



# Sana'a

## **A City Development Strategy**



# Foreword

Since 2000, with the issuance of the Local Authorities Law No. 4, Yemen has been pursuing an ambitious decentralization agenda. This agenda aims to delegate greater fiscal and administrative authority to local governments and to give communities—public leaders, residents, and investors—more control over the economic and social development of their cities and towns.

To date, city development strategies (CDS) have been initiated in four of Yemen's largest urban areas—Sana'a, Aden, Hodeidah, and Mukalla. With support from the Cities Alliance and The World Bank, the CDS process in each of these cities has brought together public and private sector leadership to assess the strengths and weaknesses of the city, think strategically about opportunities for equitable economic growth, develop a long-term vision, and draft a prioritized action plan. In all four cases, the CDS process has been coupled with revisions to the cities' master plans to ensure a strong link between economic development plans and infrastructure.

The benefits of the CDS process go far beyond the writing of the CDS document. To create a long-term vision for the city required the participation of a variety of public, private, and civil society leaders who do not often have the occasion to come together to discuss the challenges and opportunities facing the city. The structure for cross-sectoral communication provided under the umbrella of the CDS has had a lasting effect in terms of helping to align the city's social, economic, and environmental interests. In addition, with the financial support under the CDS, local leaders had access to much needed technical support and expertise focused on issues of local concern.

This publication seeks to summarize the main outcomes of the studies, discussions, and strategic planning accomplished during Sana'a's CDS process. Moreover, it aims to serve as a guide for the city's local economic development that is presented in a manner that is accessible to a broad audience.

**H.E. Mr. Abdel Kareem Al-Arhabi**  
Deputy Prime Minister for Economic Affairs  
Minister of Planning and International Cooperation

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The authors of the separate studies upon which this CDS was based are the following:

Ahmed El Basti	Municipal Institutional Specialist
Khalid Amin	Municipal Finance Specialist
Mohamed Lahouel	Urban Economist
Mostafa Madbouli	Urban Planning Specialist
Monika El Shorbagy	Urban Upgrading Specialist

David Sims, Urban Planner and CDS Coordinator, compiled this report.

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# Introduction



Sana'a is located in an upland basin at an altitude of 2300 meters within a mountainous and semi-arid region of Yemen. Because of its high altitude, the city enjoys a moderate climate year around. The main rainy season is in summer. The nearest port is Hodeidah, roughly 250 kilometers away. Bound by mountains and steep slopes to the east and west, the city has few options but to expand primarily along its north and south axes within its basin.

The Municipality of Sana'a (*amanat al asema*) is the political and administrative capital and the most important cultural center in the country. The city has developed around its medieval core Old Sana'a, which was declared by UNESCO as a World Heritage Site in 1984. The old city has a unique urban and architectural patrimony, and such unique heritage endowments act as an important draw factor for tourism, which over the coming years is expected to contribute significantly to growth and local economic development.

The city also has important economic and commercial functions. Sana'a is home to approxi-

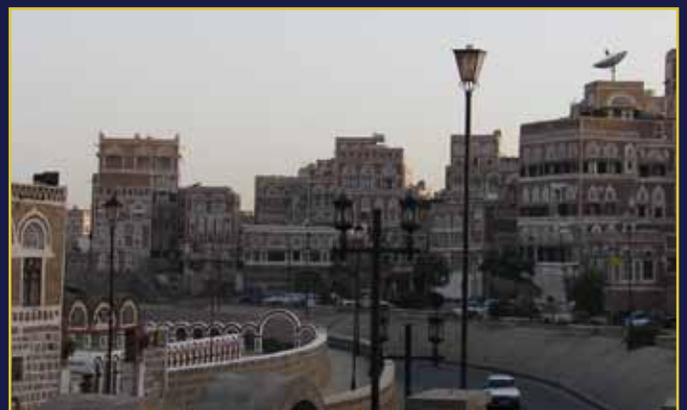
mately 30 percent of industrial establishments in Yemen and has a concentration of higher-order commercial and services activities, including banking and financial services. The city's endowments also include important infrastructure, including an international airport and a relatively efficient primary road network.

Sana'a City currently contains approximately two million people. This represents an average annual growth rate of over 7 percent over the last 30 years and 5.6 percent during the 1994–2004 decade, extremely rapid rates of city growth. This demographic increase has been paralleled by a dramatic increase of the urban/inhabited built-up area of the city.

In September 2005 the Sana'a Local Council convened a workshop to initiate the city development strategy (CDS) process, in coordination with The World Bank and the Arab Urban Development Institute (AUDI). Funding and organizational aspects of the CDS were approved in October 2006 by the Cities Alliance, and the CDS process was launched under the leadership of H.E. the Minister of State and Mayor of Sana'a.

Over the two-year period of the CDS process, numerous informal consultations and exchanges were held; the process was punctuated by formal workshops. Besides the launching workshop, four formal workshops were

convened, and each of these workshops was a valuable event in which attendee stakeholders provided feedback on the CDS process and themes. The CDS process was assisted by six international experts.



# Sana'a Today—

## *City of History and a Modern, Dynamic Capital*

The Municipality of Sana'a (*amanat al asema*), by far Yemen's largest city, is the political and administrative capital and the most important cultural center in the country. The city developed around its medieval core, and Old Sana'a has been declared by UNESCO as a World Heritage Site. Sana'a also was named the Arab world's Capital of Culture in 2004. The old city has a unique urban and architectural patrimony that dates back 2,000 years. The urban and architectural fabric within the city walls remains primarily intact. Such unique heritage endowments act as an important draw factor for tourism, which over the coming years is expected to contribute significantly to growth and local economic development.

Bound by mountains and steep slopes to the east and west, the city has few options but to expand primarily along its north and south axes. Furthermore, the location of the international airport together with the main sewage treatment plant in the north also constrains development in that direction, leaving the southern axis as the main path for the city expansion.

Sana'a City currently contains approximately two million people, up from an estimated 427,500 persons in 1986 and only 162,000 inhabitants in 1977. This demographic increase has been paralleled by a dramatic increase of the urban/inhabited built-up area of the city, which accelerated because of the Gulf War of 1991 upon the return of expatriate Yemenis from the Gulf and also extensive internal migrations after the unification of Yemen.

The export from Yemen of significant quantities of petroleum, starting in the mid 1990s, generated state revenues that have financed Sana'a's many recent improvements and has helped stimulate the city's economy. In addition, Sana'a has been experiencing a remark-



able real estate boom as Yemenis invest remittances in and around the capital.

### **History of Sana'a**

Sana'a's origins date back to extreme antiquity, at least to the second century AD during the reign of the Himyaritic King Shaar Awtar. The Islamic era, which began in the seventh century AD, contains many events critical to the formation of the Yemeni nation and the identity of the Yemeni people. Yemeni tribes were part of the earliest campaigns of Islam, and conversion to Islam in Yemen was rapid and nearly universal. In the sixth year of the Hegira era, it is said that the Prophet Mohamed (PBUH) ordered the construction of the Jamia el Kebir (Grand Mosque) in Sana'a.

The Umayyad and Abbasid caliphates ruled Yemen through governors whose seat was Sana'a, and in the 10th Century the local Zayedi dynasty was established. During the reign of the Abbasid Caliph Haroon Al-Rasheed, the Governor Muhammad Bin Khal Al Barmaki built a number of mosques and other embellishments in Sana'a, most of which can be seen today.

Power in Yemen changed hands (and capitals) over the 11th through 15th Centuries, and Sana'a's fortunes with it. In 1517, the Ottomans extended their empire to Yemen and Sana'a. Their influence on Sana'a was notable, as they progressively extended the city and its walls westward by establishing a large new dis-

trict called Beer Al-Azab. The Zayedi imamate came to hold sway until the 19th Century, dominating the mountainous regions and keeping the culture and economy isolated from the outside world. Sana'a was the seat of power in Yemen for most of this period, and the Imams added palaces as well as public buildings, and

## The Old City

The old, walled city of Sana'a has been inhabited for more than 2,000 years and contains a wealth of intact architectural gems. Virtually all structures within the old city exhibit a very distinctive vernacular style that dates back hundreds of years. Also, the medieval urban fabric of lanes and small squares remains intact. These aspects give the cityscape a historic cohesiveness and architectural harmony that is unique and represents a profound urban heritage.

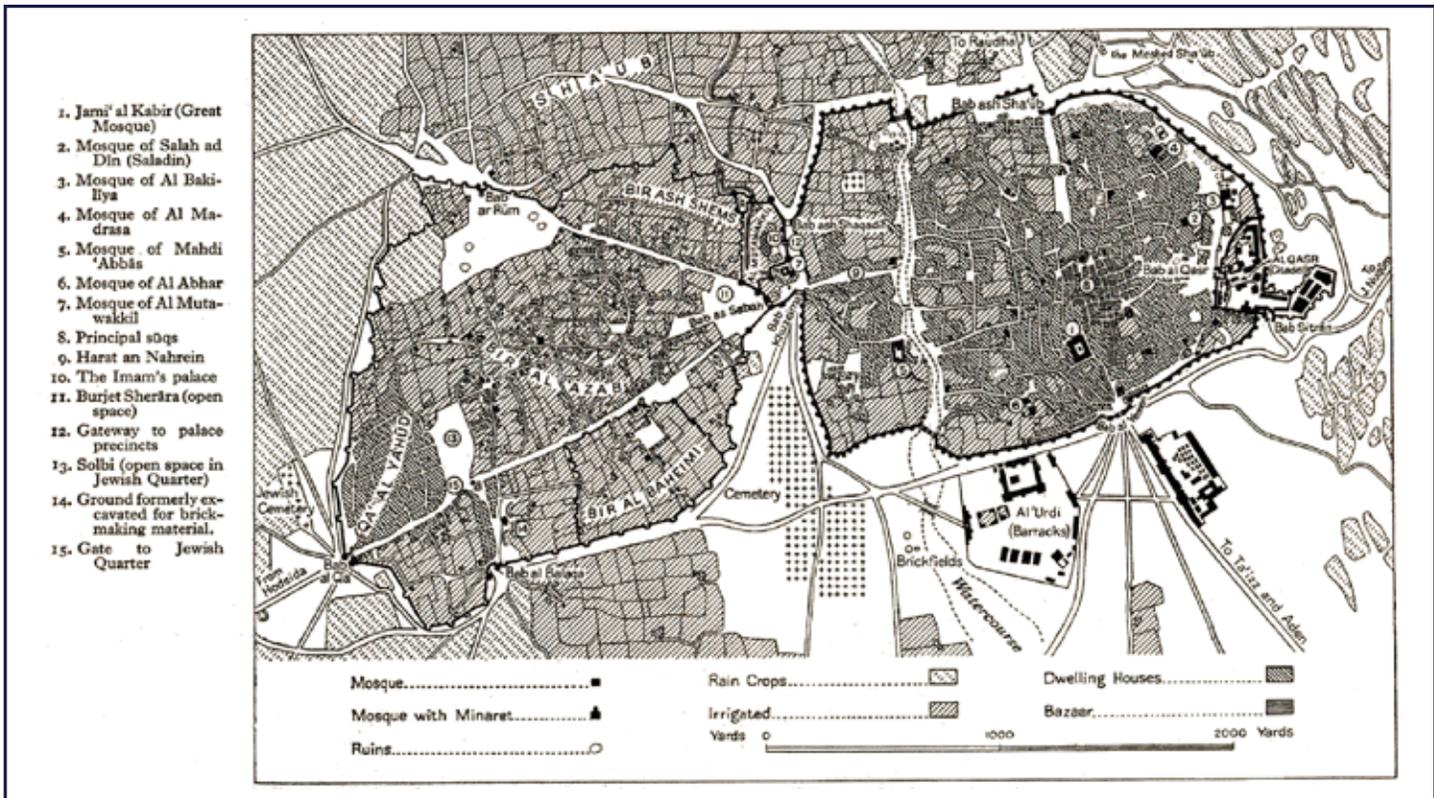
The old town contains about 6,000 buildings, almost all of which are beige-colored, multi-storey, masonry structures with elaborate white gypsum friezes and embellishments as well as gypsum and stained-glass windows. Another unique feature are a number of urban vegetable and fruit gardens whose vibrant green pleasantly off-sets the towering masonry buildings. There are also said to be 100 mosques, 12 public baths, and ten specialized market areas (one for clothes, grain, salt and spices, silver and gold, and cattle, among others). A number of caravanserais can still be found. Two main city gates still remain intact—Bab el Yemen on the south and Bab el Shuub on the north. A medieval citadel dominates the eastern quarter, and there is a large dry watercourse (Al Saila) on the western side.

The old city of Sana'a was declared a World Heritage Site by UNESCO in 1984. Water and sewerage networks were installed, and the whole of the Old City's lanes and public spaces were paved with basalt stone, as part of a number of conservation efforts carried out with foreign partners. In 2001–2004, a Yemeni-Dutch project produced a conservation and preservation strategy and plan for Old Sana'a. The strategy added to the walled city some surrounding historic neighborhoods, including Bir Al Azeb, to develop proper design and conservation guidelines for the walled city and its context.

There is a government department dedicated to the preservation and enhancement of the old city.

In 2004 the old city was declared the Arab World's capital of culture.





### Sana'a in 1940

a new market was established west of Al-Sai-ela. In 1849 Ottomans re-conquered Sana'a and the north of Yemen. The main legacy from this period is the Sana'a military barracks just outside Bab el Yemen, as well as additions to the Sana'a Citadel.

Ottoman rule was strongly resisted by the Imams and their local followers, especially during the early 1900s. Defeat in World War I forced the Turks to abandon Yemen, and the last two Zayedi Imams—Yehia and Ahmed—ruled autocratically from Sana'a for the next 44 years. They insulated Yemen and especially Sana'a from outside contacts at a time of great changes in the region.

