RECONSIDERING SITES AND SERVICES

A GLOBAL REVIEW

Urban Poverty, Inclusive Cities and Housing Global Solutions Group

THE WORLD BANK

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Acknowledgements

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Executive Summary

The Challenge of Affordable Housing Approaches

The provision of adequate low-income housing remains a challenge for many governments in developing countries with demand surpassing supply. With no real options for housing, the urban poor settle in informal, fragile sites that lack basic services. Globally, over 1 billion people live in slums and informal settlements. This figure is expected to double by the year 2030, with at least a total of 100,000 housing units per day required to meet the demand. However, meeting this demand remains a challenge with a variety of constraints hampering housing delivery on both the supply and demand side. On the demand side, poverty remain a key impediment with 74 percent of people in low-income countries living on less than $2 per day, making it impossible to afford market rate housing. On the supply side, high land values, limited infrastructure investments, stringent planning and building regulations, corruption and bureaucracy make real estate investment complex and costly, driving up the price of new and available housing units. Governments across the developing world have tried several affordable housing approaches, with limited success.

The sites and services approach has, however, resurfaced in policy discourses as a potential mechanism to expand access to low-income housing, particularly in developing countries. Recent research appreciates that the determination of past sites and services performance was either made too early or used narrowly defined metrics. Coupled with ongoing housing crisis, reconsidering sites and services is on the table. An evaluation done by the World Bank's Independent Evaluation Group (IEG) on the World Bank's support to the management of urban spatial growth[1] recommended intensifying the deployment of preventative urban upgrading such as sites and services. The report is clear that without preventative measures, efforts towards urban development in rapidly urbanization contexts will be continually playing catch up.

Study Objectives

It is against this backdrop that the World Bank initiated a review of sites and services to determine its viability in addressing affordable housing. The review sought to establish: i) the design and basic assumptions of sites and services particularly of the 1960&70s; ii) their effectiveness in meeting the set objectives; iii) the factors that led to their decline or abandonment by donors and governments; iv) factors that contributed to their success or failure in countries where they were adopted; v) how building technologies, land and housing markets have changed over time for or against sites and services; and vi) guiding principles for exploring sites and services projects moving forward. The hope is that the study will provide insights and guidance for governments, development practitioners, developers and local communities interested in exploring sites and services in developing countries as a potential solution to affordable housing demand.

Viability of Sites and Services as Low-Income Housing Solution

The study examines the experiences of the 1st generation of sites and services projects across 14 thematic areas. Initial findings provide mixed results but overall point to the potential of sites and services to effectively contribute to meeting the housing demand in developing countries. The sites and services of the 1960s and 1970s were premised on the principles of incremental housing through self-help and mutual help, where government provided serviced land to households to self-build. While it was successful in some countries, the approach never produced the expected results in others. The factors that contributed to the level of success ranged from government buy-in and political support, adequate subsidies and financing to proper location of sites in relation to employment opportunities.

[1] World Bank (2021) "Managing Urban Spatial Growth". Independent Evaluation Group (IEG).

Current building technologies, and land and housing markets provide several opportunities that make the approach worthy of reconsideration. New building technologies such as 3D printing provide faster and efficient building alternatives, as compared to labor intensive approaches used during the 1960/70s. Policy changes in the land and housing markets now allow for a multiplicity of tenure systems including sectional property rights and community land rights, which increase the options available for participating governments and households to choose from. Wide acceptance of high urban densities through concepts like re-blocking and compact cities signify the possibility of governments' approval of flexible building and infrastructure standards previously contested. Increased participation of NGOs and the private sector in affordable housing creates opportunities for additional resources and innovations that can translate to better outcomes of sites and services. It is however critical to understand that the approach may be more applicable in some places as compared to others. Second, for it to be effective, the approach needs to: be embedded in the broader national housing context; be targeted and cognizant of the diversity of beneficiaries' preferences; draw the participation of a multiplicity of actors; adapt to local contexts and draw on current innovations and technologies in housing and land markets to minimize costs and time. Housing programs for low-income families also require the acceptance of not one but several ideas: flexible buildings standards, robust community involvement, open allocation systems, building credits, different models of secure land tenure and cost recovery.

