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KEY MESSAGES

This review is part of the Global Informality Paper Series. It outlines the current state of a practitioner’s literature on slum upgrading programs. Given the scope of such an undertaking, three different papers have been developed. The first among these three discusses some crucial aspects required for a more detailed debate, including the definition of slums and a brief outline of historical approaches to informal settlements. The two remaining papers review the international experience on slum upgrading programs and systematic approaches to slum upgrading.

This paper provides an overview of slum upgrading programs and their constituting elements of successful practices worldwide to discuss the remaining challenges. The review draws extensively on specific case studies and insights from the practitioner’s literature.

The common elements of successful slum upgrading practices are participation, the provision of physical infrastructure as the backbone of slum upgrading, the need for social infrastructure, ensuring tenure security, and addressing the root of the problem by creating opportunity structures. Consequently, slum upgrading is increasingly connected to poverty alleviation and inclusionary measures.

The remaining challenges revolve around the challenge of land and finance and as a consequence of combing both, developing appropriate tools to not only unlock land-based finance but also counter market forces. The right-sizing of service and construction standards is important to maximize the impact of interventions and ensure their feasibility.

Slum upgrading requires tailored solutions to specific problems and local contexts and there is a need to unlock the true potential of trans-national learning.

The way forward emphasizes the need for more systematic approaches and a critical reflection on the ultimate goal of slum upgrading.
Cities Alliance - Global Programme on Informality

The COVID-19 pandemic coupled with already insufficient public service provision have exacerbated the vulnerability of low-income communities, elderly, children and women. The COVID-19 pandemic has revealed long overdue structural problems derived from inequality and sets the momentum for a radical shift in the way cities are planned and managed. It is no longer acceptable that a major part of the world’s population does not have access to minimum safe living conditions to deal with the pandemic. Thus, there is a strong need to address slums and informality on a permanent basis, with a fair and equitable allocation of resources, services, and land and public spaces.

Cities Alliance has been working to both highlight and improve the living conditions of slum dwellers for two decades, and can play a relevant role promoting this radical shift, legitimated by its institutional trajectory and robust membership.

The Global Programme on Informality seeks to build a coalition to globally overcome the political, knowledge and resource gaps for addressing informality of land, labour and citizenship at scale, on a permanent basis, with three specific objectives:

1) Mobilise Cities Alliance members, their constituencies and development partners to promote joint efforts and increased knowledge on addressing and harnessing informality and responding to COVID-19 in cities.

2) Identify key knowledge gaps and produce knowledge products that distil the results and learning from the dialogues and peer-learning and disseminate them to a global audience.

3) Facilitate a joint narrative and Cities Alliance coalition to deliver an advocacy and outreach campaign to a global audience to raise awareness on effective COVID-19 responses and demonstrate solutions to informality.
Informality is a complex topic with a long history.
Five decades ago, a study in Ghana resulted in the first comprehensive discussion on informality in a development context.\(^1\) Hart coined the term informal economy that became an important concept to describe national economies in the developing world.\(^2\) The idea of informality has been used in different knowledge domains and discourses. Several have made important contributions to improving our understanding of the Global South’s urbanization processes: informal economy, informal housing, informal land markets, informal law, and informal institutions.

This paper is part of a larger review series on informality launched by Cities Alliance. Since its creation in 1999, this multi-institutional platform has been at the forefront of the debate on slums, slum upgrading, and the role of informality in cities of the Global South. Cities Alliance has recently launched the Global Program on Informality. The overall aim is to fundamentally alter how knowledge is created and shared on informal settlements and related topics. One of its objectives is to build a coalition to globally overcome the political and geographic as well as knowledge- and resource-related gaps for addressing the issue of informality in housing, land, economy, and citizenship at scale, on a permanent basis.

The “Practice Review of Informality” is embedded in the Global Program on Informality and proposes a new take on cross-sectoral knowledge sharing. Each paper addresses an important topic of informality by reviewing the literature produced by Cities Alliance, its members, and other important knowledge stakeholders whenever needed. Developed in close collaboration with the restructuring of the knowledge library, several elements have been developed to enable better access and more targeted impact. The paper and its content have been tagged to unlock the potential of text-based online searches to make the content more accessible.

Our world is changing at an unprecedented pace.
This also imposes new demands on knowledge creation. The authors of this paper perceive the paper as a current snapshot of the practitioner’s knowledge on the given topic. We encourage the readers to get in touch with us for further suggestions and comments. This feedback is very valuable to us and may include, among others, specific references to new projects and case studies, missing concerns, and proposals for future review topics. Interested parties can also sign up for the mailing list of the Global Programme on Informality. The papers shall be updated regularly (traceable in the version index) to keep pace with the evolving knowledge of the Global Community of Practice.

by Anthony Boanada-Fuchs, Vanessa Boanada Fuchs, Ana Claudia Rossbach and Susana Rojas Williams
Upgrading is a term given to measures to improve the quality of housing and the provision of housing-related infrastructure and services to settlements that are considered to be (or officially designated as) ‘slums’ or that developed illegally (including squatter settlements).”