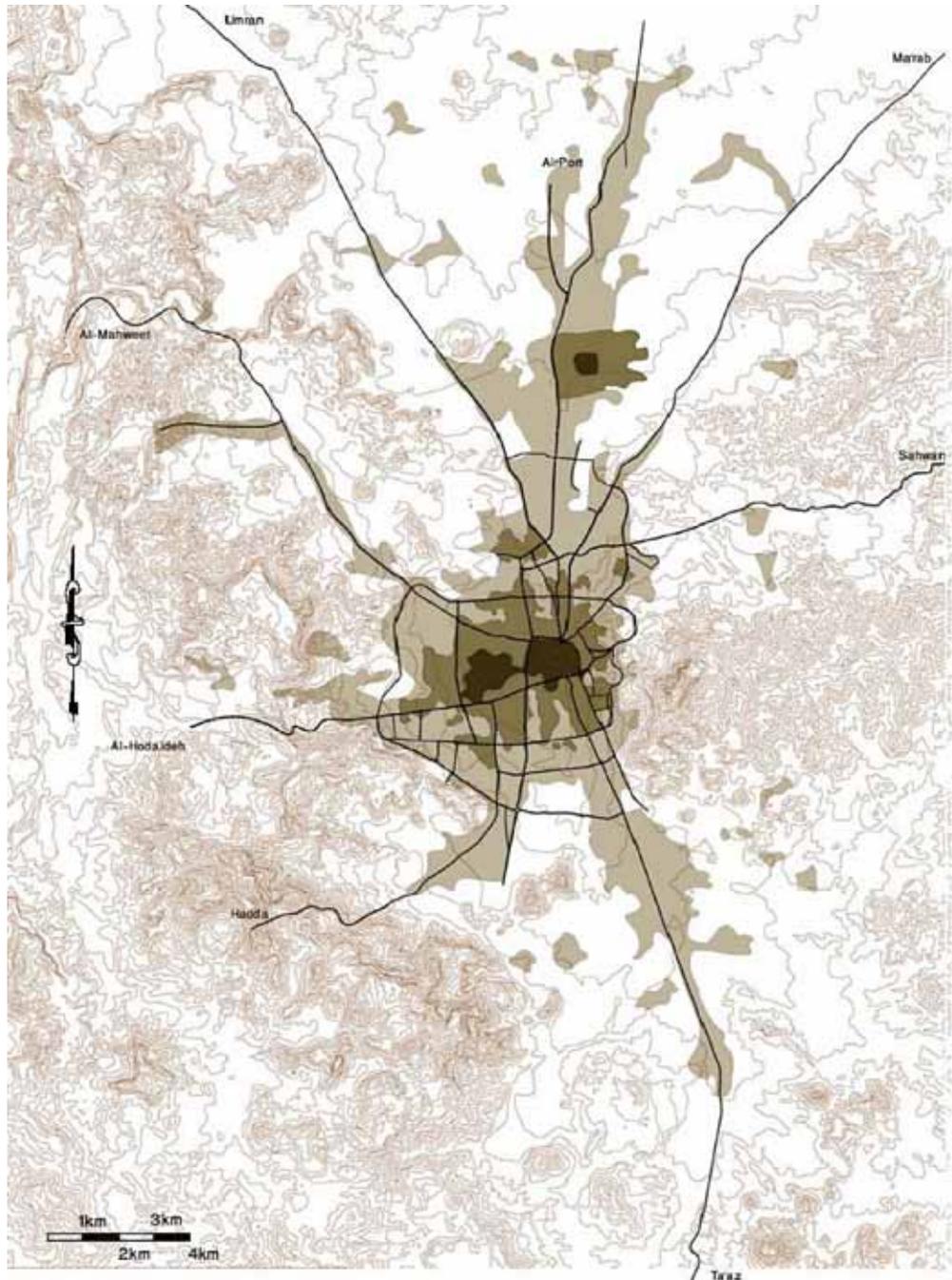
### Explosive Expansion of Modern Sana'a

Until 1962, Sana'a could be considered a medieval city stalled in time. Today, this old city of Sana'a with the Bir el Azab area to the West

represents a tiny core of what has become a sprawling city. With the 1962 revolution and the establishment of a modern republic, Sana'a began to evolve rapidly, spilling outside the old city walls and expanding in a radial manner along major roads. As a result the total area of the city expanded from merely 3.7 square kilometers in 1962 to more than 40 square kilometers in the end of the 1970s. Fastest growth has taken place since 1980 along the north-south roads starting from the airport in the north to Ta'iz in the south, and to a lesser degree, probably for reasons of difficult topography, east and west towards the towns of Hodaideh, Al-Mahaweet, Hadda, and Marib.

Rapid urban growth led to the establishment of the Municipality of Capital Sana'a (*amanet al-aasema sana'a*) by Presidential Decree No. 13 of 1983. Another presidential decree No. 2 of 2001 was issued dividing the Municipality of the Capital Sana'a into nine administrative areas or directorates (*muderiya*), plus added Bani

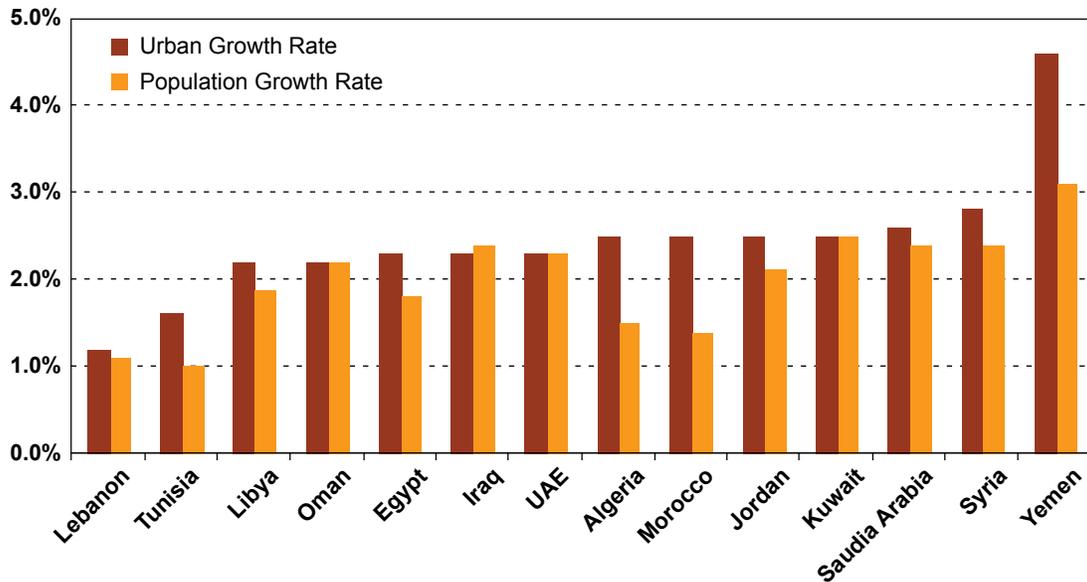
## Physical Extents of Sana'a in 1962, 1979, and 2001



Source: Team International, *Comprehensive Traffic Management Study for Sana'a City, Land Development and Population Forecast*, November 2006.

## Demographics of Countries in the MENA Region

### Growth rate of urban vs. total population



Source: United Nations Fund for Population Activities, *State of the World's Population*, 2007.

Hareth Directorate to the north as the Municipality's 10th directorate.

Within the last seven years, the city has enjoyed relative prosperity because of the implementation of improvements of services and infrastructure, especially related to water supply, telephone, roads, street lighting, drainage, and beautification and cleanliness of the city. One of the large projects that have taken place within this period is *El-Saeila* storm water project, which included the clearance/resettlement and upgrading schemes of associated poor areas. Another important project is the road intersections' project, which is providing grade-separated intersections at important junctions throughout Sana'a, as well as improved highway geometry for major roads.<sup>1</sup>

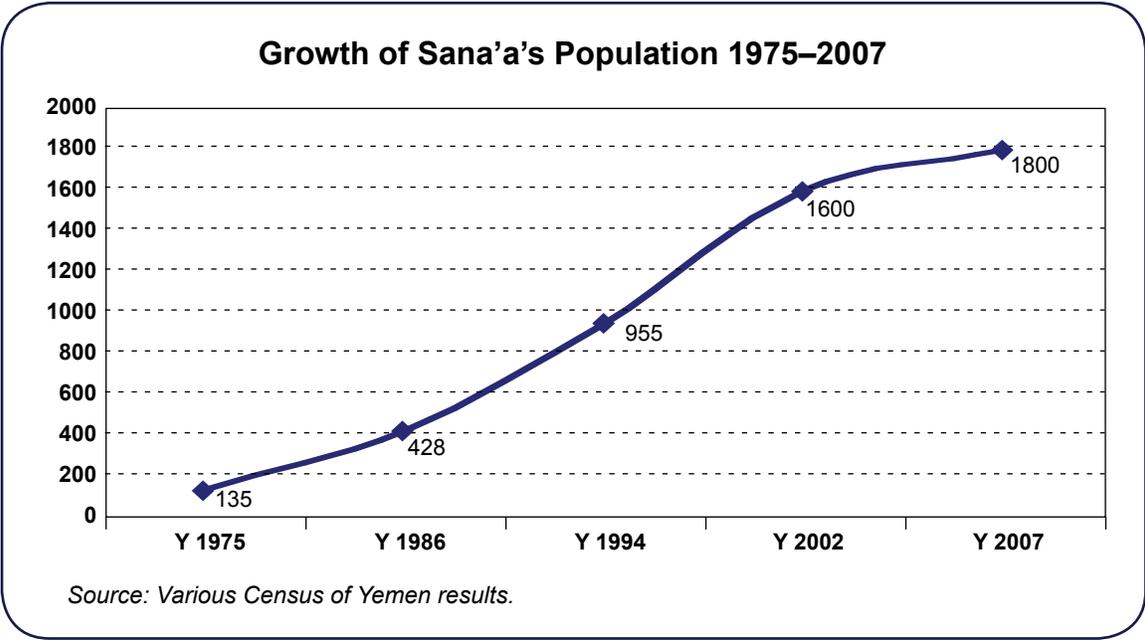
Today, Sana'a accommodates 8.9 percent of Yemen's total population and 30.3 percent of the country's urban population.<sup>2</sup> It hosts between 20 percent and 30 percent of the country's industrial base, varying by the source of information.

### Challenge of Rapid Population Growth

Yemen has the highest rate of population increase in the Middle East and North Africa (MENA) region, and the growth of the country's urban population far outstrips that of any other MENA country. Sana'a's population increase is by far the highest of any major Yemeni city. In 1977, Sana'a Municipality's population was a mere 162,000 persons representing just 3 per-

<sup>1</sup> The intersections project also included a comprehensive traffic management study for Sana'a, completed in 2006.

<sup>2</sup> Urban is defined in Yemeni statistics as Sana'a City, Aden City, the capitals of the governorates, district centers and every settled community with at least 5,000 inhabitants.



cent of the country's population, but in less than three decades the population had grown more than tenfold to reach 1.7 million inhabitants in 2004, representing 9 percent of Yemen's total population. If the 1994–2004 population rate of increase of Sana'a continues, the city population will double in 13 years and increase by over three times by 2027. It is interesting to note that the Comprehensive Traffic Management Study for Sana'a (Team International, 2006) projected a population of 2.847 million in 2014 and 3.825 million by 2024.

Since the national average population growth rate is only 3.02 percent per annum and fertility rates in Sana'a city are lower than the national average, it is obvious that natural population increase accounts only for a small part of additions to the population of Sana'a. The other part is made up by in-migrants from both other urban as well as rural parts of the country. Informal and settlements and fringe sprawl accommodate the bulk of the massive population increase that Sana'a has experienced in the past two decades. As will be seen, this very rapid demographic growth puts severe strains on urban services and infrastructure.

### Vibrant Economy of Sana'a'

The economy of Sana'a can be termed "a capital city economy," in terms of concentrations of national economic activities and employment and public sector administration. The economy is large compared to its population. The Municipality contains almost 16 percent of the nation's establishments and 22 percent of the nation's employment in establishments, whereas it had only about 9 percent of Yemen's total population in 2004. The average size of establishments in Sana'a is small at 3.88 employees per establishment, but this is higher than the Yemeni average (2.87 employees per establishment). Of all the main cities, only Aden, at 6.44 employees per establishment, has a larger establishment size than Sana'a.

At more than 30 percent of the total, the public sector accounts for a large share of non-agricultural employment in Sana'a, as it does for Yemen as a whole.

Commerce and small services are by far the largest sectors in Sana'a both in terms of establishments and in terms of employment. In this, Sana'a mirrors the country as a whole, but



### Establishments and Employment in the Main Yemeni Cities (2004)

City	Establishments		Employment	
	Number	Percentage of National Total	Number	Percentage of National Total
Sana'a	64,922	15.9%	252,257	21.6%
Taiz	45,391	11.1%	138,328	11.8%
Ibb	39,195	9.6%	80,903	6.9%
Hodeidah	36,909	9.1%	110,794	9.5%
Aden	16,547	4.1%	106,686	9.1%
Total Yemen	407,477	(100%)	1,170,031	(100%)

Source: CSO, Census of Establishments, 2004.

the degree of concentration in commerce and small services is even higher. Also, there is a relative higher concentration of general admin-

istration, hotel and restaurant, and transportation employment in Sana'a compared to the Yemeni averages.

### Percentage Distribution of Labor in Establishments by Type of Establishment Ownership

Type of Establishment	Sana'a Municipality	
Private, Locally Owned	62%	52%
State-owned	31%	38%
Waqf	2%	7%
Private, Foreign-owned	1%	1%
Private, Joint Venture	1%	1%
Total	100%	100%

Note: Error due to rounding  
Source: CSO, Census of Establishments, 2004.



### Percentage Distribution of Establishments and Employment by Economic Activity (2004)

Economic Activity	Establishments		Employment	
	Sana'a	Urban Yemen	Sana'a	Urban Yemen
Agriculture	0.2%	0.7%	0.3%	0.8%
Fishing	0%	0%	0%	0%
Mining and Quarrying	0.1%	0.1%	0.3%	0.7%
Manufacturing	12.1%	10.2%	12.5%	11.4%
Electricity, Gas, and Water	0.5%	1.1%	1.1%	1.2%
Commerce and Small Services	58.9%	50.6%	31.3%	28.4%
Hotels and Restaurants	7.1%	4.7%	7.4%	5.5%
Transportation	4.8%	2.3%	4.0%	2.7%
General Administration	0.8%	1.1%	18.0%	13.4%
Education	1.5%	4.1%	9.0%	18.6%
Health and Social Work	2.7%	2.2%	5.3%	4.8%
Other Activities	11.2%	22.9%	10.8%	12.5%
Total	100%	100%	100%	100%

Source: CSO, *Census of Establishments, 2004*.

By far, Sana'a Municipality is the leading governorate in Yemen in terms of formal sector job creation and new economic projects. Over the 1992–2006 period, 39 percent of all new formal jobs in Yemen were created in Sana'a, as well as 33 percent of new formal establishments. In terms of employment generated, Sana'a Municipality eclipses all other governorates by at least a factor of three. This underscores the

importance of Sana'a, as the nation's capital, as a location for national investment and capital accumulation.

Furthermore, Sana'a's population is relatively better educated than the populations of other Yemeni cities (and much better educated than the national population as a whole).

## New Projects Established and Formal Sector Jobs Created 1992–2006

Governorates	Number of Projects	Number of Employees
Sana'a Municipality	1125	29,298
Aden	404	10,114
Taiz	366	7,474
Hadramout	584	5,430
Hodeidah	310	10,330
Other Governorates	566	11,587
Total	3355	74,233

Source: General Investment Authority.

## Distribution of Population by Level of Education (2004)

Level	Sana'a Municipality	Urban Yemen	All Yemen
Illiterate	21.9%	25.7%	45.3%
Read and Write	32.0%	34.4%	31.5%
Primary	6.0%	4.9%	3.1%
Vocational —Basic	14.2%	12.9%	8.5%
Diploma before Secondary	0.3%	0.7%	0.4%
Secondary and Equivalent	15.8%	13.8%	7.2%
Diploma after Secondary	1.5%	1.7%	1.0%
Higher Education	7.4%	5.3%	2.3%
Nondeclared	0.9%	0.6%	0.7%
Total	100%	100%	100%

Source: CSO, Census of Yemen, 2004.

