	<ul style="list-style-type: none"> <input type="checkbox"/> Regular press conference <input type="checkbox"/> Field Visits 	<ul style="list-style-type: none"> <input type="checkbox"/> Creates an Environment for Interaction between KMC's authorities and media people <input type="checkbox"/> Helps to propagate information on KMC's activities through existing nodes. <input type="checkbox"/> Prevents miss-information. <input type="checkbox"/> First-hand experience
Access to KMC information	<ul style="list-style-type: none"> <input type="checkbox"/> Introducing Intranet System <input type="checkbox"/> Conduction Surveys and Researches 	<ul style="list-style-type: none"> <input type="checkbox"/> Scholars and Researchers will have easy access to Information <input type="checkbox"/> Partner Agencies will be provide dial-up connecti-vity to access the the information <input type="checkbox"/> Ready information on tourist destinations through internet connectivity.
Develop an Inter municipalities information System	<ul style="list-style-type: none"> <input type="checkbox"/> Implementing Internet and Intranet System 	<ul style="list-style-type: none"> <input type="checkbox"/> Exchange information between national and international municipalities <input type="checkbox"/> Publicity of investment opoportunities in municipalities <input type="checkbox"/> Sharing of ideas and innovations

ANNEX 15

Targets For Improved Financial Management

TARGET	WHO WILL DO IT ?	WHEN WILL IT BE DONE ?
Corporate Account is running:-		
<i>A : Balance sheet of KMC</i>		
a) Fixed asset register is up-to-date	Fixed Assets Committee, Depts.	End of May
b) Inventory of CWIP is up-to-date	PWD, SWM, Wards	1st week of March
c) Statement of bond investment and other deposits is finalized	Finance Dept.	End of Feb
d) Statement of inventory of different stores finalized	All Dept Finance Dept.,	End of May
e) Advances settled and actual advances determined	All other Dept, Mayor,	End of May
f) Statement of deposit made finalized	Secretary	
g) Statements of prepayments finalized	Finance Dept.	End of Feb
h) List of receivables finalized	Finance & other Depts.	End of May
i) Bank balances reconciled and confirmed	Finance & other Depts.	
j) Employees related liabilities confirmed	Finance & other	1st week of March
k) Statement of borrowings and loans and interest payable finalized	Depts., wards	End of May
l) Deposit refundable and retention money refundable finalized	Admin Dept.	End of Apr
m) List of payables to contractors, suppliers, various institutions, govt. offices etc., finalized	Fin Dept. Fin Dept., KVMP	End of May
	Finance Dept., PWD, UDD & other Depts	2nd week of March
	Finance & other Depts.	1st week of March
		End of May
<i>B : Income and Expenditure Statement</i>		
a) Billing of IPT and other taxes started	(to be discussed)	To be determined
b) Depreciation policy finalized and monthly depreciation calculated	Fixed assets committee	End of May
c) Monthly Stores consumption report prepared	Concerned stores	End of May
d) Board member honorarium and employees remuneration is booked with in the concerned month	All Depts, wards, Secretary, Mayor	End of May
e) New advances are timely settled	All Depts heads, wards,	
f) All other expenditure are booked with in the concerned month	Secretary, Mayor	End of May
g) Statement and returns are submitted by the departments and wards within the concerned month	All Depts, wards, Secretary, Mayor	End of May
		End of May
Budget system is Operationalised		
a) Obtain guidance and prior estimation of resources and means from own revenue, HMG or other sources	Finance, Revenue & Other Depts., CPC, Secretary, Mayor	Mid of April
b) Provide guidance on selection of projects and plans to ward committees	Finance, Revenue	
c) Ward committee submit their projects to KMC with classification and priority	Depts., CPC, Secretary	End of Feb
d) Budget is submitted to municipality for approval within end of Ashad	Ward committees	
e) Budget is submitted to municipal council for approval with in month of Shrawan	Secretary	
f) At completion of each month budgeted income and expenditure compared with actual and variance analysed	Mayor, Secretary	End of June
	Finance and Rev. Dept	July-Municipal council meeting
	House numbering unit of Urban Dev. Dept.	
	House numbering unit	January 2000
	House numbering unit	January 2000
	Revenue Department	January March 2000
	Tax Assessment Com	March to June 2000
	Revenue Department	Ongoing
	Revenue Department	June 2000
	House numbering unit and Ward Offices	July 2000
	Revenue Department and Ward Offices	Task ongoing
		January 2000
		June 2000
<i>Collection of local taxes in 3 pilot wards</i>		
a) House numbering training		
b) Establish unit in Urban Development Department		
c) Collect field data		
d) Enter data into computerised database		
e) Prepare manuals for above		
f) Determine rates for unified property tax (billing)		
g) Start collection		
<i>Collection of business and vehicle taxes</i>		
<i>Tax awareness campaigns</i>		
a) House numbering		
b) Tax assessment and payment		