Looking Ahead: Guiding Principles

It is clear that sites and services can offer a potential policy option, but important considerations emerge as we consider applying the lessons learnt in the previous section towards future projects and programs. First, sites and services will not work in every context. Thus, the Guiding Principles presented in this study aim to be guidance, rather than a prescription, for project teams when designing sites and services. Second, sites and services can be recrafted into a broader approach beyond a singular type of intervention for housing for urban poor. The approach can support the provision of housing for all income groups or even to support guided urban expansion. To design a sites and services intervention, a project team would need to first determine the country's primary objective for implementing sites and services. Third, a programmatic approach to sites and services has the potential to address bottlenecks more holistically. The study, therefore, assesses the lessons learnt from both a project-level and programmatic-level lens. The Guiding Principles presented in Section 3 is a starting point to designing projects at both these levels.

Introduction

The Housing Challenge

Affordable housing demand in many developing countries outstrips supply. With the market unable to meet low-income housing demand, governments are hard pressed to provide lasting solutions. In the past, governments and partners have tried several approaches such as social housing, sites and services, slum upgrading and rent subsidies programs. However, questions abound on the potential of some of these approaches to effectively address the housing challenge, sometimes leading to inertia or complete abandonment by stakeholders. Low-income housing approaches form a small percentage of most national and local governments budgets. Such reluctance in the context of the current global housing crisis calls for re-examination of past and current affordable housing approaches to provide clarity and lessons on their potential to address the housing challenge. Recently, sites and services have re-entered the affordable housing policy discourse, as a possible solution to the housing crisis.

Study Objective

In this context, the World Bank has carried out this review to explore the potential for sites and services as an option for solving the housing crisis for the poor. The objective of the review is to provide a clear understanding of the large-scale 1st generation sites and services of the 60s and 70s by assessing their structure and guiding principles, examining reasons most governments and donors abandoned the intervention, establishing their effectiveness in meeting the set objectives, identifying factors that contributed to their success or failure in countries where they were adopted, identifying how building technologies, land and housing markets have changed over time in support of or against sites and services and drawing lessons and potential guiding principles for possible future projects. The review will guide any entity (governments, practitioners, NGOs, private developers) interested in exploring sites and services as a potential solution to affordable housing demand, particularly in developing countries.

Approach

The assessment reviewed secondary literature comprising of academic papers on sites and services and reports of both World Bank and non-Bank project evaluations across different regions and time. The study also critically analyzed how building technologies, land and housing conditions have changed over time in favour of or against sites and services.

Structure of the Paper

Section 1 provides a brief context giving pivotal timelines in the evolution of sites and services. Section 2 examines the outcomes of the approach and draws key lessons from the first generation of sites and services. Lastly, the paper presents guiding principles for future sites and services.

1

Context and Evolution of Sites and Services

1.1 Background

Table 1: Key Messages /Summary of Sites and Services Context

Concept	- The broad objective of sites and services approach was the delivery of incremental housing for the poor through the provision of small, serviced plots, sometimes with a core unit. - Government provided serviced land for beneficiaries to incrementally build homes over time. - Target was mainly low-income households but, in some cases, middle- and higher-income groups were included for cost recovery purposes. - Financing for land and house consolidation was sometimes provided but, in most cases, residents built using their own resources and labor (sweat equity), and mutual self-help.
Actors	- Governments - International Finance Institutions (IFIs) - The World Bank financed the largest share of sites and services in the 60s and 70s. - Communities as beneficiaries and builders - Local contractors (contracted by residents to build homes for them)
Evolution	- Sites and services approach gained popularity in the 1960s and 1970s driven by demand for housing due to rapid urbanization and failure of the public housing model - Few examples in Africa (Kenya) and Latin America (Chile) happened earlier (1920s -1950s) without or with limited government support. - Use of the approach for low-income housing declined in the 1980s and 1990s due to policy change at the World Bank, which was the largest financier. Critiques of the model on its inability to meet its objectives were also a contributing factor to the decline.
Current Context	- Sites and services still in practice, largely dominated by private developers who acquire private land, subdivide, invest in minimal or no services and sell plots to individuals to construct houses. - Target is mostly middle- and high-income clients - Popular in African and Asian cities - Several governments in Africa (South Africa), Asia (Pakistan) and Latin America (Guyana) have continued with the approach to date. - The persistence of the model in housing has necessitated a revisit to clearly understand factors that led to its decline and its potential for delivering affordable housing.