Slums are a recurring feature of urbanisation and visual expressions of urban dysfunctions such as socio-spatial fragmentation, inequality, and government incapacities (for a more detailed discussion, see review paper on the challenge of slums). Governments have ignored slums for a long time. The first generation of responses was often hostile, such as attempts to erase slums in central parts of the city or relocating slum dwellers to the periphery. From an international vantage point, a broader learning curve can be observed towards greater recognition of the positive aspects of informal urbanisations and that slums are not an inevitable outcome of such spatial transformation processes.

Modern slum upgrading projects have been informed by the idea of self-help (J.F.C Turner, Abrams, Magnin) and its poignant argument that the urban poor is not the problem but part of the solution. Slums understood as substandard housing, are often the combined result of informal urbanisation processes and inadequate government responses (there are also other forms of genesis, see review paper on the challenge of slums). Local governments often lack the knowledge, skill, and resources to address informal residents’ needs and ensure the delivery of basic infrastructure and urban services.

The slum population suffers from multiple levels of deprivation. Already the slum definition of UN-Habitat relies on five dimensions of shelter deprivation. More recent advancements in fine-tuning data collection practices with SDG reporting and the NUA emphasise the diverse nature of exclusion and lack of access. Successful slum upgrading programs often aim to address different levels of household deprivation by deploying a multi-dimensional approach to improve the physical, economic, social, and environmental aspects of specific neighbourhoods.

Best practices in slum upgrading were identified and analysed within a one-time research project. A research assistant collected detailed information of several cases and systematised their institutional and financial aspects and stated impacts. Due to this work, this review can extensively draw from specific case studies (see list in the appendix). In addition, the practitioner’s literature was analysed based on a nested system, starting with Cities Alliance and its members and including other references whenever needed for argumentative purposes.

The findings from the literature review and case studies analysis are structured in two sections. The first section
outlines common elements of slum upgrading programs, including the importance of participation, the provision of physical infrastructure as the backbone of slum upgrading, the need for social infrastructure, ensuring tenure security, and addressing the root of the problem by creating opportunity structures. The second section discusses the impact of slum upgrading by jointly considering tangible and less tangible impacts of programs.

Section three draws our attention to the remaining challenges. The access and regularisation of land can be seen as the largest challenge and need to be understood in combination with the challenge of finance as solutions are developed at the interface of both. With the proliferation of land-based financing mechanisms, there is a growing need to counter market forces. High service and construction standards also represent an important challenge. They can be seen as both a push for informal urbanisation and a hindrance to impactful slum upgrading. Two missing concerns are addressed (rental housing and maintenance) before tackling the challenge of scaling up and trans-national learning. The review paper closes with a summary and way forward and critical reflection on the ultimate goal of slum upgrading.
Slum upgrading is done very differently around the world. While the practice of slum upgrading can look back to more than five decades of experience, and there is a consolidated discourse on what elements are essential to consider to maximise SU programs’ impact, there is no silver bullet for turning a slum around and ensuring improved living environments.

A major take-away of trans-national diplomacy on slum upgrading spearheaded by the World Bank, UN-Habitat, and Cities Alliance, is that every city and slum settlement is unique, and what might have worked very well in one place can fail in another. While the challenge of transnational learning shall be discussed later in this paper, there is a need for a differentiated understanding of slum upgrading programs and their different constituting elements.

Slum upgrading interventions may vary in the extent they aim at improving informal settlements, ranging from minimalist approaches to more comprehensive interventions. Some governments will prefer more accessible implementable solutions or just want to maximize the population they can reach by limiting their interventions to the provision of basic infrastructure. Other governments develop holistic projects by connecting physical improvements to social, economic, political, cultural, legal improvements and incorporating issues of land, environmental protection, and leisure amenities into slum upgrading. Each approach – minimalist vs. holistic – has its own merits, if implemented in the right way and if realising the strengths and limitations, the actual impact on the community, and the relation to a specific local challenge.

Important: Given the diversity of current praxis, most slum upgrading programs are situated between these two extremes of breadth vs. depth, minimalist vs. holistic.

Slum upgrading programs in the 21st century reveal a tendency to be more encompassing, recognising the multi-faceted nature of poverty and that broader and integrated approaches increase the likelihood of a successful transformation. However, as a consequence, slum upgrading projects have become very complex undertakings and require careful planning and implementation. The formation and persistence of slums are intimately connected to exclusion, inequality, poverty, and dysfunctional planning and markets. Such challenges require answers to be developed on a larger scale than a project or program. International organisations have recognised this since the early 1990s and promoted structural reforms and city-wide or even national frameworks to SU (see review paper on systematic approaches).