ANNEX: 16

Revised Targets for Improved Financial Management

TARGET	WHO WILL DO IT?	WHEN WILL IT BE DONE?	PROGRESS (Up to the 31 st of July 2000)	REVISED TARGET
Corporate Account is running: A : Balance sheet of KMC				
a) Fixed asset register is up-to-date	Fixed Assets Committee, Depts.	End of May	LATE: ON PROGRESS The valuation team is still working	End of August
b) Inventory of CWIP is up-to-date	PWD, SWM, Wards	End of Feb	LATE: AUDIT AWAITED PWD completed the listing, but as the audit has not been done, the amount still appears as memoranda advance. Appointment of final auditor is expected in the forthcoming Municipal Council meeting on 6th of August and audit may be completed by end of October	End of October
c) Statement of bond investment and other deposits is finalized	Finance Dept.	End of Feb	Not Applicable	
d) Statement of inventory of different stores finalized	All Dept	End of May	LATE: ON PROGRESS Inventory report (closing stock with values) receive from General Stores and Public Health Stores for the period up to Chatira.2056 The Mechanical Section is also working	End of August
e) Advances settled and actual advances determined	Finance Dept., All other Dept, Mayor, Secretary	End of May	LATE: The Finance Dept has issued a letter to staff concerning the settlement of advances but not all staff have responded. No progress in the case of advances to wards, departments and others.	End of September
f) Statement of deposit made finalized	Finance Dept.	End of Feb	COMPLETE:	
g) Statements of prepayments finalized	Finance & other Depts.	End of May	LATE: ON PROGRESS Insurance pre-payment has to be checked.	End of August
h) List of receivables finalized	Finance & other Depts.	End of May	LATE: Rental data is complete but basic data regarding revenues is not available	End of August
i) Bank balances reconciled and confirmed	Finance & other Depts., wards	End of May	LATE: Expenditure accounts is complete up to Chaitra 2056. Income account is complete up to Falgun 2056, but bank balance of wards are not confirmed.	End of September
j) Employees related liabilities confirmed	Admin Dept. Fin Dept.	End of May	LATE: ON PROGRESS	End of August
k) Statement of borrowings and loans and interest payable finalized	Fin Dept., KVMP	End of Feb	LATE: ON PROGRESS Loans payable to local banks are confirmed. Loan and interest payable to ADB is not confirmed.	End of August