## Poverty and Unemployment

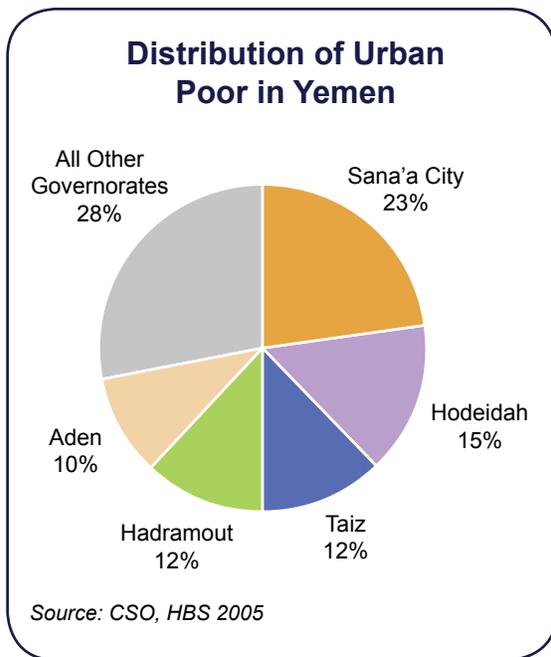
Poverty incidence in Yemen is very high with 40.1 percent of the population in rural and 20.7 percent of inhabitants in urban areas falling below the poverty line. In Sana'a, the poor account for 15 percent of all residents.<sup>3</sup> High inflation rates of between 10 percent and 20 percent during the past five years combined with low per capita income growth (0.7 percent per annum) and a skewed distribution of growth in the favor of the better-off suggest have impoverished part of the middle classes

during the past two decades. Despite government efforts to orient public policies towards the poor<sup>4</sup>, all indicators suggest that poverty incidence in Sana'a cannot be expected to decline significantly in the near future. Also, it must be highlighted that poverty lines are rather arbitrary and that there are large numbers of people living just above the poverty line and are vulnerable to falling below it.

Where do Sana'a's 300,000 poorest residents live? There are certain neighborhoods with a high concentration of the poor, but it is widely

<sup>3</sup> The World Bank, Yemen Poverty Assessment, November 2007

<sup>4</sup> See Poverty Reduction Strategy in the 3rd Five Year Plan 2006-2010



agreed that the poor are “found everywhere,” except in certain new high class residential neighborhoods, such as Hadda. Poor families live in older dilapidated structures in central neighborhoods, small single-storey structures in the middle of typical multi-storey buildings of middle class neighborhoods or in small rented flats throughout the city and also in fringe informal and squatter settlements. Where the poor live and how they live is mainly driven by their economic circumstances and their access to affordable land and housing.

Given Sana’a’s position as the capital of Yemen, the public sector is a very significant source of employment. The government, including the military and police, account for nearly 40 percent of the total of 295,000 jobs in the city. Sana’a is also a center for trade and commerce and has a fairly vibrant industrial base. There is also a large informal business sector, estimated in 2002 to represent 32 percent of non-government employment.

However, Sana’a has the largest concentration of poor people in Yemen, accounting for

nearly 6.5 percent of the total poor of the country and 23 percent of poor urban households. There seems to be a correlation between poverty and unemployment in Sana’a, with some estimates putting 25 percent of Sana’a’s labor force unemployed. And there are indications that income inequality in Sana’a is increasing. In Sana’a, the Gini Coefficient increased significantly from 37 to 44 from 1998 to 2005, an increase of 21 percent, the steepest increase of any region of the country.<sup>5</sup>

### **Sana’a’s Alarming Water Shortage**

The water supply of Sana’a is approaching a critical point because more than 80 percent

<sup>5</sup> Central Statistics Organization, Household Budget Surveys of 1998 and 2005.



**Disposal of sewage in Houd Sana'a**



**Water pipes in Qa' Al Qaidi**



**Electricity in Al Khafji**



**Garbage in Shamlan**



**Steep slopes & danger of land slides in Sneina**

comes from extracting water from reserves in the geological Sana'a Basin, which covers an approximate area of 70x40 km on the northwest side of the city. It is estimated that the basin will be completely depleted within 10–15 years, because of the rapid population growth and ad-hoc withdrawal of water whether for agricultural or domestic purposes. It is estimated that the existing aquifer levels have dropped by six to eight meter on average each year.

Although being threatened with the deterioration of its water sources, there is no clear strategy adopted by the city to overcome this problem.

In terms of access to drinking water, the public water network is estimated to cover only 55 percent of the city's households. The problem of undersupply is exacerbated by the physical deterioration of the network, which results in serious leakages (estimated at 40 percent). As a result, water supply in Sana'a is rationed—a particular area of the city will have water in the system only one day in 15, and deliveries of water by private tanker truck must make up the shortfall. For the 45 percent of households without connections to the water network, supply by tanker truck is the only option, and an expensive one. It is estimated that current domestic water consumption per capita is already only 30–50 liters per capita per day, far below urban norms in the MENA region. This water shortage poses problems not just in residential areas but also represents a severe constraint for industry and commerce. This issue is crucial for determining the future spatial development trends of the city and its population growth pattern.

### **Proliferation of Informal Areas and Squatter Settlements**

The massive population growth and the absence of effective urban planning and control instruments have led to a very rapid proliferation of informal land development and housing construction, particularly since



1990. Much construction in Sana'a over the past decade has taken place in unplanned areas without building permits and in the absence of infrastructure and municipal services. City planners, lacking a coherent up-to-date city master plan, have prepared detailed neighborhood plans for some of these sprawling areas after development has started. These detailed plans typically follow the traditional neighborhood planning unit approach without any basis in or knowledge of underlying land ownership or tenure patterns, because of the lack of a proper land information system. However, these "official" plans rarely are implemented as no landowner is willing to give up their land for the services or infrastructure and enforcement is very weak.

Several squatter settlements are also found in Sana'a, including on lands reserved for public facilities and in flood paths and other marginal land. Squatter populations have no secure land tenure and lack access to basic infrastructure and municipal services. The municipality has undertaken some projects to upgrade squatter settlements and resettle squatters living in flood prone areas (e.g., *el saila*) in public housing projects. The improvement of living conditions in squatter settlements and the socio-economic integration of the poor in the city's fabric is a pressing priority and an explicit aim of local authorities in Sana'a.

### Land Market Distortions

Sana'a faces severe land market distortions, which is arguably the city's most complex problem. In the 2002 Investment Climate Survey, 37 percent of respondent firms in Sana'a have rated "access to land" as a major/severe obstacle to doing business, compared to 30 percent in the total national sample. Access to public land is also the most challenging issue facing local authorities as they attempt to provide schools, health centers and public amenities. In Sana'a, the large majority of vacant land (formerly agricultural land) is privately owned, and only lands that can be deemed State-owned—mountain



slopes—are subject to ongoing disputes with the private landowners of adjacent lands who claim that these slopes are

theirs by virtue of their historic right-to-water. Faced with such shortage of state-owned/controlled land, local authorities are forced to acquire private land, often at very high prices. Land market distortions in Sana'a are also reflected in very high land and real estate prices and a very large volume of land disputes that clogs the courts' system (estimated between 30–50 percent of all cases heard before primary courts). Land registration is limited, and it is estimated that land registry's capture does not exceed 20 percent of total annual transactions in land and property in the city.



### Weak Urban Planning and Management

Even though decentralization and other reform measures are being carried out

nationally, the Sana'a municipal government remains a mix of decentralized and de-concentrated entities, with duplication common. It also suffers from the ambiguity of having 10 elected district councils within its boundaries, in addition to the municipal elected local council. The Sana'a Municipality's human resources lack the necessary skills and are poorly motivated. In addition, Sana'a Municipality has very weak local revenue generation capacity and its reliance on central government transfers and subsidies is huge.

Today, the urban planning process in Sana'a can be described as follows.

- There is no official plan for the city that can define a clear and comprehensive vision for its spatial growth. The city has grown completely beyond the 1978 Master Plan extents and the master plan exercise of 1998 was only partial and was never approved.
- There is no analysis of the urban agglomeration of Sana'a within its regional and sub-regional context or studies of its influence on surrounding areas.
- The current pattern of growth is taking the shape of scattered development without any phasing or sequencing to guide infrastructure provision. This scattered development with low density represents a limited utilization of land, increases the cost of infrastructure, and has negative economic consequences in terms of the huge distances that must be traveled.
- The responsibility of urban planning function is not clearly defined. Several laws and presidential decrees exist that have allocated functions to different governmental bodies. Today, the only active body is the Sana'a branch of General Authority for Land, Survey and Urban Planning, which is mainly preparing detailed urban plans for neighborhoods. This work is mainly a reaction to on-going development and the pressures of landowners. In a particular area where construction starts (either on private or state-owned land, or a mix of both), the branch tries to prevent this informal development by preparing and publishing detailed plans for those areas.
- The detailed plans are prepared without either clear land uses or planning standards and building codes and criteria.
- There is no restriction to changing existing land uses and the city suffers from the mixture of several land uses within the same neighborhoods.

- The city suffers from the absence of proper areas for industrial development. The existing areas are very limited in terms of space and infrastructure.
- There are no effective monitoring mechanisms that ensure the implementation of the detailed urban plans for local areas or to stop the development in prohibited areas or areas that have been allocated for public services.

### **Environmental Challenge**

Less than 40 percent of the city is served with sewage network service, while the majority of the buildings still rely on individual solutions that can negatively affect underground sources of water. The area of Sana'a Basin (one of the city's main well fields) is among those areas facing the problem of groundwater contamination because of informal development and industries. Until now it has proven impossible to protect this area from urban expansion, as it is one of the main sources of water for the city.

Sana'a exists in an upland basin or bowl surrounded on all sides by higher elevations, not dissimilar to Mexico City or Kathmandu. The rapid rise in the number of vehicles over the past decade and the relatively cheap price of fuel (in spite of the recent price hikes) has resulted in ever increasing volumes of pollutants being released into the atmosphere. These factors lead at times to thermal inversions and polluted, stagnant air, which is a common complaint in Sana'a.

Finally, although the Municipality's Cleanliness and Improvement Fund does a reasonable job of collecting and disposing of solid wastes in the built up areas of Sana'a, not all areas are covered, and the accumulation of rubbish and plastics along roads, empty lots, and fringe areas is very unsightly.

# Sana'a Tomorrow

## **Stakeholders' Vision**

A CDS workshop was held in Sana'a on February 11, 2007. H.E. the Mayor of Sana'a chaired the event. More than 80 participants attended, including H.E. the Minister of Planning and International Cooperation, H.E. the Secretary General of the Sana'a City Local Council and Vice Mayor, and about 60 elected councilors at the municipal and district levels. There were also selected representatives of CDS partners such as from Sana'a University, the Sana'a Chamber of Commerce and Industry, and non-governmental organizations.

The workshop attendees were organized into four working groups to brainstorm the vision of the city for sustainable development, strategic objectives, and key issues and challenges. The results of the working groups were then synthesized in a plenary session. The agreed vision statement for Sana'a in 2025 was as follows:

*Sana'a—Yemen's capital and symbol of its unity—is a historic and cultural center; a regional destination, and a gateway to Yemen; a hub of commerce, services, and tourism; a city with high quality infrastructure and services, which improves living standards for its residents and enhances its attractiveness to its visitors.*

The attendees also agreed upon the basic goals or principles of Sana'a's development over the next 20 years as follows:

- Participatory approach to policy and decision-making
- Comprehensive and up-to-date information base to enable policy and decision-making
- Effective and efficient implementation and coordination mechanisms
- Sustainable and buoyant revenue sources and efficient local revenue mobilization
- Strategic planning

Additionally, it was agreed that Sana'a's city development strategy needs to concentrate on five themes or components: (1) economic development, (2) institutional strengthening, (3) better financial management, (4) improved urban planning, and (5) a comprehensive approach to urban upgrading.

## **Principles of an Economic Development Strategy**

An economic strategy for Sana'a development needs to be based on its relative strengths. As the nation's capital, it has been and continues to be a prime location for national investment and capital accumulation. Furthermore, Sana'a's population is relatively better educated than the populations of other Yemeni cities (and much better educated than the national population as a whole). In addition to these general indicators of Sana'a's relative strengths, the following points should be added.

- Sana'a has a relatively good level of infrastructure services, especially in terms of its road network.
- Although Hodeidah, Aden, Taiz, and Mukalla all boast international airports, Sana'a's international airport is by far the most important in terms of international connections and number of passengers, number of airlines, and volumes of cargo. A new airport/terminal is planned adjacent to the existing airport, with construction set to begin soon.
- Sana'a is the seat of central government and all national-level agencies, which reduces transaction costs for investors.
- Sana'a is the home to most international organizations and all foreign embassies, which gives easier access by firms to information on technology, market opportunities, and so on.

In addition, there are natural and cultural factors that should be considered among Sana'a's strengths:

- Very attractive cultural heritage
- Mild and temperate climate throughout the year, a huge plus for attracting visitors from the Gulf region with its sweltering temperatures most of the year
- A long tradition of commerce and trade

Looking strategically at Sana'a's potential to attract investors, perhaps the most significant strength is the city's proximity to a region (mainly Arab Gulf neighbors with oil-based economies) with high purchasing power, high demand for foreign goods and services, and, most importantly, huge financial surpluses looking for investment opportunities. Furthermore, there are strong cultural ties and a commonality of language between Yemen and these Arab neighbors (in particular with Saudi Arabia).

However, for Sana'a to maximize its economic strengths, it needs to improve its investment climate. A 2005 business climate assessment<sup>6</sup> surveyed a subset of 175 firms in Sana'a out of 488 firms nationally. The results show that firms in Sana'a face constraints much as do firms throughout the country.

- Various surveys as well as interviews with entrepreneurs underscore how corruption intervenes in transactions where government administrations are involved, such as taxation, foreign trade, and permits, among others. Significant extra-legal payments are stated to be common.
- Taxes are considered by several firms as having high cumulative negative effects. In addition, tax administration inspections tend to be costly in terms of money and time, and underlying this is inefficiency and a lack of transparency.
- Anti-competitive and unfair practices bedevil firms in Sana'a. This is mainly a situation where certain firms and importers, because of

their connections, seem to be able to evade taxes and regulations and thus can out-compete other firms who must play by the rules.

- Firms in Sana'a report long delays for clearing both imports and exports through customs. This is especially true for imports. Over 70 percent of firms surveyed in Sana'a report making extra-legal payments associated with customs clearances.
- The cost of bank credit is exorbitant, and demands for loan guarantees are onerous for firms in Sana'a. These financial constraints are perceived by one-third of Sana'a firms as being serious.

Besides these constraints to business and investment, private sector firms in Sana'a also complain about infrastructure deficiencies. For example, the unreliability of electrical supply causes production losses for business and forces them to install their own backup generating capacity. Water supply is an overarching constraint to firms in Sana'a, which are heavy water consumers, and the situation can only become worse. Finally, the difficulties of acquiring secure, serviced, and titled land for investment and business property is considered a major or severe constraint by almost one third of firms surveyed in Sana'a.