The sites and services model garnered wide support among governments and donors as a panacea to the affordable housing crisis and rapidly growing slums in the 1960s and 1970s. Public housing approaches adopted by most developing countries had proved inefficient in meeting housing demand, partly due to rapid urbanization and the large amounts of resources required to quickly produce houses for the growing population.[2] For example, the population of Lusaka, Zambia more than tripled between 1963 and 1974, rising from 123,000 to 401,000 with only 193,000 housing units produced within the same period.[3] Consequently, the population living in unserviced squatter settlements in Lusaka rose from 15 to 24 percent, a trend observed across many developing countries at the time. The shortage in public housing provision was also compounded by most governments' fear that providing housing to poor rural migrants would encourage more people to move to urban areas - which would in turn jeopardize economic growth that was mainly pegged on rural agriculture. Further, evidence showed that subsidized public housing was beyond the reach of many poor households due to unaffordability and locations far from their places of employment for some of the new housing projects.[4] The failure of governments to adequately provide housing for the urban poor drew numerous responses from several quarters including the poor themselves, the informal private sector, academics and international agencies.

[2] Vijayalakshmi, M. (2000). "Impact of housing policy: sites and services schemes in Chennai city." Review of Development and Change,VoLVI/ June-December 2000, 285-295.

[3] Bamberger M.;Sanyal B.,Valverde N. (1982) Evaluation of Sites and Services Projects The Experience from Lusaka, Zambia.

[4] Mangin, W. (1967). "Latin American squatter settlements: a problem and a solution." Latin American Research Review 2(3): 65-98.

Faced with limited housing options, poor rural migrants would squat on any available public or private land and self-construct homes incrementally using locally available materials. Given the lack of infrastructure and services in such settlements, they would soon become squalid attracting government wrath. The approach to slum/squatter settlements by most governments was eviction and demolitions, referencing public health concerns.

Scholars began to draw attention to the weaknesses of the public housing model and slum settlements demolitions while advocating for a shift towards involving the poor in their own housing production through self-help[5]. Inspired by the prevailing actions of the poor in housing production especially of squatter and slum settlements that were mainly self-constructed on vacant urban land, they argued that the poor had already proven their ability to provide their own housing. The challenge remained creating an enabling environment that would attract more private capital towards urban housing for the poor. This would involve securing the investments of the poor through providing land tenure security and services such as water, sanitation, electricity and roads infrastructure in existing squatter settlements. Instead of demolishing existing slum settlements to build public housing, thereby reducing the available housing stock, governments would thus tap into the urban poor capital by either providing serviced land and letting the poor build their own homes incrementally or by upgrading existing slums.[6]

At the same time, developing countries were putting pressure on development agencies to expand their development loans portfolio to include urban infrastructure and housing.[7] Previously, donor funding was mainly directed to agricultural development and rural infrastructure driven by the notion that the majority of the population and the poor lived in rural areas. However, as urbanization increased partly driven by the relaxation of anti-urbanization colonial rules and low agricultural returns, poverty became an urban phenomenon characterised by squalid settlements, consequently drawing more attention to urban areas. In the early 1970s, several international agencies including the World Bank (the Bank) responded by entering the housing sphere.[8] The Bank however put a condition on financing, requiring governments to shift from public housing towards self-help through site and services and in-situ slum upgrading inspired by the works of John F.C Turner and others.[9] From the Bank's perspective, sites and services were seen as a shift from the then prevailing inefficient public housing approach to harnessing the ability of the poor to house themselves by facilitating self-construction.[10]

Sites and services was however not a new concept, but had been hitherto used in several countries to provide low-income housing. The earliest sites and services projects in countries like Chile, Kenya, and South Africa happened between the 1920s and 1950s, mainly without external support.[11] In Kenya, the colonial government housing policy mandated that employers provide housing for their native workers. Consequently, settler farmers in areas like Eldoret provided building plots for their African farm workers for as long as they worked for them.[12] To facilitate housing provision especially in the context of rapid urbanization and employer reluctance to build houses, municipalities in Kenya (Kisumu, Nairobi and Mombasa) set aside serviced land (what they referred to as native locations) upon which employers and Africans were required to build houses but without much government assistance.[13] In some instances, like Pumwani in Nairobi, private developers were allowed to build houses for rent in such plots. Sites and services in Apartheid South

5 Turner, J. C. (1968). "Housing Priorities, Settlement Patterns, and Urban Development in Modernizing Countries, Journal of the American Institute of Planners, 34:6, 354-363, DOI: 10.1080/01944366808977562."; Mangin, W. (1967). "Latin American squatter settlements: a problem and a solution." Latin American Research Review 2(3): 65-98.