TARGET	WHO WILL DO IT?	WHEN WILL IT BE DONE?	PROGRESS (Up to the 31 st of July 2000)	REVISED TARGET
l) Deposit refundable and retention money refundable finalized	Finance Dept., PWD, UDD & other Depts	End of Feb	LATE: ON PROGRESS Deposit refundable is complete, but retention money is awaited from PWD.	End of August
m) List of payables to contractors, suppliers, various institutions, govt. offices etc., finalized	Finance & other Depts.	End of May	LATE: ON PROGRESS List of payable id under preparation by Stores and Other Departments.	End of August
B : Income and Expenditure Statement				
a) Billing of IPT and other taxes started	(to be discussed)	To be determined		
b) Depreciation policy finalized and monthly depreciation calculated	Fixed assets committee	End of May	LATE: ON PROGRESS Delayed due to late completion of fixed assets register	End of September
c) Monthly Stores consumption report prepared	Concerned stores	End of May	LATE: ON PROGRESS Report prepared up to the end of Chaitra (excluding the mechanical section)	End of August
d) Board member honorarium and employees remuneration is booked with in the concerned month	All Depts, wards, Secretary, Mayor	End of May	LATE: To be started	End of August
e) New advances are timely settled	All Depts heads, wards, Secretary, Mayor	End of May	LATE: To be started	End of August
f) All other expenditure are booked with in the concerned month	All Depts, wards, Secretary, Mayor	End of May	LATE: ON PROGRESS Some Progress	End of August
g) Statement and returns are submitted by the departments and wards within the concerned month	All Depts, wards, Secretary, Mayor	End of May	LATE: ON PROGRESS To be started	End of August

Source: Final Interim Report, PP 13-14, ISKMC, ADB-TA 3185-NER, July 27, 2000

ANNEX 17**Total Staff and Approved Positions in the KMC**

Level	Approved	Existing	Balance
Officer Level II	13	8	5
Officer Level III	66	48	18
Office Assistant I	212	226	-14
Office Assistant II	298	281	17
Office Assistant III	97	146	-49
Office Assistant IV	0	15	-15
Peon or Equivalent (classless)	1480	1751	-271
Total	2,166	2,475	-309

Source: KMC Administration Dept.

ANNEX 18**Total Staff and Approved Positions in the Finance Department of KMC**

Level	Approved	Existing	Balance
Officer Level II	1	1	0
Officer Level III	5	3	2
Office Assistant I	10	9	1
Office Assistant II	7	4	3
Office Assistant III	0	0	0
Office Assistant IV	0	0	0
Peon or Equivalent (classless)	6	4	2
Total	29	21	8

Source: KMC Administration Dept.

ANNEX: 19**Total Staff and Approved Positions in the Revenue Department of KMC**

Level	Approved	Existing	Balance
Officer Level II	1	1	0
Officer Level III	7	4	3
Office Assistant I	25	10	15
Office Assistant II	31	11	20
Office Assistant III	0	4	-4
Office Assistant IV	0	0	0
Peon or Equivalent (classless)	9	9	0
Total	73	39	34

Source: KMC Administration Dept.

ANNEX: 20

Total Account Staff and Approved Positions in Other
Departments of KMC

S #	Department	Level	Proposed	Existing	Balance
1.	Social Welfare	Office Assistant II	1	1	0
2.	Culture & heritage	Office Assistant II	1	0	1
3.	Urban Development	Office Assistant I	1	0	1
		Office Assistant II	1	1	0
4.	Public Works	Office Assistant I	1	1	0
5.	Environment	Office Assistant I	1	1	0
		Office Assistant II	3	3	0
6.	Public Health	Office Assistant II	1	1	0
7.	Audit Unit	Officer Level III	1	0	1
		Office Assistant I	1	1	0
		Office Assistant II	2	1	1
Total			14	10	4

Source: KMC Administration Dept.

ANNEX: 21 (A)

ANNEX: 21 (a)