Slum upgrading programs require a tailored solution. Slums are a global phenomenon and are, in some countries, the dominant way of urbanisation. Each place and its specific challenge differ. In the perspective of the diversity of context, a range of interventions has been developed that can be tailored to the specificity of the country, city, and neighbourhood. They may include the provision of physical infrastructure (water, sanitation, drainage, stormwater, electricity, road, public space), social infrastructure (health services, education facilities, community centres, sports facilities), economic interventions (skills, jobs, business support), and legal provision (regularisation, tenure security). Most commonly, SU projects do not include housing construction as such “since the residents can do
For much of the 20th century, cities have managed slum upgrading with little or no consultation with residents themselves.”14

Participation is the Key and the most commonly featured element in the analysis of the best practices. In contrast to the first generation of slum upgrading projects that were often centralised and top-down, current practices rely on community involvement as the essential backbone for intervening in specific neighbourhoods. Participation increases ownership and acceptance and incorporates the residents’ knowledge, ideas, and aspirations in the planning and decision-making processes. The community also can contribute to programs, often more effective than other stakeholders (see review paper on community-led mechanisms), and might contribute to widening the perspective of governments on what is important in slum upgrading.

Meaningful participation requires dedicated financial and human resources. Successful slum upgrading practices manage to have an encompassing approach to the community and try to include representatives in every decision-making step, ranging from creating ideas to designing, planning, implementation, and maintenance phases (see text box 1 for more detailed information).

The Community Action Area Plans (CAAP) in Free Town, Sierra Leone, distinguishes four phases of community participation: diagnosis, dreaming, developing, and defining. The first phase assesses the current living environment. The second phase focuses on aspirations and housing needs which are then, in phase three, translated into specific housing principles in options. The last phase incorporates these insights into a list of priorities.15 But participation is not only limited to the planning of specific areas as grassroots organizations and non-governmental organizations form, together with representatives of the local and national government, an advisory committee that provides strategic advice to the CAAP but also ensures its links to other ongoing processes relevant to slum upgrading.

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15 – Macarthy, Apsan Frediani & Kamara, 2019.
A Local presence and zone of contact are needed to foster exchange. Several analysed best practices use the foot on the ground principle to foster participation and trust while at the same time providing continuity to exchanges. Regular meetings are important to foster understanding and trust. The Favela Barrio project in Rio de Janeiro set up special Urban and Social Orientation Offices to ensure the maintenance of the works and facilitate regular encounters between the residents and the municipality.16

16 – Paula Lucci et al., 2015.
17 – Magalhães, 2016, p.79.
18 – UCLG, 2011.

Text Box 1: The Proyecto Urbano Integrado in Medellin

The Proyecto Urbano Integrado (PUI) is targeted at areas with multi-dimensional deprivation (low housing quality, absence of public spaces, environmental degradation, poverty, lack of socio-economic opportunities) and implemented by the Empresa de Desarrollo Urbano and directly under the purview of the mayor. The integrated urban projects provided a combination of physical and social interventions to peripheral and disconnected areas in the city.

The PUI Nororiental benefited 150,000 inhabitants and was implemented from 2004 to 2011. Due to a history of neglect and exclusion, the socio-technical diagnostic preceding the works was used to improve the relation with the local government and re-establish trust. Four local committees were created to ensure the participatory processes. One person from the social project team of the EDU was appointed as a liaison point with the community and organized weekly meetings. The community representation was formed by representatives of various social organizations, local leaders, the elderly and youth groups, as well as anyone who wished to participate and was not yet represented by a formal group.

After the diagnostic and the constitution of the committees, the community was involved in every step of the project, technical teams and committees would visit the different neighbourhoods to discuss and jointly decide intervention options. The following participatory processes revolved around the organisation of imaginaries’ workshops (Talleres de Imaginarios). During these public events, the concerned population would develop specific projects based on participatory design methods and reflect on the meaning and symbolic impact of specific interventions to change the image of marginality and social exclusion positively.

Based on these visions and ideas, the technical teams would create renderings and the first set of drawings that are presented to the committee and further detailed based on technical and financial feasibility. These preliminary projects were presented to and approved by the community. All hired companies and oversight services are introduced to the committee in order to improve relationships and change the pre-existing culture of corruption and patronage.

Hired companies were obliged to hire local unskilled labourers to offer new employment opportunities in the neighbourhoods. The work progress is monitored by special committees composed of area committee members, the construction companies, auditors, and the project’s technical team. Once completed the projects were inaugurated by official events that were also aimed at the rest of the city to further improve the areas’ image.17 18 19

Physical infrastructure is the common backbone of interventions but is often too limited. The UN-Habitat definition of slums is based on five dimensions of housing deprivation. Two are directly connected to inadequate physical infrastructure (see review paper on the challenge of slums). Furthermore, water has been declared as an economic and environmental good and has been considered since 1991 as a basic human right20 and reaffirmed in 2010 (for water and sanitation) by the UN General Assembly (Resolution 64/292).