6 Abbot, J. (2002). "An analysis of informal settlement upgrading and critique of existing methodological approaches." Habitat International 26(3): 303-315."; Pugh, C. (2001). "The Theory and Practice of Housing Sector Development for Developing Countries." Housing Studies 16(4): 399-423.

7 Abbot, J. (2002). "An analysis of informal settlement upgrading and critique of existing methodological approaches." Habitat International 26(3): 303-315".

8 Abbot, J. (2002). "An analysis of informal settlement upgrading and critique of existing methodological approaches." Habitat International 26(3): 303-315.".

9 Werlin, H. (1999). "The slum upgrading myth." Urban studies 36(9): 1523-1534.

10 Mayo, S. K. and D. J. Gross (1987). "Sites and services—and subsidies: The economics of low-cost housing in developing countries." The World Bank Economic Review 1(2): 301-335.

11 Gross, S. K. M. a. D. J. (1987). "Sites and Services—and Subsidies: The Economics of Low-Cost Housing in Developing Countries." The World Bank Economic Review Vol.1 No.2, 301-335.; Hay, A. and R. Harris (2007). "'Shauri ya Sera Kali': the colonial regime of urban housing in Kenya to 1939." Urban History 34(3): 504-530.

12 Hay, A. and R. Harris (2007). "'Shauri ya Sera Kali': the colonial regime of urban housing in Kenya to 1939." Urban History 34(3): 504-530.

13 Hay, A. and R. Harris (2007). "'Shauri ya Sera Kali': the colonial regime of urban housing in Kenya to 1939." Urban History 34(3): 504-530.

Africa were also considered a cheap housing option for residents. Initially, the government built small single-story houses in standardized plots and provided services such as water standpipes, roads and refuse collection points. In order to cut down costs, the government however decided to apply the principle of sites and services for subsequent constructions. This involved providing a site and some services and leaving house construction to the residents. Self-building was controlled and supervised by authorities with residents required to select house types from a limited number of worked out prototypes that were applied across the whole country.[14]

The broad objective of sites and services programs was the delivery of incremental housing for the poor through the provision of small, serviced plots, sometimes with a core unit. The definition and typology of what constituted sites and services evolved over time and was dependent on context. The key components in a housing scheme include land, infrastructure and the house itself, which require several inputs such as finance, building materials and labor. Building on these requirements, the sites and services advocated that the government provides land and infrastructure services and then sells or leases land to individuals. Households then incrementally self-build the houses as their own resources (labor and finance) allow. This in essence followed the squatter settlement development without the squatting element.[15] In some instances, the government would provide the core of the house (consisting of a kitchen and a toilet), a utility wall (a wall on the plot containing connections for power, water & sewerage services), a roof frame or a latrine.

Among the donor agencies that participated in the sites and services development program, the Bank was the biggest player in terms of projects and resources. Between the early 1970s and 1998 the World Bank financed 100 sites and service projects in 53 countries at a cost of $14.6 billion.[16] In 1984, the Bank alone, initiated sixty-eight projects across a number of countries, each benefiting over 25,000 households on average.[17] The size, scale and background of sites and services implemented by the Bank varied greatly with some as small as to accommodate hundreds of beneficiaries and others as big as to cater to hundreds of thousands.[18] From 1972 to 1986, seventy percent of the World Bank's total urban shelter lending consisted of sites and services and slum upgrading projects. However, there was a drastic change since the 1980s where sites and services and upgrading projects fell to only 15 percent of the total shelter portfolio. In contrast, housing policy and housing finance loans made an increase.[19] Other international agencies involved in sites and services include: the United States Agency for International Development (USAID), through the Housing Guarantee Loans Programme, (especially in Latin America, Kenya, Zimbabwe); the UK Ministry of Oversees Development in Egypt; the United Nations Development Program (UNDP) and United Nations Capital Development Fund (UNCDF) in Dacca; the European Development Fund; the Canadian International Development Agency (CIDA) and the Asian Development Bank (ADB).

1.2 Decline and Renewed Interest in Sites and Services

By the mid-1990s, most governments and donor agencies had abandoned sites and services. This change was precipitated by a policy shift and financial crisis as well as the prevailing critiques of sites and services at the time.[20] Towards the 1980s, the World Bank started to shift its development policy from sites and services and slum upgrading towards municipal development and housing finance. Assessments of these interventions in the early 1990s however concluded that they were unable to make citywide impact and that the rate of urban growth far outweighed the size of urban programs.[21] Urban programs such as sites and services were seen to 'divide the city into projects, improving specific neighbourhoods without improving the urban policy and institutional framework such as the functioning of citywide markets for

14 Vestbro, D. U. (1999). "Housing in the Apartheid City."

15 Srinivas, H. (Unknown). "Sites and Services."

16 Owens, K. E., Gulyani, S., & Rizvi, A. (2018). Success when we deemed it failure? Revisiting sites and services projects in Mumbai and Chennai 20 years later. World development, 106, 260-272.