Stakeholder Analysis - Municipal Finance

Stakeholder	Communication from KMC	Communication from Stakeholder	Importance of Stakeholder	Demands of stakeholder	Goals of stakeholder	Strengths of stakeholder	Weaknesses of stakeholder
1. Taxpayers <ul style="list-style-type: none"> business community professionals 	Notice, Tax Invoice	Payment, complain, suggestions	*****	<ul style="list-style-type: none"> a) Ease in other related issues after paying taxes b) transparency c) comfort in paying taxes d) prompt service 	<ul style="list-style-type: none"> a) pay minimum tax and fees to avoid untoward situations. b) pay tax and fees as imposed c) avoid tax and fees if possible 	Organized business communities are ready to assist KMC in its effort of revenue collection.	willingness to pay is weaker than ability to pay
<ul style="list-style-type: none"> vehicle owners 	Notice, Tax Invoice	Payment, complain, suggestions	*****	<ul style="list-style-type: none"> a) comfort in paying taxes b) prompt service 	<ul style="list-style-type: none"> pay minimum tax and fees to avoid untoward situations. 	owns KMC money, more tax and fees	tend to forget about paying taxes
<ul style="list-style-type: none"> house and land owners 	Notice, Tax Invoice	Payment, complain, suggestions	*****	<ul style="list-style-type: none"> a) Ease in other related issues after paying taxes b) transparency c) comfort in paying taxes 	<ul style="list-style-type: none"> stay out of trouble related to house and land 		willingness to pay is weaker than ability to pay
<ul style="list-style-type: none"> service users and general public 	Notice, Tax Invoice	Payment, complain, suggestions	*****	adequate municipal services prompt services	clean and healthy city		
2. Investors <ul style="list-style-type: none"> Private Sector 	Notice, Invitation in different forums, meetings	Complain, suggestions, participation, meetings	*****	Less competition	<ul style="list-style-type: none"> make profit by exploiting the opportunity to invest in the city's infrastructure and services 	<ul style="list-style-type: none"> a) Resources b) Effective and Efficient Management c) Capability 	<ul style="list-style-type: none"> a) Excessive profit oriented b) Reliability is questionable

ANNEX: 21 (a)

Stakeholder	Communication from KMC	Communication from Stakeholder	Importance of Stakeholder	Demands of stakeholder	Goals of stakeholder	Strengths of stakeholder	Weaknesses of stakeholder
<ul style="list-style-type: none"> Bank & Financial Institutions 	Request for loan, Meetings	Letters, meetings	****	Less competition	Earn interest through investment in the infrastructure of the city	<ul style="list-style-type: none"> Resources Effective and Efficient Management Capability 	loan sanctioning process might be tedious and time taking.
<ul style="list-style-type: none"> Donors 	Request for assistancem meetings	Letters, meetings, visits	****	Support to needy	Test their idea	<ul style="list-style-type: none"> Development investment 	some ideas may not be appropriate to local context.
<p>3. Government</p> <ul style="list-style-type: none"> Ministry of Local Development (MLD) 	Annual Reports, situational reports, letters, meetings	Legislation, directives, meetings, local development fee advice	****	Timely reports Employment	<ul style="list-style-type: none"> Effective urban management Publicity 	<ul style="list-style-type: none"> New Act, rules & regulations Resources Authority Liase with other line agencies 	Intention is doubtful
<ul style="list-style-type: none"> Ministry of Pop. & Env. (MOPE) 	Letters, meetings	Reports, Environment standards, meetings	***	Cooperation in enforcing environment standards	Environment friendly city	<ul style="list-style-type: none"> Fund for environment improvement program 	
<ul style="list-style-type: none"> Ministry of Physical Planning Kathmandu Valley Development Council 	Letters, meetings	Reports, meetings	***				
<p>4. Partner Agencies</p> <ul style="list-style-type: none"> NGOs CBOs INGOs 	Letters, meetings, Invitation to participate in functions	Letters, meetings, suggestions	***	<ul style="list-style-type: none"> Resource Publicity Opportunity to work 	<ul style="list-style-type: none"> Social Service Community Upliftment Support to needy 	<ul style="list-style-type: none"> Resource generation through their contacts Local people mobilization Enhance image of KMC 	<ul style="list-style-type: none"> performance capacity is not clear. tendency toward more resources and publicity

ANNEX: 21 (a)