Unsurprisingly, early attempts to improve slums concentrated on the provision of water, sanitation, and drainage infrastructure. The importance of WASH (water, sanitation, and hygiene) has been more vividly discussed in the context of COVID-19 and the unfolding global pandemic and its impact on informal settlements (see review paper on COVID-19 and informal settlements).
While we do have estimates to illustrate the scale of the problem globally, billions of people are excluded from adequate access to water and sanitation, information on the city-level is problematic. In a study of 15 cities in the Global South, the Sub-Saharan African sample had the lowest proportion of piped water, and Latin America had the highest. The same study also showed that slum dwellers pay a higher price for clean water as truck vendors charge up to 52 times the city’s piped water.

**Important:** A focus on physical infrastructure also gave rise to a focus on street-led upgrading that “uses streets as the primary physical vector through which water and sewer pipes, power lines, and drainage systems, and public life in cities are laid.”

At the same time, a focus on physical interventions also revealed its limitations quickly, as slum dwellers are suffering from multiple deprivations and levels of exclusions. While there is hardly any slum upgrading initiative that does not include physical infrastructure, many projects and programs have become much broader than encompassing (see further below).

**Many slum dwellers are deprived of social services and infrastructure.** Slums are spatially excluded from the rest of the city, translating into a lack of access to urban amenities and social infrastructure. The non-availability of community buildings, public space, sports facilities, schools, health services has an important impact on the lives of slum dwellers. However, currently, we lack the data on this matter to develop pertinent arguments. A promising initiative is the Know the City campaign, spearheaded by Slum Dwellers International, which uses grassroots organisations to realise settlement profiles that include an inventory of available infrastructure and services. The analysed best practices provide a range of social infrastructure and services, including community-focused (community centres, libraries, nurseries, sports areas, cultural buildings), public space interventions, and health and educational services.

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21 – 2 and 2.4 billion respectively, see UN-Habitat 2019, p.3.
22 – Mitlin et al., 2019, p.3.
24 – Thomson et al., 2020, p. 80.
substantial concern for space and design. Today, it is well-recognised that spatial plans are the departure point for planning and designing successful interventions and need to be developed with the concerned community and in conjunction with strategic plans. Slum settlements need to be reblocked.

Slum upgrading programs should also extend tenure security to slum dwellers. As we have seen (see review paper on the challenge of slums), there is compelling evidence that family investments and housing improvements are strongly connected to the absence of fear of eviction (see also the section on impact in this paper). Proponents of the land management literature have argued for perceiving tenure as a social relation that produces different solutions spanning between complete informality and formality and that individual formal property titles are not necessary to unlock investments in slums. In places where slum dwellers are safe from evictions, the regularisation of their property might not be a priority.

Results of titling programs provide mixed results: while they can be seen as a cheap government intervention that unlocks ‘dead capital’ by the act of issuing official documents, the practice of regularisation might consume a lot of time and resources due to complex laws and institutional processes. While land titling programs can have the most significant positive impact on the lives of slum dwellers, if regularisations are not executed carefully, they might open up areas to development pressures and the displacement of the original beneficiaries or at least of informal activities.

A focus on opportunity structures may tackle the underlying cause of slum formation. Slum upgrading is an important anti-poverty lever but requires further interventions to be complemented and reduce urban poverty, including sectoral reforms, the engagement of financial institutions, the creation of employment opportunities, improved governance, social capital, and knowledge. The cases described in the dedicated text boxes both provided jobs to the local population, PIU in Colombia by imposing the hiring of local low-skilled workers for the implementation of the works (a comparable system was initially proposed in the SNP in India), Barrio 31 in Argentina by collaborating with national and international companies to open businesses and provide job opportunities. The CAAP in Sierra Leone provided a commercial area to create jobs for the local population. Schools, educational offers, and skill-building are equally important to equip slum dwellers with the tools to lift themselves out of poverty. A third concern to foster opportunity is access to financial services, particularly access to credit. As discussed in the paper on the systematic approach to slum upgrading, opportunity structures appear to be more present in national or at least city-level initiatives, pointing to the need for a larger scale of intervention.

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26 – Fiori and Brandao, 2010.
27 – UN-Habitat, 2015, p. 105.
30 – Cities Alliance, no date, p. 4.
31 – Cities Alliance, no date, p. 9.
Experience has shown that slum upgrading projects are associated with social and economic benefits that are particularly high.”\(^{32}\)

Slum upgrading makes “highly visible, immediate, and large difference in the quality of life of the urban poor.”\(^ {33}\) While there is common agreement among international organisations and donors about the positive effect of slum upgrading, many governments still need to be convinced to put slum upgrading on their urban development agenda. Unfortunately, assessing actual impacts is very difficult, and not enough compelling evidence is available to support the merits of slum upgrading.