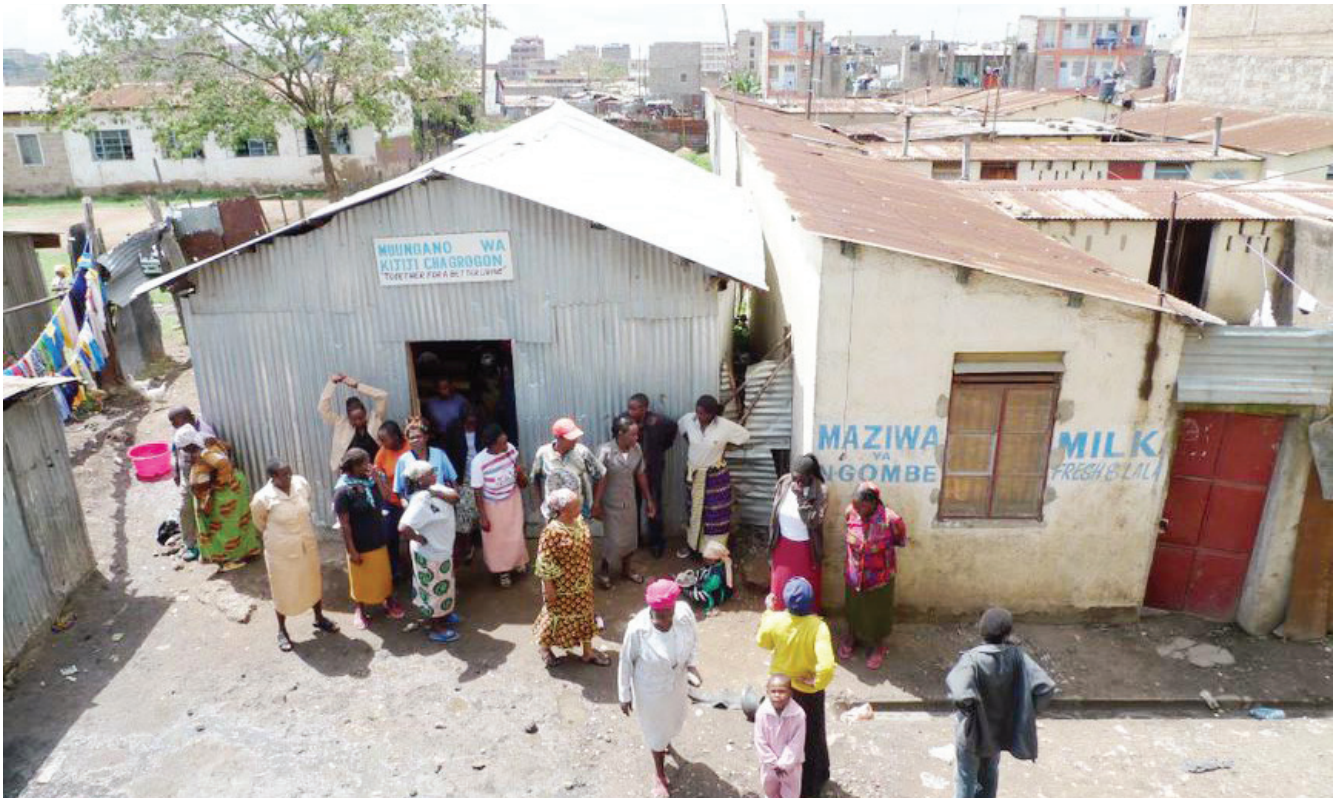
17 Mayo, S. K. and D. J. Gross (1987). "Sites and services—and subsidies: The economics of low-cost housing in developing countries." The World Bank Economic Review 1(2): 301-335.

18 Table in annex 3 shows a sample of bank financed projects in several countries.

19 Buckley and Kalarickal (2006), P.16.

20 Abbot, J. (2002). "An analysis of informal settlement upgrading and critique of existing methodological approaches." Habitat International 26(3): 303-315.".