Sana'a, as Yemen's capital and largest city, enjoys a unique position within the national economy. In fact, the city's strengths, as elaborated above, ensure that, compared to other urban centers in Yemen, the capital will enjoy continued accumulation of capital and relatively strong economic growth. But the city cannot afford to rest on its achievements and existing strengths, since as with any large capital city, much of the fate of the nation's economic future is intrinsically tied to the capital's performance. And the country is in dire need of strong and sustained economic growth to meet its many challenges and to tackle the intractable problem of deep poverty. Therefore, **Sana'a must adopt a strategy that stimulates private sector growth**

**in ways that maximizes contributions to the national economy, complements economic activities in other urban centers, and provides support for national resource mobilization and crucially needed improvements in the national business climate.**

But how could this be done? Most business reform and improvement in the investment climate requires action at the national level.<sup>7</sup> But cannot Sana'a Municipality play an "illustrative role," applying reforms in areas under its control (for example, licensing, local taxation, and land registration, among others) and thus leading by example? After all, the relative sophistication of Sana'a's labor force, enterprises, and business-support services provide a convenient platform for innovation.

Also, an economic development strategy for Sana'a desperately needs to address the city's poverty, which means employment generation. This leads to a strategy of promoting those industry clusters for which Sana'a has a comparative advantage, especially those which are labor intensive.

One area where the Sana'a Municipality can directly influence the city's economic climate is providing better infrastructure services (such as electricity and water, as well as continuing to strengthen its transportation infrastructure) including accelerating expansion of air transport infrastructure.

Another concept to be explored in detail is the modern industrial park. Candidates might include creating industrial parks on the periphery, such as along the Taiz and Hodeidah highways, and also creating a transport and business park associated with the new airport development to the north of the city proper.

This does mean that Sana'a should pursue an all-out industrialization strategy? Quite the contrary. First, any water-intensive industries must be discouraged from locating in or around Sana'a, given the acute and increasing water shortages in the area. Secondly, the potential problems of environmental pollution and land use conflicts associated with manufacturing activities around Sana'a would inevitably be exacerbated. Thirdly, and most importantly, other urban centers in Yemen (in particular Aden and Al Hodeidah) are better suited for the bulk of manufacturing investment Yemen seeks to attract and, in fact, these centers have adopted robust industrial development strategies.<sup>8</sup> Thus industry in Sana'a is best restricted to light, non-polluting, water-conserving, processing, storage, distribution and business service activities for which there is a compelling locational logic.

What are the industries and economic activity clusters for which Sana'a has a comparative advantage? And which of these will generate the most employment and will most contribute to exports? These are as follows.

### **1) Tourism**

Sana'a, with its Old City and associated traditional markets, is already Yemen's premier tourist destination.<sup>9</sup> And tourism in Yemen has been identified as the economic sector with perhaps the greatest comparative advantage. With only 300,000 visitors per year (and only 100,000 from outside the region) Yemen has a vast untapped potential. And Sana'a is the gateway for tourists to the rest of Yemen. Improving Sana'a's tourism infrastructure and information, diversifying its tourism "products," upgrading and enhancing its tourist sites, improving site management, and training and improved marketing are all activities that should stimulate tourism as a lead economic sector in the city.

7 For a listing of these needed reform options and steps to improve the business climate, see the matrix entitled "Investment Climate Problems and Reform Options for Yemen" in World Bank, Republic of Yemen: Investment Climate Assessment: Priorities and Recommendations for Accelerating Private-led Growth, May 2006, p. viii.

8 The cities of Aden, Al Hodeidah, and Al Mukalla have all prepared local economic development strategies and campaigns to capitalize on their comparative advantages for certain kinds of manufacturing, as part of CDS exercises carried out over the 2002 to 2007 period.

9 It should not be forgotten that in and around Sana'a are several natural and heritage attractions in addition to the Old City.

Conference tourism is linked to, and complements, general tourism. In this Sana'a has a significant comparative advantage over other cities in the region, simply because it has a year around moderate and invigorating climate. When combined with the famed heritage sites in and around Sana'a, it would seem that promoting Sana'a as a destination for conference visitors is an obvious success formula. Already there are several hotels in Sana'a that have conference facilities, and more are under construction. A small amount of strategically placed promotion of Sana'a as a conference destination will yield considerable benefits.

## **2) Handicrafts and traditional manufacturing**

Yemen has a long tradition of handicrafts and artisan manufacturing, and for many Sana'a is considered the main center for such activities. And handicrafts have direct and natural links to the tourist industry. Almost all engaged in handicraft production are small and micro-enterprises, and they could benefit greatly from support in such areas as (1) credit, (2) enhanced product models, (3) marketing and promotion outlets, (4) production space, and (5) skills training, especially for youth.

## **3) Private health services**

Yemeni's currently travel to neighboring countries in large numbers (Egypt and Jordan in particular) for health services, because of the poor level of health care and expertise in Yemeni hospitals and the poor reputation of the Yemeni health sector. It is estimated that over US\$ 200 million per year is spent abroad by Yemenis on health care. If it were possible to attract serious private investment in modern, well-managed, and specialized health centers in Sana'a, Sana'a could attract patients from throughout Yemen and greatly reduce the need to travel abroad for health.

## **4) Private education services**

There is strong and growing demand among more affluent Yemenis, as well as resident expatriates, for quality secondary and higher

education. Sana'a has not yet reached anywhere near the level of other capital cities in the region for such educational services, and it would seem that this is one area where private investment and joint ventures, combined with a friendly regulatory environment, could generate considerable employment and also ancillary investment opportunities.

## **5) Real estate and construction**

In the last couple years Sana'a has begun to be eyed by major Gulf real estate companies as an investment opportunity for up-scale property developments. Given the huge financial resources they have at hand, such interest can only increase. The core of demand for such projects is said to come from Yemeni expatriates seeking to invest in real estate, and in addition there is increasing general demand for commercial and recreational projects. While some may say that such high-end investments are hardly needed in a poor country such as Yemen, such property investments generate considerable permanent as well as temporary employment, and they stimulate secondary demand for building materials, contracting, and building systems.

## **Strengthening Institutional Structures and Capacities**

The legal framework governing local government in Yemen rests on two pillars: the Constitution of 1991 and the Law of Local Authorities No.4 of 2000. In addition, the Cleaning and City Improvement Fund (CCIF), local governments' most important financial instrument for service delivery, is governed by Law No. 20 of 1999, and Prime Ministerial decree (No.167) of 1999. In addition, there are several other laws that touch on various important matters of direct relevance to local governments, such as service delivery, civil service, and budgeting. The problem is that, in some instances, these laws represent a source of conflict and contradiction with the overall legal and regulatory framework for decentralization.

Before unification and up to the year 2000, Yemen was characterized by a highly centralized administrative system with an elaborate network of de-concentrated field offices of sectoral ministries and agencies. Following the enactment of the Local Authorities Law in 2000, the country was territorially divided into local administrative units, each enjoying a juridical status.

The Municipality of Sana'a (*amanet al-a'asema sana'a*) was formed by Presidential Decree No. 13 of 1983. The decree defined the borders of the Municipality and bestowed on it the status of a governorate (along with 19 other governorates in Yemen, one of which is the Governorate of Sana'a which geographically surrounds Sana'a Municipality). Another presidential decree No. 2 of 2001 was issued dividing the Municipality of the Capital Sana'a into nine administrative areas or directorates (*muderiya*), plus added Bani Hareth District to the north as the Municipality's 10th directorate.

The municipal status of Sana'a, under which are grouped 10 districts, is unique in Yemen. As explained above, in other areas of the country there is a simple two tiered administrative system of governorates (*muhafadhat*) and districts (*mudiriya*), with no distinction between urban and rural areas. For example, the urban areas of both Taiz and Hodeidah extend across three *mudiriya*, but administratively these *mudiriya* are undistinguishable from rural *mudiriya* and all fall equally under the relevant governorates.

The legal and executive status of Sana'a Municipality as an independent local authority and capital of the nation and municipality, yet with governorate status, is still somewhat a gray area. Article 166 of the Local Authorities Law of 2000 states the necessity for promulgation of a special law governing the Sana'a Municipality, "which clarifies the powers and specializations which it enjoys and which aim at developing the capital of the country." Although partial drafts of

such a law have been written, no such law has yet seen the light of day

The present structure of the Municipality is based on the general organizational structure of governorates,<sup>10</sup> but with a number of modifications and additions. There are two kinds of organizational units: (1) those tied directly to the Governor, that is, the governor's office, the executive office, and the executive agencies (described in the next section), and (2) those tied to the Governor through an administrative pyramid. The latter include 13 general administrations (*idarat aama*) over which the deputy governor (who is also the general secretary or *amin aam al majlis al mahali*) presides.

There are also one or more governorate undersecretaries (*wakil al muhafadha*) whose tasks are determined by governor's decree. Currently there are four such undersecretaries in the Municipality, one for each of (1) cleanliness and environment, (2) office affairs, (3) financial and administrative affairs, and (4) technical affairs. These report directly to the First Undersecretary of the Governorate.

There are all together 16 organizational units in the Municipality. Three of these are the Office of the Governor, the Administration for Internal Control and Inspection, and the Technical Administration to Support Community Initiatives. The other 13 are general administrations (*idarat aama*). In addition, there are a number of executive agencies (*al ajhiza al tanfidhiya*), which are sectorally-oriented service delivery bodies. These are controlled by and report to the Governor. These executive agencies are technically branches of the relevant central ministries although legally they are part of the Municipality and their financing comes through it. The law on decentralization confers considerable local autonomy to these agencies but in practice control by central ministries remains strong, depending on the degree of political will towards decentralization.

<sup>10</sup> As set out in Republican Decree 269 of 2001.

There are also specific oversight committees (*ligaan*) made up of members of the elected Governorate Local Council. At present these are (1) finance and development, (2) services, (3) social affairs, and (4) tenders and procurement.

As mentioned above, there are ten districts (*mudiriyat*), which make up the Municipality, and each is geographically defined. Under the Local Authorities Law each district is an independent local authority, with its own elected local council and its own juridical personality. The district administration is headed by an appointed general director (*mudir aam*) who reports to the district local council. The sectoral organs of the Municipality (for example, health, education, technical affairs, etc.) each have service branches in the 10 districts.

Basically, the districts have a difficult time meeting the expectations and responsibilities conferred upon them in the Local Authorities Law, mainly because of a lack of qualified staff and an inability to undertake the planning, programming, licensing, supervision, and control functions envisioned in the law in parallel with the day-to-day functions of service delivery.

Restructuring the Municipality cannot be seen in isolation of the context of decentralization and governance in Yemen. Any proposals will have to consider factors and obstacles that come out of an assessment of the Municipality and also that have been identified in a number of studies of decentralization in Yemen:

- The understanding of “decentralization” is not always clear and can be confused with straightforward de-concentration of responsibilities and tasks.
- The Local Authorities Law represents a bold initiative that in one single step effected the wholesale transfer of powers and tasks to local authorities, rather than transferring such powers progressively step by step, which has led to confusion and conflicting interpretation.
- The two levels of local authorities (governorate and district) are given equal weight in

decentralization legislation without clear hierarchical distribution of powers; duplication of tasks is common; and there is no differentiation of local authorities as to size or location or urban/rural nature.

- The two levels of local authorities each have elected councils as the source of legitimacy, and thus there are two sets of ultimate authority within a single governorate.
- The elected councils are given wide authority in the law, but these powers are not clearly defined nor is there a clear division between the roles of the elected councils versus the executive authorities.
- The organizational structures of local authorities are complicated, frequently deviate from the form laid down in legislation, and suffer from duplication of efforts and tasks among different organizational units.
- Within the governorate organizational structure, there is considerable duplication of responsibilities and tasks among the administrative units and the executive agencies.
- The sectoral organizations within the Municipality (such as cleanliness, water and wastewater, health, and education) do not follow any common format. They are poorly integrated into the governorate administrative structure, are sometimes historical accidents, and yet command considerable weight given the huge size of their labor forces (especially education, technical affairs, and health) and their own revenue sources.
- Lack of local control over financial resources (which are mostly central) and weak local resource mobilization lead to small local participation in and control of development projects.
- There are weak human resource capacities at most local levels, which makes it difficult for local agencies to carry the functions bestowed upon them in decentralization legislation.

Improving and restructuring the Municipality is an imperative if the Municipality is to begin fulfilling its role as an institution that can provide services to its citizens efficiently and respond effectively to development pressures. Many structural alternatives are available.

- Unified Decentralized Municipality (one unified administration)
- Divided Decentralized Municipality (partly decentralized and partly de-concentrated)
- Decentralized Municipality with Two Levels (decentralized to Municipality and district levels)

Through discussions with the Municipality leadership as well as knowledgeable institutional experts in Yemen it has become clear that the first alternative—a unified, completely decentralized Municipality—would best guarantee the kinds of outcomes needed. It is worth noting that a unified, single administration for Sana’a Municipality has been popular with the Municipality’s leadership and was the intent of an early draft of the special law that is needed for the Municipality.

The aim is to unify the city into one single administration, and this intention of a unified city is found in the draft law for the Municipality. This means that the 10 district administrations should not be isolated from the City entity. The institutional setup for the unified city would have the following elements:

**General assembly:** This is the elected authority from which legitimacy for the Municipality devolves, with powers which are equivalent to those of the present Local Councils in Yemen.

**City council:** This is made up from internal elections from the general assembly, and authority is delegated from it. (There is a parallel with shareholder general assemblies and management councils in large companies.)

**Chairman of the Local Authority (*amin al asama*):** He would be elected by the general assembly and is the head of the administrative pyramid. That is, this person chairs the city council and also heads the Executive Authority.

**Executive Authority:** This is made up of all executive units in one structure, and is

run by an appointed Executive Manager who runs the Executive Authority on a day-to-day basis. This manager must have high qualifications that might not be found among State employees and thus secondment from the private sector should be possible. He remains accountable to the Chairman of the Local Authority who delegates most tasks to him. He would be similar to a “city manager” found in some municipalities in the West.