Stakeholder	Communication from KMC	Communication from Stakeholder	Importance of Stakeholder	Demands of stakeholder	Goals of stakeholder	Strengths of stakeholder	Weaknesses of stakeholder
<ul style="list-style-type: none"> Bilateral/multilateral development agencies 	Letters, meetings, Proposals	Letters, meetings, Visits	***		<ul style="list-style-type: none"> Support to needy Test their idea 	Resource and Technology transfer	
<p>5. Political representatives</p> <ul style="list-style-type: none"> local and national leaders 	Letters, meetings, Invitation to participate in functions	Letters, meetings, suggestions	***	political benefits, publicity	serve people	Lead the community Complete participation	create obstacles to fulfill their political goals
<p>6. Other municipalities</p>	Letters, meetings, Invitation to participate in functions	Letters, meetings	***	co-operation	betterment of own municipality through co-operation of KMC		
<p>7. Urban poor and disadvantaged/vulnerable group</p>	Meetings	complain demonstration	***	Pro-poor approach from KMC	Housing and other welfare schemes from KMC	support to KMC activities	
<p>8. KMC employees</p>	letters, instructions, job descriptions	letters, meetings, reports	****	<ul style="list-style-type: none"> Clear instructions Money 	<ul style="list-style-type: none"> Get promotion Good salary, benefits and working conditions Enjoy Work (QWL) 	is crucial for development of KMC	can be influenced lacks development opportunities
<p>9. Training & Development Institutions</p>	letters, meeting	letters, meetings	**		Profit or service	could help HRD efforts of KMC	

ANNEX 21 (B)

Focused Group of Stakeholders for Municipal Finance

S.#	STAKEHOLDER	ORGANIZATION	PERSON(S)
1.	Tax Payers		
	Business Community	Nepal Chamber of Commerce	Mr. Surendra Bir Malakar, Vice President
			Mr. Gyanendra Tuladhar, Member Secretary
	Professionals	Urban Finance Expert - Nepal Urban Sector Strategy Study Municipal Finance Expert - ADB TA ISKMC	Mr. Pratap P. Pradhan, Chartered Accountant Mr. Vinod C. Baral, Chartered Accountant
	House & Land Owner Service Users		
2.	Investors		
	Private Sector	FNCCI, Urban Dev. Committee	Mr. Harka Chhetry, Acting Director
	Bank & Financial Institution	Town Development Fund (TDF) Karmachari Sanchaya Kosh	
	Donors	ADB	Mr. K. R. Pandey
3.	Government	Ministry of Local Development Ministry of Local Development	Mr. Achhyut Koirala, Under Secretary
		Local Government Finance Commission	Mr. Sadhu Ram Sapkota, Under Secretary
		"	Mr. Khem Raj Nepal, Joint Secretary
		Ministry of Physical Planning VAT Office	Mr. Yadav Chapagain, Consultant Mr. Surya Bhakta Sangachhe Dr. Roop Khadaka, Tax Specialist
4.	Partner Agencies		
	NGOs/CBOs/INGOs	NGO Federation	Mr. Gauri Pradhan, President
	Bilateral/multilateral development agencies	Udle/gtz (fima component) USAID	Mr. Ram Chhetry, Chief Ms. Sharada Jnawali, Program Specialist
5.	Political representatives	from MuAN	Mr. Surendra Pathak, Executive Secretary
6.	Other municipalities	Dhulikhel Municipality	Mayor or (Mr. Ashok Byanju, Deputy Mayor)
7.	Training and Development Institutions	Nepal Administrative Staff College	Dr. Surya P. Shrestha, Senior Director of Studies
		"	Mr. Ramesh B. Shrestha, Finance Expert.