21 World Bank (1991). "Urban policy and economic development: An agenda for the 1990s. World Bank, Washington."



land and housing' (ibid pg.5). Suggestions were then made that the Bank's urban lending ought to align with the 'broader objectives of economic development and macroeconomic performance' (ibid pg.4) and to 'shift from the provision of neighbourhood investments in shelter infrastructure to citywide policy reform; institutional development' through 'reform of central-local financial relations' particularly lending for housing; and high-priority 'infrastructure investments that support a country's overall development' (ibid pg.13). Additionally, 'the analytical foundations of urban assistance' would 'also be strengthened, including assessments of land and housing markets, regulatory audits, and analysis of central-local financial relations' (Ibid, pg.13).

Other critiques that led to the abandonment of sites and services model included: unaffordability of housing by the poor caused by the use of high standards of infrastructure and housing; leaking of project benefits to the better off; poor cost recovery; high and unsustainable subsidies; inability to replicate project on a large scale; unrealistic plot sizes that were sometimes too big to be maintained by allottees, translating to subletting and lack of maintenance; long delays in provision of infrastructure and services; lengthy and complex process of obtaining land that provided loopholes for corruption and malpractices as well as locked out the poor who in most cases were illiterate and unable to figure out the processes; reliance on public land only; remote locations of sites away from jobs; insufficient supply of plots to meet demand; budgetary limitations; and weak financial institutions for providing low interest loans to the poor to build or improve their homes.[22]

Recent research, however, appreciates that the determination of past sites and services performance was either made too early or used narrowly defined metrics. Consequently, many of the projects were prematurely deemed failures. Most latter studies on sites and services

[22] Straaten, J. J. V. (1977). "Site and Service Schemes in Kenya." Paper Presented at the HRDU Seminar on Housing for the Lower Income Groups' 9th May 1977 National Housing Corporation; Aliani, A. H. and Y. K. Sheng (1990). "The incremental development scheme in Hyderabad An innovative approach to low income housing."; Rondinelli, D. A. (1990). "Housing the urban poor in developing countries: The Magnitude of Housing Deficiencies and the Failure of Conventional Strategies Are World-Wide Problems." American Journal of Economics and Sociology 49(2): 153-166.; Akinsola, B. N., et al. (2013). "Effective Site and services scheme as a means of solving low-income housing need in Nigeria." Proceedings of 5th West African Built Environment Research (WABER) Conference, the British Council in Accra, Ghana , on 12-14, August, 2013 pp 429-446.

show significant levels of success.[23] Recent evaluations of two cities in India (Chennai and Mumbai) where a total 28 sites and services were developed with approximately 143,000 plots between 1977 and 1994 tell a success story.[24] These projects not only succeeded in delivering a range of decent housing options but also inclusive and livable neighborhoods. Sites and services also served to increase the infrastructure and serviced areas footprint in many cities. Researchers argue that, in Nigeria's older cities, it is only the areas that had a sites and services scheme that usually enjoy decent housing, functional infrastructure and an environment conducive to healthy living.[25] In Kenya, sites and services provided a much-needed boost to rental housing, with the majority of those residing in the project sites by the 1990s being low-income renters.[26] Between the 80s and 90s, sites and services are also considered to have reached a significant number of middle-income blacks in South Africa, despite the government's unwillingness to dedicate a huge budget to housing Africans.[27]

These success stories in addition to the ongoing housing crisis in Africa necessitates a reconsideration of the sites and services approach as a potential housing solution. None of the alternative instruments that succeeded sites and services appear to have addressed the bottlenecks to low-income housing – especially in relation to land and housing products appropriate for low-income households.[28] Forty years after the first sites and services, the urban poor still have no real options for housing and are still settling in high-risk, informal, fragile sites. Globally, over 1 billion people live in slums today with limited or no services.[29] This figure is expected to double by the year 2030, with at least a total of 100,000 housing units per day required to meet the demand. Additionally, the persistence of sites and services particularly through the private sector and NGOs provides an opportunity to revisit the approach with the potential to learn and tap into non-profit experiences and private sector capital that were largely missing in the first-generation sites and services. There is also emerging interest in sites and services from the donor community, for example a DFI commissioned study on sites and services[30], signalling potential for revived donor funding for this intervention.