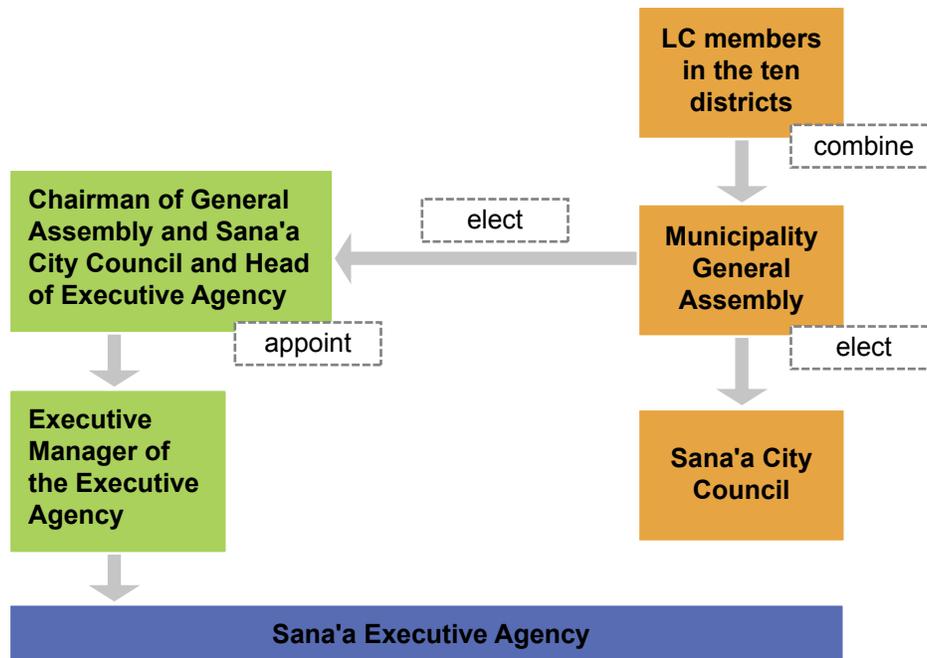
This proposed system still needs administrative and service divisions that are geographic, i.e., what are presently known as *mudiriyas* or districts, but only as de-concentrated direct branches or extensions of the Executive Authority (i.e. no elected councils and no legal personality). Their tasks may be (a) providing local neighborhood services and issuing licenses, (b) preparing budgets to be submitted to the City Council of the Municipality, (c) supporting cooperatives, and (d) undertaking some services that are economically and technically feasible at this small geographic scale.

To actualize these proposals, many steps and actions need to be undertaken. These can be divided into two main areas:

*First, refining, pruning or re-writing legal and procedural documents.* This mainly concerns the draft law of the Municipality al Asama. This law must incorporate (1) unifying the city under a single enlarged local council, (2) confirming the main principles of the new structure, but leaving the details of the structure to subsequent writing of the executive regulations to the law once finalized, and confirming some of the main recommendations concerning the powers of the local authority over certain non-municipal tasks. Also, some articles of the Local Authority Law need to be revised that conflict with the refinements proposed here.

*Second, organizational building of the Municipality.* The organizational structure needs to be part of the executive regulations of the Municipality. Also, the required tasks and functions need spelling out and assigned to the units of

## Entities and Lines of Authority for the Proposed Restructuring of the Municipality



the structure. A “Procedural and Organizational Guide” to define the work procedures and tasks and functions needs preparation.

*Third, and in parallel, undertake the activation of the organizational infrastructure* of the Municipality. This will require building a computer based management information system: diagnosing information needs, identify priorities, and ensuring information is applied in each of the structure’s units.

*Fourth, initiate training for tasks and functions and procedures.* This requires diagnosing training needs, preparing training programs, making available training agencies, and progressively applying programs. While training needs are across the board, a particular focus should be placed on the executives and staff of the Municipality administration who can insure continuity beyond the term of office of elected council

members and Amin Al Asama. Also, training should be focused on branch administrations and offices, particularly as concerns revenue collection. Detailed training programs should include basic computer training, participatory strategic planning, monitoring and evaluation, the promotion and coordination of community initiatives, assets management, and revenue collection.

### **Better Financial Management for the City**

The financial system for Sana'a Municipality follows in general that of governorates authorities as set out in the Law of Local Authorities No.4 of 2000, but with a number of variations. Because of its unique structure as an urban governorate with 10 districts there are three separate budgets that relate to the city’s financing: the Amana

Districts Budget for the 10 districts; the Amana Central Budget; and the Amana's Cleanliness and City Improvement Fund (CCIF). As can be seen by comparing these budgets over the 2004–2006 period, the Amana Districts Budget was the largest in both revenues and expenditures (representing over 50 percent of the grand total, and the Amana Central Budget was the second largest. The Sana'a CCIF was a relatively minor player, representing between 10 and 16 percent of grand totals.

An overall assessment of Sana'a Municipality's finances allows a summarizing of the areas in greatest need of improvement.

**Central subsidies:** Fiscal conditions of Sana'a city and the fiscal relationship and arrangements between the center and the city shows that the city's budgets are heavily dependent on the central government subsidy to finance its activities. The central recurrent and capital subsidy accounted for 73.4 percent of Sana'a's total revenue in 2006/2007. This reduces the ability of the city to effectively respond to the needs and preferences of its residents, since most of these subsidies are specific purpose set by the central ministries. In addition, the fact that these subsidies

are not stable and depend on the national fiscal condition, limits the ability of the city to even implement the commitments approved by the annual plans.

**Revenue bases:** The study shows that reliable data bases exist only for some revenue sources. Furthermore, the levels of sophistication of databases vary markedly among various revenue sources. While serious efforts are made to develop data bases in areas of Al Zakat and educational services, others relating to property taxes, taxes on free enterprise, notarization, and registration services suffer from extreme negligence. In addition, data base coverage of the actual size of revenue sources is limited, especially for sources such as katt, and some types of Al Zakat, real estate, and free enterprise revenues.

**Tax liability estimation:** It is evident in the case of Al Zakat and qatt, personal estimation of due taxes/liabilities remains a major method in determining the amount of due taxes. Complexity of the tax estimation and collection system results in the absence of transparency between the income collecting units and the tax and fees payers. Except in very tight limits, the local districts do not

### Total Revenues and Expenditures for Sana'a's Different Budgets in 1,000 YR

	Amana Districts Budget	Amana Central Budget	Cleanliness & City Improvement Fund	Grand Totals
<b>Year 2004</b>				
Total Revenues	8,358,074	4,968,619	2,181,842	15,508,535
Total Expenditures	7,175,681	6,035,771	2,246,121	15,457,573
<b>Year 2005</b>				
Total Revenues	9,804,088	6,145,841	2,728,357	18,678,286
Total Expenditures	9,239,638	5,922,860	2,483,275	17,645,773
<b>Year 2006</b>				
Total Revenues	11,242,929	5,124,031	2,300,148	18,667,108
Total Expenditures	12,611,333	7,631,860	2,167,137	22,410,330

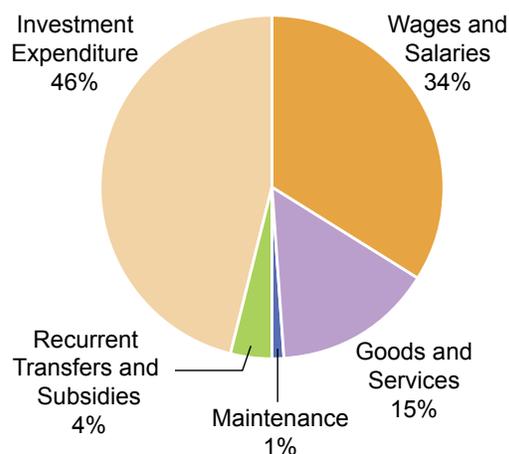
have the necessary flexibility to extend total or partial tax exemptions nor to reschedule payments. This rigid taxation practice leads to tax evasion or settlements outside the system, hence seriously reducing the potential revenue.

**Collection methods:** Field collection is the major collection method, while the efforts to introduce electronic collection are very modest. A comparison of the target to actual revenues indicates the need for major development of tax collection methods. There is a lack of awareness among tax collectors and local payers alike, and a lack of incentives and commissions for collection. The budgets set for collection efforts are very limited because of a very high level of inaccuracy to the extent that tax estimation is quite arbitrary.

**Payment coercion:** Because of the special nature of Yemeni society and its intricate social interrelationships, the use of coercive methods to force payment of taxes is quite difficult. Political and social figures interfere so as to thwart the usage of coercion methods. Tax enforcement entities, particularly the police force, do not cooperate in applying coercive methods for collection. Deteriorating economic and social conditions in some districts cause the authorities to understandably refrain from using coercive collection methods. Tax authorities resort only infrequently to the legal system while the system itself represented by the courts is usually indecisive when dealing with tax evasion.

**Administrative capacity:** While the multiplicity of the units responsible for different steps in managing the local revenues is unjustified, the number of employees in key management units is insufficient and the quality of their technical and proficiency levels is inadequate to their tasks at hand. Limited budgets are allocated to management and this has led most districts to concentrate on permanent, rather than part-time or seasonal employees. Research efforts in revenue management are modest, particularly in

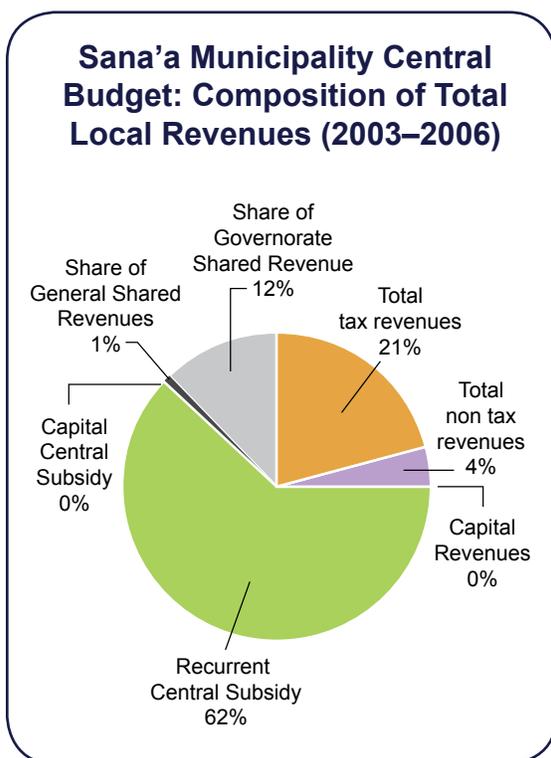
**Structure of Expenditure for the Municipal Central Budget (2003–2006)**



the fields of revenue estimation, collection methods, and collection cost.

**Investment design and implementation:** Most of the investments implemented at the district level are not based on technical feasibility studies. Investments that have had feasibility studies were conducted by the governorates, the executive offices at the governorate level, or the central agencies. The lack of technical units at the district level is the main reason standing behind this situation. At the same time, the district does not have a budget for technical feasibility studies and it is not allowed to finance these studies from investment funds. Securing specialists and technical expertise is one of the main obstacles facing the districts. The districts, according to the current wages schedules, cannot afford the market price of this type of staff, while the central government entities and the governorates have not introduced enough financial and social incentives to their staff to move to the districts. The districts also encounter difficulties in implementing investments: inadequate central investment subsidies; districts not having full control on investment allocation because of

fluctuations; lack of qualified staff and cadres; lack of efficient contractors at the district level; lack of available land to implement projects; and inefficient and biased choice of contractors.



**Local fiscal autonomy:** Local revenue sources are strongly controlled as the central government fixes the tax rate and tax base of most of the local revenue sources. Various reports have identified a number of problems in the present local authority revenue assignments and procedures, such as lack of buoyancy, lack of local autonomy to set the tax base rate (at least within certain ceilings, and control and manage the tax administration; nonconductive assignment of revenue sources; weaknesses in the revenue sharing arrangements; and lack of local capacity and incentives to improve revenue mobilization.

**Potentials to increase local revenues:** Potential procedures to be explored to increase local revenues could include the fol-

lowing: re-zoning through changing the status of land usage; implementing a land pooling scheme whereby owners of small plots of land will be encouraged to combine their land together for profitable development under the governorate concerned; and applying valorization charges. These charges are taxes on the increase in land values that results from the provision of infrastructure, payable by the land owner to finance urban infrastructure.

**Central-local fiscal arrangements and possible areas for reform:** Ideally, subnational revenue system reform should be done in the context of an examination of the larger national revenue system and its reform, not as a self-standing reform. In Yemen, multiple redundant revenue sources should ideally be consolidated, but broader public sector restructuring efforts are needed. For example, without basic civil service reform, it is not expected that revenue administrators and collectors would effectively perform their functions.

Initial revenue reforms should focus more on taking steps to enhance own-source revenue generation and to link the extra revenues to improved service delivery. This does not mean that reforms of the shared tax and transfer system could not proceed as part of a larger review and reform of the national public revenue system. Sharing of specific sources of revenue is most useful, if done on an origin basis. This helps to establish the fiscal capacity of a local government unit and to define the role of a redistributive transfer system.

The Local Administration Law gives local authorities a considerable role in preparing and monitoring the implementation of local investment budgets, although it gives almost no role at the recurrent side of the budget. Concerning the investment side, the preparing stage is the full responsibility of the executive office at the district diwan. The preparation process considers relevant laws and regulations, data, and information collected on the district investment performance and the central and local devel-

opment plans. The capacity of the executive office members may not allow for an effective preparation process. The flow of data and information at the local level regarding investment implementation is slow in a way that weakens the process.

In the same vein, local level officials face a severe problem in evaluating the intergovernmental transfers. Many institutions are involved in estimating the values of intergovernmental transfers and in informing the districts about their transfer shares. According to the financial regulations, the districts should be informed about their shares by the beginning of May. However, practice reflects very different experience of time delays.

Field visits and interviews show that the city of Sana'a and its affiliated districts pay little attention to improving the management of public assets located and owned by the city's districts. The city does not have an accurate database of these assets and their ownership history. Also, the city management does not have a plan to maximize its financial benefits from using these assets. Public assets located in Sana'a represent a considerable potential revenue base, and the city should invest in these assets to generate more income in the future. At the same time, the improvement and the rehabilitation of public assets would have indirect positive effects on the economy of Sana'a in general and on the business environment in particular.

Following on from the assessment of Sana'a's financial management system, it is possible to develop a strategy for improving financial performance. First, a number of key elements or principles that govern the strategy are identified:

- Invest in the infrastructure of various units managing the local tax bases such as databases, collection and levying methods, research and development, and transparency to enhance the effectiveness of the points of revenue collections.

- Clearly outline, describe, and specify jobs and tasks.
- Emphasize cooperation between the revenue collection units and the relevant executive authorities to facilitate the collection task.
- Increase the awareness of the advantages of taxes and the role they play and the ideal relationship between the collection units and the tax payers. Promotional campaigns should address both the tax payers and the tax collectors.
- Reconsider the budgets allocated to manage local revenue bases, particularly those relating to levying and collection systems and coercive payment methods.
- Develop an integrated/consolidated budget for the city of Sana'a.
- Develop and activate a city/district level information system and GIS to be used by local authorities for planning and impact assessment and provide training to local staff on the operation of the system.
- Improve performance of district authorities with enhanced capacities in public expenditure and resource management and the promotion of social and economic development and the alleviation of poverty.

Successful fiscal reform of local authorities in several countries shows that the general approach has always been to increase the autonomy and authority of such units through decentralization. Efforts have been exerted to diversify the sources of financing these units, increasing their budget allocations and improving and developing the standards of their personnel and their system's software and hardware. In the case of Sana'a, the following are discrete actions that need to be taken.

**Set key performance indicators** that are important to increase the efficiency and effectiveness of the revenue management process, and continuously review the sketched indicators.

**Redefine the tax base levels for some revenue sources** with the purpose of either simplifying the procedures or increasing the

return. Among these are property taxes, improvement fees, and toll fees on roads.