There are specific challenges to quantifying and qualifying the impact of slum upgrading – similar to any other kind of impact evaluation in the urban environment. The target group needs to be compared to a similar group that does not benefit from the program.\(^ {34}\) Such comparison is sometimes not possible. A systematic investigation of more than 300 impact evaluations showed strong evidence of health-related improvements. However, results were with a risk of bias. The majority of socio-economic outcomes revolved around improving the financial deprivation, but the body of evidence mainly was of poor quality.\(^ {35}\) A more recent study found comparable findings and pointed to new research designs to minimise study bias.\(^ {36}\)

A comprehensive review of slum upgrading interventions in Latin America provided a framework to distinguish different outcomes on the level of the housing, neighbourhood, and individual.\(^ {37}\) Interventions can affect housing units in slums, including an increase of dwelling values and housing investments, access to basic infrastructure, and tenure security. Members of the household may also benefit from improved access to financial services.

The neighbourhood outcomes are diverse and can be grouped into urban mobility (links to the city and commuting time), urban services (street paving, lighting, solid waste collection, health centres, communal amenities, educational infrastructure), and safety (perception and crime statistics). The individual outcomes consist of improved income, employment status, human capital and health and well-being.

Some impacts are challenging to assess by impact evaluations. These tangible results affect individuals and the community’s psychological and social well-being. The participatory nature of most slum upgrading programs has a fundamental impact on the community, creating confidence and legitimacy by improving the relationships with government institutions (Slum Networking Program in Ahmedabad). This local community empowerment can also indirectly generate the propagation of democratic values (Community Program for Neighbourhood Improvement in Mexico).

Sophisticated impact data is required to advance the political agenda of slum upgrading. Interventions in slums

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33 – Cities Alliance, no date, p. 3.  
35 – Turley et al., 2013.  
36 – Hanson et al., 2020.  
37 – Brakarz and Jaitman, 2013. 
REMAINING CHALLENGES

There are several remaining challenges in slum upgrading programs. Many, such as the issue of land, finance, standards, data, and maintenance, have deep historical roots and can be traced back to the earliest approaches to informal settlements and slums. Some, such as the need for systematic approaches and countering market forces, are more recent challenges to ensure the success of slum upgrading practices.

5.1 The Challenge of Land

Arguably the most profound impact on slums can be achieved not through physical infrastructure investment, but through policies that promote the legalization or regularization of properties thus enabling secure land tenure. People who feel safe from eviction and who have long-term stability, can through incremental improvements upgrade an entire community.“

Land tenure insecurity is a defining feature of slums and probably the largest challenge to slum upgrading. There are many interests in land as urban development can multiply the economic exchange value of properties multiple times. The multiplier effect (the difference between urban and rural land values) can reach two-digit numbers in some fast-growing cities of the Global South and represent targets of national and international investment strategies.

As a result of historical growth, slums can be situated nowadays in some of the city’s most central and desirable locations. Dharavi, one of the largest slums in Asia, is situated just opposite of the central business district of Mumbai, and the land is potentially worth billions of US
Dollars. While large communities can better oppose development pressure, smaller slum pockets might fall victim to investment interests and urban development pressures. Displacement is still a common feature of urban development (see the challenge of slums review paper), and particularly large-scale infrastructure projects and events can lead to slum eradication to obtain centrally located lands for works.

**Important:** Providing tenure security or even land titles in the context of high land values can be politically difficult – for both private and public landowners as the “control of land is often connected to political patronage and corruption.”

Access to land is often required but difficult to realise. Slum upgrading may displace some residents (road widening, carving out of public space, provision of social infrastructure) who would need to be accommodated in new homes close to the original residence. Systematic approaches to slum upgrading also require well-services and/or central land. Access to such land parcels is challenging as they are little available in a central location, and the ones available are extremely expensive.

Some international experiences managed to unlock access to central land. The Zones of Special Interests (ZEIS) and the social function of land in Brazil are discussed in the review paper on informal land markets. Land pooling, as practised in Gujarat in India has shown its capacities in increasing the supply of well-serviced land as well as reservations for social housing and resale to raise funds for infrastructure works.

Less known is the Casa Minha, Nosso Bairro initiative in Mozambique, as it is a private initiative of in-situ slum upgrading. Due to its specific history (Portuguese inspired building regulation, Marxist government, and civil war) has a rather peculiar land ownership pattern. In international comparison, centrally located slums are still rather low-density, and housing units are built on large plots. This enables a rather interesting business model where a family who wants to move to the area finances the building of two semi-detached houses, and the residing family provides the land. The two families will have access to affordable housing while the neighbourhood can be transformed step by step. The same principle can be applied in denser areas by involving more families. A similar approach has been implemented in India, albeit with more ambivalent results.

Mechanisms of land value capture represent attractive options to address land issues and at the same time enable the financing of projects. While different approaches can be distinguished, they all aim at tapping into the added value of urbanization and using the increase in property value and the interest of private markets to raise capital. Planning tools such as land pooling and readjustments can also be used to regularize the land parcels of slums and reserve areas for accommodating displaced households (or other low-income residents).

5.2 Countering Market Forces

“With land being articulated as an instrument of financing, it no longer serves a social function. The poor are evicted from inner city pricey lands and housed at the city’s edges by way of resettlement. This has huge costs – to the city and to the poor.”