Many governments have since recognized housing as a human right, but difficult conditions hamper affordable housing, and the housing crisis continues. The global recognition of housing as a human right has prompted a keen focus on housing provision for the poor but challenges remain. On the demand side, 74 percent of people in low-income countries live on less than $2 per day, making it impossible to afford market rate housing without huge subsidies. Indeed, it is estimated that 1.6 billion people (a third of urban residents) will struggle to secure adequate housing by 2025.[31] On the supply side, securing land for development remains a major challenge with about 70 percent of land in emerging economies being unregistered or tenure insecure.[32] The ease of doing business for housing developers still remains a challenge with 159 days required to obtain a construction permit for non-OECD countries versus 76 days for OECD countries. These vary in different regions with 155 days in countries in Sub-Saharan Africa, 178 in Latin America and 199 in South Asia.[33] These statistics encourage a reconsideration of sites and services as a potential solution to the housing crisis in most developing country cities, learning from previous sites and services to inform future low-income housing.

23 Owens, K. E., et al. (2018). "Success when we deemed it failure? Revisiting sites and services projects in Mumbai and Chennai 20 years later." World Development: 260–272.; Gattoni, G. (2009). "A Case for the Incremental Housing Process in Sites-and-Services.

24 Owens, K. E., et al. (2018). "Success when we deemed it failure? Revisiting sites and services projects in Mumbai and Chennai 20 years later." World Development: 260–272.

25 Olaniran, M. O. (2018). "Urban Infrastructure Development: An Examination of Impact of Sites and Services Schemes in Ibadan."; Akinsola, B. N., et al. (2014). "Effective sites and services scheme as a means of solving low-income housing need in Nigerian cities." Journal of Economics and International Business Management Vol. 2(3), pp. 50-58, September 2014 ISSN: 2384-7328 Review Paper.

26 Keare, D. and S. Parris (1982). Evaluation of Shelter Programs for the Urban Poor Principal Findings. WORLD BANK STAFF WORKING PAPERS . Washington, D.C., U.S.A., WORLD BANK.

27 Goodlad, R. (1996). "The Housing Challenge in South Africa " Urban studies 33(9): 1629-1646.

28 Owens, K. E., et al. (2018). "Success when we deemed it failure? Revisiting sites and services projects in Mumbai and Chennai 20 years later." World Development: 260–272.

29 UN HABITAT (2016), Slum Almanac 2015-2016.

30 Bolton L. 2020, 'Sites and services', and in-situ slum upgrading, K4D.

31 UN HABITAT (2020), World Cities Report 2020: The Value of Sustainable Urbanization; McKinsey Global Institute, (2014), A blueprint for addressing the global affordable housing challenge.

32 USAID (2021), Securing Land Tenure And Property Rights For Stability And Prosperity.

33 Hallward-Driemeier M. and Lant Pritchett.L (2015), How Business is Done in the Developing World: Deals versus Rules, Journal of Economic Perspectives—Volume 29, Number 3—Summer 2015—Pages 121–140.

2

Re-examining 1st Generation Sites and Services: Underlying Assumptions, Lessons and Emergent Possibilities

2.1 Sites and Services Underlying Assumptions

KEY MESSAGES

- Underlying assumptions in the 1st generation sites and services included the viability of **incremental housing and mutual/self-help** as constructing models, the desire for home ownership and the expectation of **immediate site occupancy**.
- **Incremental housing is still widely practiced in developing countries** (e.g. through private sector or owner-led incremental housing and backyarding) underscoring the value of reconsidering this approach.
- **Sweat equity and mutual help are not tenable for future projects**. The assumption of sites and services was that low-income households would incrementally build houses using own labor (sweat equity) and mutual self-help. This never prevailed as it did not make economic sense for allotees, and allotees hired building contractors to construct houses for them.
- **Sites and services continue today** driven largely by the private sector, pointing to the continued viability of this approach. Future efforts should **integrate these projects into a broader urban development context**.
- **Both homeownership and rental options should be considered in future projects**. The 1st generation sites and services were largely modeled on individual home ownership, but most of the original sites now have a large share of renters, indicating the need for rental options.
- **Immediate site occupancy should not be the sole indicator of success**. At project closure, most sites were unoccupied, and projects were considered failures. But later assessments show eventual full occupation. Projects should allow for longer periods for occupancy to take place.
- **Access of new sites in relation to jobs and former homes** should be considered to enhance faster relocation and quicker occupancy rates.