**Introduce an integrated budgeting process at the city level.** This needs hard negotiations with the Ministry of Finance and line ministries and service authorities at the central level. However, alternatives could be adopted locally, such as setting up a committee for investment planning at the city level. Also budgeting and planning departments should be integrated for this effort.

**Enhance revenue collection requirements.** Three aspects are considered important to enhance revenue collection process in Sana'a's revenue generating departments: (1) optimum rate structures, (2) appropriate rules and regulations, and (3) human resource capacity development.

**Reduce revenue leakage.** To reduce revenue leakage, Sana'a city may perform some or all of the following actions: (1) improving the direct control process, (2) enforce strict and heavy penalties for noncompliance, (3) discipline financial staff that may have contributed to leakage in local revenues, and (4) better link tax payment with services provided by local government.

**Reduce revenue collection costs.** Improvement in revenue performance is also critically dependent upon the ability of local authorities to minimize the cost of collecting revenues. Based on this analysis, there are four actions that could be taken by Sana'a city to improve their administrative efficiency: (1) simplification of administrative measures and procedures, (2) calculate collection efficiency for each type of revenue, (3) consider elimination of very inefficient sources of revenue, and (4) consider direct ways to cut operating costs.

### **Improved Urban Planning**

The main physical, spatial, environmental, and institutional problems facing urban planning in Sana'a can be summarized as follows.

**Low-density sprawl within the inhabited area of the municipality** has resulted in a relatively low residential gross density of 130 persons/ hectare, which represents an inefficient process of land consumption process. This has resulted in more expensive service delivery and an overall less efficient urban pattern.

**Limited prime sites for investment projects.** The majority of land parcels with highest values or highest development potential are already occupied by low development density or suboptimal land uses from an economic efficiency perspective. In addition, many land parcels today along main arteries or within inner city areas belong to the military or other governmental organizations, which use those parcels in economically improper uses as camps, storages, and administrative buildings.

**The heritage value of Old Sana'a and other historic areas of the municipality remain under threat.** Despite the remarkable conservation and restoration efforts carried out by General Authority for Preserving the Heritage of Yemeni Cities with the support of several international organizations, Old Sana'a still lacks a comprehensive development plan that utilizes its unique potentials for economic revitalization and integrates it with the overall urban context. The new proposed master plan should come up with a clear strategy and action plans on how to integrate the Old Sana'a with the rest of the municipality, protecting its heritage and image from modern development. Such a comprehensive plan must also address conservation and revitalization of a number of other historic and heritage areas in and around Sana'a, such as parts of Bir Al Azeb (including Al Qaa, the old Jewish Quarter), Al Rowda, and Beit Baus.

**Lack of sufficient open spaces and parks.** In spite of the various parks created by the Municipality within the last five years, the city still suffers from the absence of open spaces within inner city areas.

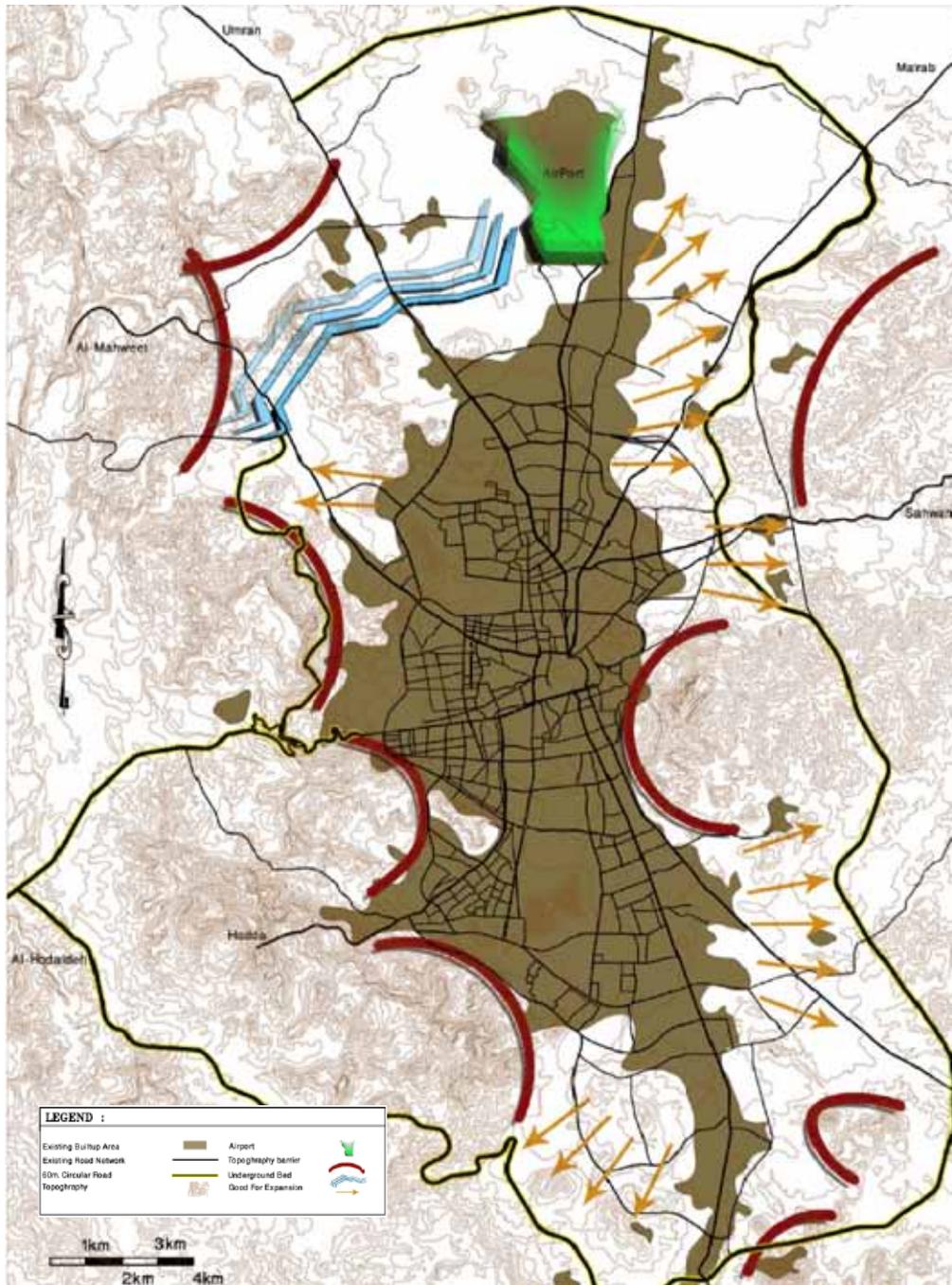
**A core problem of planning in Sana'a is that it is a city without a comprehensive plan or a vision for its future growth.** The approved 1978 Master Plan has become hopelessly obsolete, and the 1998 Cuban-Yemeni master plan was never adopted. As a result, urban planning efforts concentrate on short-term problem solving rather than long-term strategic planning. Today, the Municipality, in order to promote investment and cope with the fast informal development taking place on the peripheries, is forced to prepare detailed neighborhood plans for candidate areas for urban development. The Municipality lacks a sustainable development strategy for its main environmental assets (whether natural or man-made), such as water resources, agricultural areas, and the unique heritage.

**Lack of clarity of responsibility in planning matters and poor coordination.** Up until 2006, urban planning was the mandate of the Ministry of Public Works and Roads through the department of housing and urban planning or through its executive offices in the Municipality, with hardly any respect to local needs and priorities. With the establishment of the General Authority for Lands and Urban Planning (GALSUP), the planning role has been placed centrally in contrary to the Local Authorities Law. As such, the municipal urban planning office, previously affiliated to Ministry of Public Works and currently under GALSUP, has continued with its former limited mandate of designing detailed neighborhood plans, amending detailed plans to reflect the situation on the ground, and monitoring the implementation of the master plan and detailed subdivision plans, especially in ensuring the alignment of main roads. However, the responsibility of monitoring the implementation of plans is questionable as the responsibility of inspection and issuing the building permits has been retained under the de-concentrated arms of the Ministry of Public Works and Highways while planning has become the responsibility of GALSUP and its de-concentrated offices with hardly any coordination.

**Detailed neighborhood plans: a flawed tool for planning.** The Municipality is divided into nine planning sectors, each sector is divided into nine areas and each area is divided into nine neighborhoods. The neighborhood ranges from 45–60 hectares with an estimated population ranges from 7,000 up to 12,000 persons. Each neighborhood is planned to have a primary school, garden, and mosque. If the population reaches 12,000, then a post office, police office and a high school should be included in the neighborhood plan. The detailed neighborhood plans that the urban planning office typically produces are cookie-cutter plans, which follow inappropriate planning norms and standards that are derived from the neighborhood planning unit concept. The plans rarely look at existing land ownership patterns or existing buildings on the ground. This is simply because there are no up-to-date detailed maps. Usually land ownership is not known or properly registered until the urban planning office prepares the detailed plans and publicizes them. Then, the landlords start to claim their rights, try to prove their ownership and anticipate compensation from the municipality in case their land has been confiscated for the purpose of establishing local roads or public services. It is worth mentioning that detailed planning can be seen as a tool for wealth-production for landowners. According to local experts and officials from the urban planning office in the Municipality, land prices may increase up to ten times after the Municipality prepares and publishes the detailed plan of a particular area. This explains why in several cases, certain areas have been planned prior to other ones. In fact, many influential landlords attempt to influence planning decisions so that they can benefit from wind-fall gains upon the sale of their lands.

**Lack of building regulations.** The Municipality does not apply any building regulations apart from the maximum permissible heights along the airport flight path. The lack of building regulations is considered the fault of GALSUP, since the executive by-law that is needed to put into application the new build-

## Constraints to Development and Main Areas of Expansion 2005



Source: Team International, *Comprehensive Traffic Management Study for Sana'a City, Land Development and Population Forecast*, November 2006.

ing code has not been prepared, which means that the 2002 code can not be enforced. It is important to note, however, that building regulations alone do not mean much unless there is enforcement capacity in place (which today does not exist).

**Lack of an effective land registry.** Although land registration is sanctioned under legislation, in Sana'a (as well as throughout Yemen), it hardly functions. There is no cadastre or even property maps, and registering land is at the discretion of the land owner. Since there are stiff fees associated with land registration, it is no wonder that few landlords take this option. The effect, in terms of land management, is obviously a negative one.

**Poor of management of state lands.** Most land in and around Sana'a is considered agricultural and thus is privately owned. State lands are supposed to include all steep terrain with slopes in excess of 20 percent as well as certain institutional parcels. But there is no inventory of state lands and no coordinated attempts to protect them. Encroachment on state lands is rife, not only by informal squatters but more often by land speculators who claim segments of state lands as extensions to their adjacent agricultural parcels.

Based on this analysis, a number of recommendations can be made that would, over time, result in a much improved and effective urban planning and land management systems. These are highlighted below. Recommendations are made with the knowledge that a complete update of the Sana'a Master Plan is being launched and will be carried out by international consultants.

### ***Provision of Land for Residential and Investment Activities and the Concepts of Land Banking and Land Pooling and Readjustment***

Access to urban land (both for investment and residential use) represents one of the critical obstacles to economic growth, as well as to poverty alleviation in Sana'a. This is mainly the

results of high risks and transaction costs resulting from unclear and unenforceable property rights. The existing systems for administering land tenure security (namely through the two pillars of land registration and dispute resolution) and managing state-owned lands are fraught with many problems. There would be an urgent need to setup a clear and coordinated mechanism for land management and disposition within the municipality administrative jurisdiction in order to ensure proper spatial development, according to the new proposed Master Plan.

Another alternative for ensuring the availability of land for mega investment projects would be through purchasing privately owned land, which would require huge cash outlays to compensate the original land owners, unless such land assembly were carried out far in advance of development pressures and the consequent rise in land prices.

Such a situation suggests that there is an immediate need to initiate a process of land banking. Under this system, the Municipality would acquire land in key fringe locations for future urban development. Through this initiative, the Municipality should concentrate on acquiring remote and presently inaccessible land which can be bought from private land holders at minimal prices. Then, the land bank would regularly release its land for such development sectors as housing, economic development, and services as needed to control land market, prevent land speculation, and recapture some of the unearned increment because of rural-to-urban land conversion.

Another possible modality for acquiring land and guiding development would be through what is called "land readjustment" or "land pooling." A land readjustment scheme is typically initiated by designating an area that is to be converted from agricultural to urban land use for land readjustment. A subdivision plan is developed for a unified planning of the area. Provision of infrastructure and services is financed by the sale of some of the plots within the area, often for commercial activities. The original landowners

## Sawaan Sites and Services Project



The Sawaan sites and services project was started in the mid 1980s by the then Ministry of Housing and Urban Development with financing from the World Bank. It involved creating a complete new neighborhood on state land in what was then the northeast fringe of Sana'a, with small serviced plots of land, plus public facilities as well as a market. Beneficiaries (mainly civil servants) progressively built their own housing, partly financed by long-term loans. Although forgotten by most decision-makers, this project today is fully populated, vibrant, and well integrated into the urban fabric. It should be recognized as a success and an important example of efficient and appropriate urban development that taps the considerable energies of the Yemeni owner-builder.

are provided plots within the reshaped area that, though smaller in size, now have access to infrastructure and services. Land readjustment in Sana'a should be considered, but it will require completely new enabling legislation which allows compulsory taking by the state of lands being readjusted. And for land readjustment to

work, improved land information and land management capacities are needed.

### ***Better Land Information Systems and Land Management***

It is recommended that a number of steps be taken to improve land information systems and

land management mechanisms. The following are the most important:

- Create an accessible information clearing-house on Sana'a's land and spatial development.
- Improve, expand, and modernize land titling and registration systems and associated tax regimes.
- Inventory and protect State lands in and around Sana'a (as described in the previous section).
- Improve or streamline court procedures for land contestation and dispute resolution.
- Adopt a straightforward and low-cost building code system for Sana'a that would apply to all new structures.
- Reform the detailed neighborhood planning system and re-plan neighborhoods, utilizing relaxed street and public space standards and aiming at smaller plot sizes. Such re-planning of neighborhoods would be carried out using up-to-date satellite imagery and would reflect on-the-ground reality.

### ***Improving Urban Planning Skills and Capacities***

At present there is only a handful of dedicated planning officials with basic planning skills and the will to improve them, especially with more computer-oriented applications. Most other people on the planning staff, both in the Municipality and GALSUP, are simply occupying their positions. What is required is first a comprehensive skills and training needs assessment, followed by the selection of a cadre of young motivated employees in the relevant departments for intensive and on-the-job training. Revision of detailed neighborhood plans, based on reality on the ground, would be an excellent means for practical training.

### ***Dealing with the Water Shortage***

Sana'a's looming water crisis could compromise any development strategies and could threaten Sana'a's very survival. Without strict conservation and effective water management, Sana'a is facing a dry and inhospitable future. While the subjects of potential water sources, water depletion, and rationalization of water

use are complicated technical and political issues, it is worthwhile considering measures to meet the challenge, since such measures will have consequences for Sana'a's development planning and land management. Some possible measures are listed here.