END NOTES:

1. Local Self-Governance Act, 2055 (1999), Part 3 - Chapter 4 - Section 96: Functions, Duties and Power of Municipality, His Majesty's Government, Ministry of Law and Justice, Law Books Management Board, 1999, pp 78-89.
2. The Ninth Plan (1998-2002), Section 8.2 and 8.4, HMG, National Planning Commission, 1998.
3. GTZ/UDLE, "Detailed Revenue and Expenditure Breakdown and Basic Financial Information of 58 Municipalities of Nepal (FY 1995/96 - 1998/99)", HMG, Ministry of Local Development, Municipal Management Section, 2000, p. 165.
4. Institutional Strengthening of KMC, ADB TA 3185 NEP, Working Paper No. B4-New Budget Formulation Procedure, May 2000.
5. Institutional Strengthening of KMC, ADB TA 3185NEP, Working Paper No. B5-Formats for Expenditure Budgeting, May 2000.
6. Kopp, John Christopher "Private Capital for Public Works: Designing the Next Generation Franchise for Public-Private Partnerships in Transportation Infrastructure", Master's Thesis submitted to the Department of Civil Engineering, Northwestern University, May 1, 1997.
Online, Internet, Available <http://iti.acns.nwu.edu/clear/infr/kopp/index.html>
7. Kathmandu Metropolitan City, Budget for Fiscal Year 2055/56 (1998/99), KMC, 1998, p. 55.
8. Naresh P. Shrestha, KMC Corporate Accounting System, Status Report, Oct. 12, 1999, pp. 1-2.
9. R.M. Kapoor, Urban Governance in Bangladesh, India, Nepal & Sri Lanka, Regional workshop on Decentralization for Efficient Urban Management, RUDO/USAID, July 25-27, 1999, pp. 6-7.
10. Local Government Finance Commission, A Study of Tax Revenue, Grants, Revenue Sharing and Accounting System of Local bodies: Problems, Challenges and Area of Improvements, HMG, Ministry of Local Development, 2000.
11. Institutional Strengthening of KMC, ADB TA 3185NEP, Working Paper No. B6-Revenue Forecast for Financial Year 2057/58 (2000/01), June 2000.
12. Kathmandu Metropolitan City, Budget for Fiscal Year 2057/58 (2000/01), KMC, Aug 6, 2000, p. rev. 3.
13. Institutional Strengthening of KMC, ADB TA 3185NEP, Proceedings of Budget Formulation Workshop, March 2000, p. 19-20.
14. Michael Schaeffer, Municipal Budgeting, The World Bank, Washington D.C., April 2000, p 20.
15. Institutional Strengthening of KMC, ADB TA 3185NEP, Final Interim Report, July 27, 2000, p. 34-35.
16. Local Self-Governance Act, 2055 (1999), Part 3 - Chapter 8 - Section 136.1: Land Revenue and House and Land Tax, His Majesty's Government, Ministry of Law and Justice, Law Books Management Board, 1999, p 113.
17. *ibid.*, Section 142, p. 113.
18. *ibid.*, Section 138, p. 113.
19. Dr. Jigbar Joshi, Investment Planning & Financing of Urban Infrastructure in Kathmandu Valley, Regional workshop on Financial Management of Urban Local Governments of Asia Pacific Region, Citynet, Aug 31-Sept 3, 1999, p 127.

BIBLIOGRAPHY

1. Report on Organizational and Management Improvement Program, Kathmandu Municipality, August 1993.
2. Nepal Urban Sector Strategy, Background Paper IV, Urban Finance.
3. Shrestha, Naresh P., The Rising Nepal; Urban Management: Challenges Exists; March 26, 2000.
4. WS Atkins International Ltd. et al, ADB TA 1905 NEP Improved Resource Mobilization for Kathmandu Metropolitan City - Final Report; May 1997.
5. Mathur. O. P., Municipal Finances in Developing Economies of Asia; September 1999.
6. Kathmandu Metropolitan City, Budget Documents of Various Fiscal Years.
7. Institutional Strengthening of KMC, ADB TA 3185NEP, Working Paper No. B2-Draft: Taxes and Taxation Performance, March 2000.
8. Kathmandu Urban Development Project, Project Management Unit, Consultancy Services, Kathmandu Metropolitan City, Formulation of Budgets, October 1996.
9. White Paper on Local Government, Section G: Municipal Finance, Online, Internet, Available http://www.polity.org.za/govdocs/white_papers/localgov/wp7.htm

CITY DIAGNOSTIC REPORT