Market forces are a double-edged sword and can undermine slum upgrading intentions. The challenge of land is strongly connected to another challenge, how to counter market forces. There is ample evidence that slums are places of real estate interest and the lucrative place for small-scale developers, and real estate brokers. Rising interests in land, particularly by developers, are threatening even well-functioning slum upgrading projects and might displace slum dwellers. Following the insights of the land value capture literature, SU interventions result in property appreciation, a fact substantiated by impact evaluations. However, interventions also generate payment obligations (for electricity, water, other services) that may represent a considerable strain on household budgets.

Community land titles and ownership with reduced rights have been developed to prevent the uncontrolled displacement of beneficiaries. Such restrictions (e.g., not being able to sell the property within a given period) can be powerful in preventing the penetration of large-scale real estate activities into slums. The Barrio 31 in Buenos Aires is a large-scale urban development project in Buenos Aires that included, among other elements, the compre-
The Barrio 31 Project in Argentina

Barrio 31 is a large area of 72 hectares with a population of 40,000 inhabitants, situated in the city's downtown, in close vicinity to very affluent neighbourhoods. In 2015, the decision was taken to integrate this area with the rest of the city by following the philosophy of urban acupuncture - the strategic use of public interventions to trigger large-scale transformations - inspired by comparable approaches in Medellin.

In four years, the city provided 18 km of basic infrastructure and services such as sewerage, drainage, water, public lighting, and roads, renovated 26 public spaces, and improved over 1.700 housing units while constructing 1.200 new residences. The local authority stressed the importance of understanding human development in its entire process and therefore reaching far beyond the built environment. Next to physical interventions, the holistic approach of Barrio 31 also provided three new public schools, three healthcare centers, and various interventions that fostered economic development.

Education, health, and economic opportunities were three dimensions of inequality the original residents suffered from. Thanks to the slum upgrading project, families can easily access health care services with digital records, send their kids to the largest public school in the city, and boost their financial opportunities by taking part in entrepreneur support programs or skill-building classes. 1.200 entrepreneurs were coached and supported, while 3.500 inhabitants completed training courses. Furthermore, the most important local market was regularized, and now the local traders are registered and also pay taxes to the city hall. Such transformation was only possible by combining public and private resources. Barrio 31 collaborated with more than 150 companies, several large multinationals to open businesses in the area and contribute to the neighbourhood’s economic growth.

The remaining challenges of Barrio 31 are not dissimilar to other best practices in the world. When triggering a successful urban transformation, a major concern is how to avoid gentrification. The project deployed three levers to avoid the displacement of original residents. Land titles were given to residents with a subsidised 30-year mortgage. Plot sizes were kept very small (250 sqm, which is smaller than the minimum plot standard of the city), and development rights were limited to constructions with a maximum of 3 floors above ground level. Another disincentive for replacing the original socio-economic fabric is a tax penalty to new residents who must pay three times the property tax.

The second challenge is scaling up a successful initiative. Given the scale of the problem, the solutions to informal settlements can only be found in the partnering of various sectors. Even if the very committed approach in Buenos Aires were replicated in the rest of the country at the same pace, it would take a lifetime to upgrade the living environments of 4.5 million residents.51

52 – Cities Alliance, 1999, p.16.
53 – Freire, 2013, p.369.
Sources of finance come from diverse sources but require commitment. A broad range of different constellations of funding sources can be observed, including often a combination of government funds, support by international organisations, international or foreign funding, and private and community finance. Most analysed case studies had a combination of different funding sources, and the successful slum upgrading programs in Brazil activated financial revenues from the central, state, and local government.\textsuperscript{54} Besides some earlier examples, such as the Kampung Improvement Project\textsuperscript{55} or the early stage of the Slum Networking Project in Ahmedabad, there is only a little evidence that slum communities make a substantial contribution to overall project budgets.

COVID-19 will have a considerable impact on government funds. While it is still too early to assess the financial impact of COVID-19 on government revenues, early estimates point at a considerable reduction. In 2021, it is estimated that local governments’ revenues alone will decline by up to 25%. Developing countries are expected to be hit harder, increasing the financial challenge for slum upgrading.\textsuperscript{56} Value capture mechanism might be a way to raise the required budget. However, successful international experiences are scarce and used chiefly for replacing slums with serviced apartments (see experience in Mumbai on land value capture). There is an ongoing debate about integrating land value capture and slum upgrading.\textsuperscript{57}

5.4 Service and Construction Standards

The informal sector exists because of government regulations. Remove them and you will eliminate the blemish of informality. What were one day informal settlements will the next day become low-cost housing subdivisions.”\textsuperscript{58}

Service and construction standards define the accessibility of housing options. Standards that do not reflect local conditions are a major driver for informal urbanisation. Viewpoints of the Global North influence the legislative and regulative frameworks in many countries in the Global South. This can be either indirectly by the educational backgrounds of planning professionals and government officials or more directly by national legislation. Planning theory and education have deeply rooted colonial norms and value perceptions, highlighted in research on the former British colonies,\textsuperscript{59} but fragmented evidence can also be found in the international planning discourse. It is striking that the “International Guidelines on Urban and Territorial Planning” makes just one specific mention of slums and informal settlements concerning public planning.\textsuperscript{60} In former colonies, the post-colonial nature of planning is much more visible. The building codes in Mozambique are a blueprint of the regulations in Portugal, which itself were developed as a consequence of a major earthquake in Lisbon. While the country is heavily exposed to natural disasters, earthquakes are not one of them.