- **Restrict irrigated qatt production in and around Sana'a** (with implications for agricultural land use policies). *Use surface water to recharge aquifers by channeling sailas and through upstream rain harvesting* (with implications for surface water and flood management systems).
- **Restrict water consuming industries** (with implications for industrial development policies and industrial zone management).
- **Seek new sources of water outside the Sana'a basin, either through development of new water fields or through water desalination** (with implications for water consumption pricing for Sana'a's inhabitants and generating economic returns for the huge investments required).

### **Comprehensive Approach to Urban Upgrading in Sana'a**

There is little systematic information available on informal settlements in Sana'a. No comprehensive inventory and classification of informal settlements has been undertaken so far and the available information is limited to a brief description of the main features of the settlements covered and some statistics on socio-economic characteristics and housing conditions.

Also, there is no official standard definition of informal settlements in Yemen. Informal areas are usually labeled as "*ashwa'i*", i.e., "random" areas with a connotation of chaotic and unlawful development. They are also often associated with poverty, marginalization, and precarious housing conditions. Perceptions of "*ashwa'i*" areas vary and are mostly informed by shallow and impressionistic media reporting and personal experience.

In view of the fact that information on informal residential development in Sana'a is extremely scarce and definitions of these areas vary widely, it was decided to adopt a rather broad definition that allows for capturing the distinct features and complex dynamics in various types of informal areas. Informal areas are thus defined as ***“areas in which land is squatted on or subdivided without following an official subdivision plan and which are informally developed without adhering to any official planning and building regulations.”***

The informal areas covered in the Sana'a CDS Urban Upgrading Study were initially identified through analysis of maps and satellite images. The final selection was made after repeated field trips to all of these areas. The distinction between formal and informal areas was not easy and boundaries have to be verified in future detailed studies. The information collected on the different areas included in this study provides, nevertheless, a sufficiently clear general picture about informal areas and the phenomenon of informal residential development to allow for the formulation of a strategy and action plan.

Altogether 35 informal settlements were identified in Sana'a. They are located in six of the ten districts of the city as well as on the urban fringe. Four areas were established alongside *sailas* (mostly dry river beds), seven areas on hills and steep slopes, 23 areas on private agricultural land and adjacent mountains (*mara-hiq*), and one area consists of tents and shacks erected besides a main street. With the exception of the latter, all informal areas were established between 1990 and 1995. Altogether 23 areas were at least partially planned ex-post but plans were never really enforced and development continues largely informally.

Based on international experiences in many countries, it is possible to group the 35 areas into a number of typologies, each of which have a set of common features that represent particular challenges for urban plan-

ning, service provision, and socio-economic development programs and that require specific approaches to deal with their specific problems.

The 35 areas were classified into four different types, including sub-types:

1. Slum pockets (two areas)
2. Informal areas within or close to the core urban built-up area (eight areas)
3. Informal areas on the far urban fringe
  - a. alongside or close to major roads (six areas) or
  - b. village extensions (nine areas)
4. Informal areas on land that was reserved for
  - a. the preservation of public goods (three areas) or
  - b. other nonresidential purposes (seven areas)

Population figures and densities could only be estimated roughly, which was done by defining the boundaries of each area on GIS imagery of Sana'a. It was found that informal areas in Sana'a host between roughly 313,000 and 390,000 inhabitants (low and high estimates of density and population) or between 16.5 percent and 20.5 percent of the city's total population. Even though these are rather rough estimates, they clearly show that residential informality is a phenomenon of scale. Informal areas appear to accommodate a significant percentage of Sana'a's population growth. The 2004 census indicates an increase of 744,207 individuals in Sana'a during the period of 1994–2004. **The population estimates suggest that around one third of these households have found housing in the 35 informal areas included in this study.**

So far, the government has no strategy to control, contain, or guide informal residential development. In some areas, the Municipality tries to control informal development by prohibitions, which it is unable to enforce. The main instrument of government response is an ex-post planning mechanism, i.e., the preparation and



**Type (1):  
Haret Al Lakama**



**Type (2):  
Sailat Al Shahira**



**Type (3a):  
Qa' Al Qaidi**



**Type (3b):  
Asar Village Ext.**



**Type (4a): Al Khafji**



**Type (4b):  
Houd Sana'a**

approval of detailed neighborhood plans that consist of the street layout and location of basic services such as a school, a mosque, and a garden. These detailed plans are not embedded in any broader structural planning or strategic vision and are usually not enforced. In practice, most post-planned areas look virtually the same as unplanned areas and planners themselves use the term of “*takhtit ‘ashwa’*” (random planning), which reflects the fact that development in post-planned areas continues largely informally. Slum pockets are considered illegal and unacceptable and the favored solution is demolition and resettlement. Most slum dwellers were resettled in the Sa’wan area where the state has built small, low-cost housing units for them.

It is considered necessary to develop a strategy that deals not only with existing informal areas but addresses also the phenomenon of informal residential development as an ongoing dynamic. Despite the variety of features and dynamics in different types of informal areas, these areas have many challenges in common, most notably the following:

- Service provision and upgrading of deficient services and finance of needed investments
- Lack of or inappropriate planning that takes place without a vision for the incorporation of informal areas in a more comprehensive plan for the city
- Challenge to secure land for infrastructure and service provision because of encroachment on state land and inflating land prices after the start of planning

Other problems and challenges apply only to part of the areas, most notably the following:

- Environmental problems and health hazards
- Difficult access, dangers of land slides, collapse of buildings, and other hazards related to difficult topography
- Inflated costs to extend infrastructure and provide services to low-density areas and to areas with difficult access and topography

- Difficulties to preserve public goods that are endangered because of (continuing) informal urbanization
- Land disputes that sometimes turn violent
- Overcrowding and unhealthy housing conditions
- Socio-economic problems related to poverty and a high concentration of poor and low income residents

These issues need to be addressed within a comprehensive strategy that consists essentially of two pillars: (1) remedy of problems related to the existing situation, i.e., integrated upgrading of selected areas and (2) guidance of the ongoing informal urbanization process that implies the acceptance of a certain level of informality but avoids the most urgent problems related to it.

The principles listed below are to be understood as guidelines for the future design of interventions and actions:

1. Address development dynamics, not only the existing situation
2. Don't try to prohibit continuing informal residential development, rather aim to organize and guide it
3. Preserve access to cheap land for low-income strata, but avoid creating development dynamics that boost further expansion of low-density informal areas
4. Anticipate service needs, prioritize staged service provision, and cooperate with the private sector to ensure provision of essential services

5. Incorporate economic development concerns into planning for development
6. In areas with a high concentration of the poor, combine physical with socio-economic development interventions and engage multiple actors
7. Ensure residents' participation in planning and development

It is possible to present seven key elements of the proposed strategy for dealing with informal residential development. They are intended to delineate concrete paths of action, which are taken up and translated into first steps in the last section presenting the proposed action plan. The key elements proposed are the following:

- Secure state land and land needed for infrastructure and services
- Declare pilot development zones for guided fringe informal development
- Carry out integrated upgrading projects in selected mature informal areas
- Quickly identify tailored and feasible solutions for areas where crucial public goods are endangered
- Create an information system that allows for continuous monitoring and effective needs assessment
- Adapt planning tools and increase enforcement capacities
- Improve intersectoral approach for service provision.

# Implementation

## *Agendas for Action*

It is for the stakeholders in Sana'a's development—city and central government officials, private sector and academic leaders, and representatives of the population—to carry forward the vision and strategies for the city's sustainable development. They will ultimately be responsible for periodically updating, implementing and monitoring their City Development Strategy over the next 20 years.

This strategy has been crafted from an understanding the city's strengths, comparative advantages, and many challenges it faces. This understanding has led to five components for the overall strategy. Each has a strategic goal and each has a number of proposed actions associated with it, as is summarized in the following boxes.

### **Economic Development**

#### **Strategy**

The strategy is two pronged: (1) Stimulate private sector growth in ways that maximize contributions to the national economy, complement economic activities in other urban centers, and provide support for crucially needed improvements in the national business climate; (2) Promote those service and industry clusters for which Sana'a has a comparative advantage, especially those which are labor intensive, to generate maximum new job and enterprise opportunities to tackle the city's acute poverty.

#### **Proposals and Actions**

1. Develop high quality and secure investor zones (industry and business parks)
2. Promote Sana'a's tourism, as a destination for tourists, as a tourism gateway for the rest of Yemen, and as a location for international conferences and expositions
3. Promote Sana'a's handicraft sector
4. Encourage private investment in specialized health and education facilities
5. Encourage foreign and Yemeni expatriate investment in prime real estate projects
6. Establish economic development committees in the Municipality and perhaps a higher business council
7. Reform and improve business-related administration in the Municipality (e.g., licensing, local taxation, and land registration)

## Municipal Finance

### Strategy

The aim is to improve financial performance of the Municipality. The strategy is to increase the autonomy and efficiency of the Municipality's financial system by diversifying and increasing the sources of revenues, by rationalizing budget allocations, by developing performance standards for financial departments of the Municipality and their personnel, and by improving and computerizing budget information systems. Ultimately the strategy is to integrate the city's budgets into one unified system.

### Proposals and Actions

1. Reduce revenue collection costs by simplifying procedures and administration and calculating collection efficiency for each type of revenue
2. Enhance revenue collection by training staff of revenue departments
3. Identify new tax or fee payers, improve valuation of tax objects, and calculate the revenue capacity for each type of levy
4. Set performance indicators for revenue management and continuously review the sketched indicators
5. Create a committee for investment planning at the Municipality level to coordinate with all relevant central ministries and agencies as well as with the city's districts
6. Integrate the Municipality's budgeting and planning departments and establish a city and district level finance information system
7. Reduce leakage in Municipality revenues and expenditures by improving financial control, by strictly enforcing heavy penalties for noncompliance, and by disciplining staff

## Institutional Development

### Strategy

The aim is to improve the Municipality, which can provide services to its citizens efficiently and respond effectively to development pressures. The strategy is to unify the city into one single administration, including the ten district administrations, so that the Municipality can function as one "corporate" entity.

### Proposals and Actions

1. Unify the elected bodies into one General Assembly with a small City Council, headed by an elected Amin al Asama
2. Empower the City Council with policy functions through specialized committees
3. Create a unified Executive Authority with all line units in one pyramidal structure, run by an appointed Executive Manager under the Amin al Asama.
4. Prepare a *separate law for the Municipality el Asama* with executive regulations, and modify national legislation as necessary
5. Establish the organizational structure based on clear tasks and functions of the units, governed by procedural and organizational guide
6. Rationalize the specialized executive agencies of the Municipality (Cleanliness Fund, Local Water and Wastewater Corporation, Education, and Health Offices)
7. Restructure district administrations as functional branches of Municipality executive agencies
8. Launch training programs for Municipality nonelected staff that are based on clear training needs assessment
9. Building a management information system for all of the Municipality's executive units

## Urban Planning

### *Strategy*

The aim is to develop a much improved and more effective urban planning and land management systems for the Municipality. The strategy is to adopt better information, planning, and land management mechanisms which, over time, give the Municipality more control over urban development. This strategy will complement the Sana'a Master Plan updating exercise, which is to be carried out by international consultants

### *Proposals and Actions*

1. Improve future land delivery through adopting the concept of land banking
2. Establish an accessible and dynamic land information system
3. Inventory and protect State lands in and around Sana'a
4. Improve, expand, and modernize land titling and registration systems and associated tax regimes
5. Adopt a straightforward and low-cost building code system for Sana'a which would apply to all new structures
6. Reform the detailed neighborhood planning system and re-plan neighborhoods, utilizing relaxed street and public space standards and aiming at smaller plot sizes
7. Improving urban planning skills and capacities
8. Improving revenue generation from the process of urban development

## Urban Upgrading

### *Strategy*

The aim is to improve the livelihoods of those living in disadvantaged areas and also to accommodate future inhabitants in improved urban conditions. The strategy is to deal not only with existing informal areas but to address also the phenomenon of informal residential development as an ongoing dynamic, through undertaking pilot upgrading projects in selected areas representative of informal settlements typologies (including fringe informal areas just beginning to develop) and, through learning and feedback, to apply proven mechanisms to other areas on a rolling basis.

### *Proposals and Actions*

1. Secure state land and land needed for infrastructure and services
2. Declare pilot development zones for guided fringe informal development
3. Carry out integrated upgrading projects in candidate mature informal areas
4. Quickly identify tailored and feasible solutions for areas where crucial public goods are endangered
5. Create an information system that allows for continuous monitoring and effective needs assessment
6. Adapt and rationalize planning tools (such as neighborhood plans) and increase enforcement capacities
7. Improve intersectoral approach for service provision

Can the strategies and proposals of the five components be considered together as one cohesive strategy? Each component is of a different nature, implying different approaches. The proposals in each component are oriented

towards a particular audience (both within the Municipality and in other agencies), and each component strategy has different implied scope, stages and timelines. Thus it would be difficult to say they hang together easily.

It is not logical to try to force the five components into one single framework or one single plan of action, nor is it possible to say that one component should have priority over the other. The challenges and problems that each component addresses are so important that a “across the board” approach is required. This means that the proposals and actions contained in all five components should be launched together. Progress in one component may be rapid and relatively easy, and in others obstacles and resistance will inevitably arise. And within a component some proposals may be adopted with little effort, whereas some proposals may prove difficult to implement.

This having been said, it should be apparent that there are cross-cutting issues that relate to two or more components and sometimes relate to them all. By identifying these cross-cutting issues it is possible to create a common framework and, if you will, a strategy for the strategy. The main cross-cutting issues are the following:

1. **Legislative reform.** Legislative reform is needed to promulgate a special law for the Municipality, as well as its executive regulations. Bylaws need to be written to enhance the Municipality’s financial performance. And a number of legal changes will be required to activate the proposed urban planning mechanisms.
2. **Knowledge management.** For Sana’a to meet its challenges, virtually all thematic areas need much better knowledge management. Perhaps it is most crucial for urban planning and urban upgrading, particular for land information systems. However, it is also important to improve the information base for municipal finance, particularly on the revenue side. It may be that a management information system is needed for the Municipality, or at least for certain components, such as municipal finance. Under this theme should be included the possibility of forming a clearinghouse for urban development information within the Municipality.
3. **Capacity building and human resource development (HRD).** Developing human resources, training, and raising management capacities have been identified as key tasks in four of the five components. Such tasks must concentrate on improving the performance of key personnel in the Municipality and associated agencies. Thus these persons must be identified as part of coordinated training needs assessments for the Municipality, and training programs need to be identified that are practical and effective. Capacity building is crucially needed for urban planning and urban upgrading, and on-job-training programs linked to pilot upgrading areas should prove very effective training mechanisms.
4. **Pro-poor approaches.** Tackling poverty in Sana’a relates most directly to the urban upgrading component, although there are also poverty alleviation aspects to both the economic development and urban planning components. There is also a host of national-level poverty reduction programs with which the Municipality needs to coordinate, in particular the Social Fund for Development.
5. **Water scarcity and environment.** Water scarcity is directly relevant to the economic development and urban planning components, but it is a much wider issue. Water scarcity threatens Sana’a’s potential for future growth and there are national level organizations (and international donors), which are also closely involved. The Municipality is the best placed government institution to tackle the subject. At the very least, the Municipality should play an advocacy role in keeping up the pressure to find sustainable solutions to the water crisis. Most environmental issues in Sana’a relate to surface water drainage systems and flood control, and these are directly linked to the issue of water scarcity.