Inadequate laws and regulations trigger the growth of informal settlements but also slums. Housing and infrastructure standards are crucial for slum upgrading but also underly the formation of informal settlements. Many constructions violate building codes or lack permits because the laws and regulations have set too high standards. Research in India, where the garden-city idea heavily influenced some states’ regulations, has shown that right-sizing regulation can reduce housing costs by more than a third and increase supply by three quarters.\textsuperscript{61} A blueprint for increasing the supply of affordable housing has also identified regulations and laws (particular to land) as the major lever to reduce costs.\textsuperscript{62} Detailed investigations are required in how regulations can be fine-tuned to reduce the push for informal urbanisation and unlock formal and informal supply.\textsuperscript{63} This includes learning from informal solutions to fix the right level of standards.\textsuperscript{64}

\textsuperscript{54} – Rossbach, 2018.
\textsuperscript{55} – Hart and King, 2019.
\textsuperscript{56} – UN-Habitat, 2020, pp.xix.
\textsuperscript{57} – Becerril Miranda, Rossbach, and Boanada-Fuchs, 2021.
\textsuperscript{58} – Dowall, 1992, p. 414.
\textsuperscript{59} – Portier, 2013.
\textsuperscript{60} – UN-Habitat, 2015, p.16.
\textsuperscript{61} – Patel and Bhatha, 2018.
\textsuperscript{62} – Woetzel, 2014.
\textsuperscript{63} – see, for example, the engaged debate in the 1990s Malpezzi, 1994; Malpezzi and Mayo, 1997; Baken and van der Linden, 1993, p.1.
\textsuperscript{64} – Mumtaz, 2001, pp.20-21.
There are several examples where community mobilisation and grassroots organisations have managed to institutionalise right-sized standards for informal settlements and slum upgrading. Mahila Milan (women together) was created in 1986 and represented the first women-led federation of slum dwellers. Pavement dwellers formed the Mumbai-based federation to organise saving groups. However, they soon became actively engaged in addressing the housing needs of its members. After developing a model house with room heights that were against local building regulations, four years of lobby efforts succeeded in the official sanction of the proposal.65

Another example is Mukuru, a particular planning area in Nairobi, Kenya, that was identified as requiring substantial improvement. This densely populated slum would be erased entirely if applying the conventional standards of the applicable planning law. In an iterative process and by adjusting standards, the share of displaced residents was constantly reduced to 12.5%. It could eventually reach 0% by implementing some high-rise buildings.66 The negotiation process was complex and included in addition to the residents, various stakeholders, such as the Infrastructure Consortium, Kenyan utilities and officials, and SDI India, SPARC, and planners from CEPT University in Ahmedabad.67

Such examples illustrate that negotiations are possible with government officials and that these processes are complex and lengthy and often require the “jumping of scale” by including expertise from other countries and international organisations.

Text Box 3: Negotiating Standards fit for Informal Settlements

Informal renters often fall between the cracks of slum upgrading programs. Slum upgrading programs target the improvement of a substandard neighbourhood by combining a set of interventions. When assessing the extent of beneficiaries, informal renters can often be excluded as they might not be considered permanent occupants. However, SU practices often impact them due to the loss of their initial housing option. The renting out of backyards and rooms in slums can be an important source of revenue (as seen in South Africa). Rental housing is a generally poorly studied topic and even more in the context of informality.68 Cities Alliance acknowledges the importance of these informal living arrangements by dedicating a special review paper to this topic (review paper on informal rental markets).

5.5 Frequently Missing Concerns: Rental Housing and Maintenance

5.6 Scaling-up, the Need for Systematic Approaches, and How to Unlock Trans-national Learning

The learning experience of the last decade also underlined the limits of programs and projects. Slums result from complex spatial and social processes and can only be fully addressed if tackling the underlying causes. The forces driving people into slums are not fully understood but appear to be connected to poverty and the structural nature of exclusion. Consequently, these issues at hand require more profound interventions than a project or program can address. The limitation of punctual interventions was realised in the early 1990s (see review paper on the challenge of slums) and led to the development of enablement strategies and city-wide and even national frameworks of slum upgrading. The learning experience of such approaches will be discussed elsewhere (review paper on systematic approaches to slum upgrading).