## Interrelations between Thematic Areas and Cross-cutting Issues

Cross-cutting Issues	Thematic Areas				
	Economic development	Municipal finance	Institutional Development	Urban Planning	Urban Upgrading
Legislative Reform					
Knowledge management					
Capacity building & HRD					
Pro-poor approaches					
Water scarcity & environment					
Resource mobilization					

6. **Resource mobilization.** Resource mobilization at first would seem to be linked solely to municipal finance, and indeed there is a very strong operational link to proposals to improve revenue collection. But resource mobilization needs to be seen in its widest context, since the Municipality's current local revenues are extremely limited in scope and presently the city relies mainly on central government transfers. Thus, the issue of capturing a portion of rising land and property values because of urban development needs to be put to the front of the resource mobilization agenda. The potential in Sana'a is truly colossal. Means to achieve such capturing particularly relates to urban planning and the introduction of new planning mechanisms.

These cross cutting issues can be said to constitute themes upon which the leadership of the Municipality can focus as they organize the implementation of the City Development Strategy. In some cases, a certain theme logically lies within the responsibility of one or more Municipality administrative units. For example, legislative reform tasks would logically be assigned to the legal affairs department; capacity building and HRD could be coordinated by the department

of personnel affairs. Other themes could be tackled by creating specialized committees under the Amin al Asama. This would be particularly true for knowledge management, whose improvement is critical within the Municipality and whose importance extends across all five components. A committee could also be formed for the pro-poor theme or become the responsibility of the existing local council committee for social affairs, with added membership from the SFD. The water scarcity theme should include surface water drainage and flood control, and the Municipality (with the local water and sanitation corporation) could sponsor an intergovernmental action committee to focus on the water scarcity problem.

### Sequencing and Monitoring the Strategy

It should be stressed that the city development strategy is a guide for Sana'a's development for a span of 20 years. The five components of the strategy are thus long-term general proposals, with individual tasks and actions that could extend over several years. It is not practical to propose a timeline for the implementation of the five components of the city development

strategy. As mentioned above, each component will develop according to its own nature and at a pace determined by particular constraints and opportunities. Within each component, proposals are presented which imply a logical sequencing of tasks, but these are not and should not be time bound. The one exception is the urban upgrading strategy, which sets out four clear stages to tackle the problems of underserved areas and informal fringe development over the next two decades. It should be noted that even this relatively detailed schedule is not rigidly time-bound, and that there is considerable flexibility in sequencing of tasks.

A period of 20 years is a long time. It is inevitable that Sana'a will experience dramatic changes, some of which cannot at all be foreseen. The city development strategy, which is presented here, cannot hope to remain anything like a blueprint for the city over this long period. It is rather an overall strategy or set of

strategies that will require revisiting and fine-tuning. Thus it is proposed that after a convenient period, say five years, the Municipality undertake a rapid assessment of progress in each of the five components. This assessment would measure the success in implementing the component proposals, identify new challenges, and re-design the strategy in the light of future circumstances.

### **Priority Capital Investment Projects**

For the next seven years, the CDS process has identified 18 capital investment projects that would have the greatest positive impact on the city's development and have been assigned high priorities for implementation. These are organized into (1) transportation-related projects, (2) key infrastructure projects, (3) urban and environmental projects, and (4) tourism promotion projects, as follows.

## SANA'A PRIORITY CAPITAL INVESTMENT PROJECTS

### A. STRATEGIC TRANSPORTATION PROJECTS

*Costs in 2009 US dollars; includes any required associated studies and management*

Ref. No.	Project	Estimated Public Investment Cost	Responsible Agency	Description/Comments	Time Frame
<b>A1</b>	Road Intersections Project (Five Intersections)	\$37 million plus 6%	Sana'a Municipality (Technical Affairs Sector)	The project will construct five multi-grade intersections in key locations in Sana'a, to improve traffic circulation. Already nine multi-grade intersections have been built or are under construction, managed by a special project unit in the Technical Affairs sector, with financing from the Arab Fund. All such intersections are based on the 2006 Comprehensive Traffic Management Study for Sana'a. Detailed designs and tender documents have been prepared.	2012 to 2016
<b>A2</b>	Sana'a Traffic Control System	\$25.3 million plus 6%	Sana'a Municipality (Technical Affairs Sector)	The project will create an integrated traffic control system, which includes connected traffic signal installations, a CCTV traffic surveillance system, a communication system, and a Traffic Management Center (TMC) for all of Sana'a. The system can be expanded in the future to include public transport control (see project A3), and environmental monitoring.	2010 to 2012
<b>A3</b>	Bus Rapid Transit	\$88.5 million plus 6%	Sana'a Municipality (Technical Affairs Sector)	The project will introduce modern, cost-effective, and high volume rapid public bus services with a dedicated right-of-way along Sana'a's north-south central spine for a distance of 30 km. Most of the right-of-way is already acquired within the Saylah wadi channel. Bus operations will be under a concession arrangement with an experienced private investor and operator. Preliminary economic and financial feasibility studies have been carried out in 2007 by the Comprehensive Traffic Management Study.	2012 to 2016
<b>A4</b>	Eastern Ring Road and Barash Tunnel	t.b.d.	Ministry of Public Works	The project will include construction of a 1.5 km. tunnel under Barash Mountain and 11.6 km. of a four-lane ring road to link to existing roads (Sawan to the North and Kholan to the South). Currently there is no road by-pass around the city proper to the east because of the Nuqum mountain system (up to 2900 meter altitude). Thus this ring road link is crucial for other arcs of Sana'a's ring roads to function properly. Detailed design and tender documents for the tunnel were completed in 2005.	2013 to 2016

## LIST OF SANA'A PRIORITY CAPITAL INVESTMENT PROJECTS

### B. STRATEGIC INFRASTRUCTURE PROJECTS

*Costs in 2009 US dollars; includes any required associated studies and management*

Ref. No.	Project	Estimated Public Investment Cost	Responsible Agency	Description/Comments	Time Frame
<b>B1</b>	Potable Water Network Extensions in Five Zones	\$54 million	Sana'a Local Water and Sanitation Corporation	The project will extend water networks to five zones of Sana'a that together cover 2,745 hectares, including main and secondary networks, house connections, meters, etc. This will increase public water system coverage in Sana'a from the present 55 percent of inhabitants to roughly 78 percent. This extended coverage will be mostly in areas that are inhabited by families of limited income. Also, the project will improve water network efficiency and reduce water losses and will boost the revenue profile of the Sana'a Water Corporation. Feasibility studies, detailed design, and tender documents for the five areas were prepared in 2006.	2010 to 2013
<b>B2</b>	Upgrading of Existing Sana'a Wastewater Treatment Plant	\$6 million (funding gap)	Sana'a Local Water and Sanitation Corporation	This project will boost the capacity of the existing wastewater treatment plant, increase its efficiency, and allow it to cope with chemical and other pollutants in the fluid discharge. The Arab Fund for Economic and Social Development has undertaken to finance 60% of the total cost, and the Yemeni Government has allocated funds to cover 20%, leaving a funding gap of the remaining 20%. Feasibility studies and detailed design are available.	2010 to 2012
<b>B3</b>	Construction of Northern Wastewater Transmission Line	\$16 million	Sana'a Local Water and Sanitation Corporation	This project will construct 15 kilometers of gravity wastewater transmission lines from the existing treatment plant to the location of the new treatment plant north of the airport (350 ha. of land is being acquired).	2011 to 2015
<b>B4</b>	Installation of electrical substation in Haziaz	\$5 million	Yemen Public Electricity Corporation	This project will address the serious power deficiencies in Haziaz, a rapidly growing area in the southern fringes of Sana'a along the Taiz Road. In addition, it will provide power needed for the proposed nearby Haziaz Industrial Area (see Project C-5) and Dry Port (see Project C-6).	2011 to 2012

## LIST OF SANA'A PRIORITY CAPITAL INVESTMENT PROJECTS

### C. STRATEGIC URBAN AND ENVIRONMENTAL PROJECTS

*Costs in 2009 US dollars; includes any required associated studies and management*

Ref. No.	Project	Estimated Public Investment Cost	Responsible Agency	Description/Comments	Time Frame
<b>C1</b>	Urban Neighborhood Upgrading	\$30 million	Sana'a Municipality, Technical Affairs Sector	A recent Sana'a CDS study has identified 35 poorer neighborhoods in and around the city which that require integrated upgrading as part of a comprehensive upgrading strategy. Five of these areas have been included in the World Bank's Integrated Urban Upgrading Project (under preparation). These pilot efforts will confirm the appropriate approaches and modalities. It is expected that an additional 10 areas will be upgrading in the 2011 to 2014 period.	2012 to 2015
<b>C2</b>	Saylah Flood Project Extension	\$52 million	Sana'a Municipality, Saylah Project	After successfully completing phases one through four, the final phase of the Saylah Project (some 10 kms' north of Sanaa) is in need of financing. This last phase, for which detailed designs have been prepared, will extend flood control and transport artery benefits to the remaining north-south spine of the city.	2010 to 2014
<b>C3</b>	Three Solid Waste Zonal Transfer and Maintenance Stations	\$25 million	Sana'a Municipality, Cleanliness and Environment Sector	Sana'a Municipality is reorganizing its solid waste management system for it to become more cost-effective, partly by rationalizing collection and fleet operations. Under the World Bank's Integrated Urban Development Project (under preparation), it is envisioned to create a model zonal transfer and maintenance station, one of four planned for the city. This model station will set the format for the other three, and Sana'a Municipality is seeking financing for these.	2011 to 2013
<b>C4</b>	Expanded Main Sanitary Landfill Site	t.b.d.	Sana'a Municipality, Cleanliness and Environment Sector	As part of Sana'a Municipality's reorganization of its solid waste management system, it plans to create a new landfill site adjacent to the existing site. Under the World Bank's Integrated Urban Development Project (under preparation), the existing landfill is to be upgraded as an immediate action. However, in the medium term additional capacities will be required, and funds are needed to prepare this new site, which is adjacent to the existing site and for which the Municipality has already completed land acquisition.	2013 to 2017

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## LIST OF SANA'A PRIORITY CAPITAL INVESTMENT PROJECTS

### C. STRATEGIC URBAN AND ENVIRONMENTAL PROJECTS *(continued)*

Ref. No.	Project	Estimated Public Investment Cost	Responsible Agency	Description/Comments	Time Frame
C5	Haziaz Dry Port (Transport Hub)	\$7 million	Sana'a Municipality, Technical Affairs Sector	The proposed Haziaz Dry Port on 250 hectares will provide warehousing, trucking facilities, transshipment, and other transport logistics in an ideal location south of the city on the Taiz Road, near the intersection with the Ring Road, thus enjoying rapid road links outside the city to both Hodeidah and Mareb as well as to the whole south of the country. Sana'a Municipality will invest in infrastructure and basic parking and security facilities. Land acquisition is underway. Currently Sana'a Municipality has shortlisted consulting firms to carry out design and feasibility studies for the project.	2013 to 2017
C6	Haziaz Industrial Zone	\$5 million	Sana'a Municipality, Technical Affairs Sector	The Haziaz Industrial Zone on 250 hectares would provide secure and serviced sites for non-polluting and non-water consuming industries. These would include new industrial projects as well as existing factories in Sana'a that need to be relocated for environmental reasons. It is located south of the city off the Taiz Road, adjacent to the proposed Haziaz Dry Port (see Project C-5). Sana'a Municipality will be responsible for main infrastructure, and the marketing of individual industrial sites and operations will be undertaken by a concessionaire specialized in industrial estates. The Municipality has already constructed 40% of the roads.	2013 to 2017

## LIST OF SANA'A PRIORITY CAPITAL INVESTMENT PROJECTS

### D. STRATEGIC TOURISM AND HERITAGE PROTECTION PROJECTS

*Costs in 2009 US dollars; includes any required associated studies and management*

Ref. No.	Project	Estimated Public Investment Cost	Responsible Agency	Description/Comments	Time Frame
<b>D1</b>	International Park	\$17 million	Sana'a Municipality, Technical Affairs Sector	Sana'a Municipality aims to create a high quality, multi-purpose cultural, recreational, and amusement center which that give the city a premier tourist attraction for both domestic and Gulf families, which is a fundamental part of the City Development Strategy. The area of 130 hectares is on a slight plateau in an agricultural area south of the city. Sana'a municipality will provide large serviced lots to investors, and each of these will create, cultural, thematic, and amusement attractions. The International Park will provide considerable revenues to the Municipality from leasing and a percentage of entrance ticket sales. Land acquisition is ongoing and access roads and the perimeter have been constructed.	2010 to 2014
<b>D2</b>	Traditional Villages and Nature Protectorate	t.b.d.	Sana'a Municipality, Technical Affairs Sector	Near to the existing city are a number of old hill villages and surrounding traditionally farmed land, all of which have considerable architectural and natural beauty. An extensive study of four of these villages—Faj Attan, Beit Baus, Sana', and Beit Zabatan—was carried out for Sana'a Municipality in 2007–2008. It concluded that these four areas (with an aggregate population of 4,000) were in urgent need of preservation and development as a nature preserve. Appropriate environmental and heritage tourism was also called for, as well as institutional and legal frameworks for preservation. A feasibility study is urgently required.	2012 to 2015
<b>D3</b>	Renewal of Old Sana'a Sewerage System	t.b.d.	General Authority for Preservation of Historic Cities, Sana'a	The Old City of Sana'a, deemed a World Heritage Site by UNESCO in 1983, has become Yemen's single most important tourist attraction. While in the 1980s the Old City's infrastructure was upgraded and the architectural heritage has been well managed, much of the sewerage network is over 25 years old and leakages and blockages are becoming more and more common. The renewal of elements of the network is required, and a technical assessment and feasibility study is urgently needed.	2011 to 2015

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## LIST OF SANA'A PRIORITY CAPITAL INVESTMENT PROJECTS

### D. STRATEGIC TOURISM AND HERITAGE PROTECTION PROJECTS *(continued)*

Ref. No.	Project	Estimated Public Investment Cost	Responsible Agency	Description/Comments	Time Frame
<b>D4</b>	Wadi Dhar Visitors Center	\$6 million	Sana'a Municipality, Technical Affairs Sector	Sana'a Municipality wishes to develop a first-class tourist center in an area that is famous for its cultural heritage and natural beauty. Developing the site will attract both domestic and foreign tourists, which is a fundamental part of the City Development Strategy. Sensitive development will preserve the cultural and natural aspects of the site and protect it from random encroachment. The project is to be situated on a beautiful escarpment overlooking the cultivated Wadi Dhar valley on an area of 12.5 hectares. It is planned to have a range of attractions, including restaurants, shaded sitting areas, children's' playgrounds, an events stadium, an open air theatre, and sports and rock climbing facilities.	2012 to 2015





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