Trans-national learning still does not take place in the required depth and at the needed speed. Cities Alliance and other international organisations use advocacy, outreach activities, and the showcasing of projects to advance the practice of slum upgrading and related topics. In the perspective of the scale and urgency of the challenge, implementation and research need to be advanced in parallel. Promising practices are developed or identified and promoted between regions and governments. Can trans-national learning be unlocked to improve slum upgrading practices and our knowledge on how and why certain interventions are successful? Strengthening

65 – UN-Habitat, 2015, 52.
67 – Sverdlik et al., 2020, p.12.
cross-sectoral collaborations, activating resources between governments, academia, civil society, and international organisations, and stimulating debates and the alignment of agendas represent promising directions for closing the theory-practice gap and speeding up as well as deepening the international knowledge creation on slum upgrading. The LAVs format and the creation of the Community of Practice which Cities Alliance spearheaded both in such spirit, have yet to show their impact.

Slums and informal settlements “represent physical manifestations of inadequate housing policy and social and economic exclusion.”

This review paper focused on the lessons learned from past slum upgrading projects and programs. It builds upon the foundation laid out in the review paper on the challenge of slums that helped define some important terminology and provided a historical overview of the broad learning curve of tackling informality. Slum upgrading practices have come a long way and nowadays consist of comprehensive and participatory approaches that try not only to remedy the substandard living conditions but also tackle the underlying causes of slum formation connected to multiple levels of deprivation.

Slum upgrading is increasingly connected to poverty alleviation and inclusionary measures. While extending basic infrastructure is a fundamental element of slum upgrading, a concern for the physical built-up is frequently too limited. Impactful practices tend to be encompassing recognising the multi-faceted nature of poverty and exclusion. Interventions may include the provision of physical infrastructure (water, sanitation, drainage, stormwater, electricity, road, public space), social infrastructure (health services, education facilities, community centres, sports facilities), economic interventions (skills, jobs, business support), and legal provision (regularisation, tenure security).

Slum upgrading requires tailored solutions to specific problems and local contexts. While several decades of international exchanges on slum upgrading have considerably improved our understanding and we have a good idea of what works or not, there is no golden recipe for carrying out slum upgrading. Each slum and its population represent a unique opportunity to improve current living conditions and enable a more promising future by developing context-sensitive solutions. Participation is fundamental as it is the best way to ensure that slum upgrading provides what is actually needed and that an intervention is fully embraced and “owned” by the concerned community. Physical infrastructure helps improve existing slum conditions effectively. However, access to social infrastructure and creating opportunity structures address some of the root causes of slum formations.

69 – UN-Habitat, 2020, p. 11.
Land and finance can be seen as the most considerable challenge of slum upgrading and are increasingly inter-linked. The land is subject to multiple interests, nowadays often including global investment circuits, that complexify the land-use decisions related to slum upgrading. In most countries, average incomes are growing much slower than property prices, further aggravating the situation. Value capture mechanisms have been developed as a tool to tap into the economic opportunity offered by urbanisation. However, they represent a double-edged sword as the exact mechanism can lead to an increased displacement of the slum population. Recognising the social function of land and the right to the city of slum dwellers are important levers to balance the economic narrative of urban growth with broader human development goals.

Scaling-up of successful initiatives and trans-national learning still need to unlock their true potential. Already in the early 1990s, the need for more structural reforms was recognised. Over the last two decades, more systematic approaches to slums have been developed. While promising national initiatives will be presented in a dedicated review paper, the numbers on slums show that only a few countries managed to reduce their slum population considerably, and in most areas of the world, the numbers are rising. An argument is made in this paper to further strengthen cross-sectoral collaborations, pool resources, and align agendas to close the theory-practice gap and speed up as well as deepen the international knowledge creation on slum upgrading. The need for scaling up and trans-national learning draws our attention to another fundamental question:

What is the ultimate purpose of slum upgrading? The answer to this question is much more complex than it appears at first sight. While to be upgraded is an undeniable goal, what does this status entail? In the analysed literature, we could hardly find evidence of a de-notification of slums or that slums have become fully integrated parts of the city. Evidence suggests that even very successful slum upgrading projects do not guarantee a full integration into the city. Ten years after the favela upgrading in the Brazilian cities of São Paulo and Rio de Janeiro, the provision of many physical infrastructures and considerable housing improvement did not automatically lead to full integration into the city management and planning system. This owes to the complex nature and lengthy process of land property regularisation. It would be exciting to investigate these processes in different countries as well as identify eventual hindrances.

This paper is part of a larger review series on key topics of informality published in 2021. We encourage the readership to also engage with the review of slum upgrading programs, National approaches to slums, informal land markets, informal rental solutions, informal economy, the impact of COVID-19 on informal settlements, and informality concepts.

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70 – Acioly Jr., 2021, p.29.
BIBLIOGRAPHY


Cities Alliance. Slums and Slum Upgrading. Cities Alliance, Brussels, no date, no date, last accessed 25.11.21.