2.1.1 The Incremental Housing Approach and Self-Help

Two of the key principles of the sites and services were incremental housing and self-help. The principles were drawn from the prevailing 'informal housing delivery systems' (slums and squatter settlements) that were largely self-built by the poor over time. As the public housing model failed to meet the housing demand, the poor resulted to squatting on mainly un-serviced vacant land. Rural migrants would identify vacant urban land and progressively build houses over time using their own labor and resources. Due to the lack of infrastructure and services in these areas, they would soon turn into slum conditions. In response, governments reacted by demolishing such settlements citing public health threats. On the other hand, proponents of slum settlements argued that slum dwellers were contributing immensely to the welfare of formal cities by providing labor, markets for goods and services as well as social capital and their contribution needed to be recognized. A key contribution was however seen as the provision and resolution of their own housing problem through self-help in situations where national governments were practically unable to intervene.[34] Building on their practices, Turner and others argued that the challenge of low-income housing was not as a result of their inability to build homes but due to several constraints (e.g lack of tenure security, infrastructure and services) which if addressed could facilitate self-house construction.[35]

Instead of direct housing provision, governments would therefore facilitate self-housing for the urban poor through eliminating bottlenecks (such as land and infrastructure). Under the sites and services model, governments would provide serviced land, sometimes with a core house or a toilet. They would then sell these plots to households, especially targeting the poor. Upon payment, plot owners received

[34] Mangin, W. (1967). "Latin American Squatter Settlements: A Problem and a Solution." Latin American Research Review, Vol. 2, No. 3 (Summer, 1967), pp. 65-98.

[35] Abbot, J. (2002). "An analysis of informal settlement upgrading and critique of existing methodological approaches." Habitat International 26(3): 303-315".; Mangin, W. (1967). "Latin American Squatter Settlements: A Problem and a Solution." Latin American Research Review, Vol. 2, No. 3 (Summer, 1967), pp. 65-98.

formal land title and were expected to construct houses incrementally, as resources would allow, using their own labor ('sweat equity'), trained local contractors and mutual self-help.[36] To facilitate self-help construction, the projects trained beneficiaries in construction skills after which they built their houses sometimes based on plans provided by the project.[37] Community engagement was also structured into the model as "mutual-help" where allotees were expected to pull together and help each other. The typology of sites and services ranged from a minimal level of "surveyed plot" to an intermediate level of "serviced sites" to an upper level of "core housing" complete with utilities and access to shared community services. The level of services depended on the ability and willingness of beneficiaries to pay.[38]

The self-help approach in terms of labor did not produce the expected results, for various reasons. First, the cost of labor training and supervision often outweighed the cost reductions of self-help labor. Second, the cost-benefit of using own labor versus hiring building contractors or skilled labor did not make economic sense for the allottees. As a result, most of them opted to employ skilled laborers to construct houses for them.[39] For most allottees, staying on site to provide labor meant missing out on income generating activities that would in most cases provide adequate resources to hire skilled labor and use for other household expenses. Given this evidence, self-help and mutual help ('sweat equity') is no longer viable as an underlying principle for future sites and services or housing model. Additionally, emerging building technologies such as 3-D printing and other machine-based building technologies offer much promise as costs come down as they reduce the need for intense human labor while enhancing efficiency in house building. Nonetheless, community inclusion remains a key ingredient of any successful low-income housing model.

On the other hand, the incremental housing approach was successful and remains an optimal approach to poor housing provision. Globally, sites and services remain prevalent and critical to the delivery of housing. Owner–led incremental housing is common, where private owners buy land from individuals or private land companies and then build their houses over long periods of time using short-term loans. Private companies also buy and service land and later sell to individuals who self-construct. These approaches are mostly done on private land, signaling the need to facilitate housing on both public and private land as well as incorporating the private sector in low-income housing provision.

The incremental housing approach is also seen today through the practice of backyarding where formal homeowners erect informal structures in their yards for rent. This is a common practice in cities where there is scarcity of housing and limited enforcement of planning and building regulations on private housing. This practice is also common in old public housing estates like in the case of Nairobi. The practice of backyarding for rent underscores the importance to consider supporting both rental and homeownership in future sites and services. Under the 1st phase of sites and services, the model was largely based on home ownership except in a few places that provided for rental. Indeed, sites and services evaluations in India, Kenya and Zimbabwe show a higher number of later occupants to be tenants.

Ownership remained critical in fostering project sustainability, but more immediate needs sometimes took precedence. During the first sites and services in Kenya, studies showed that most city dwellers were single residents who had left their households in rural areas and came to search for incomes to meet other needs. Thus, in addition to being unaffordable, permanent shelter in the city was not a priority. If considered, it was as a form of investment rather than an urban home. On the other hand, a survey of residents of Mogappir, Chennai 10 years after the introduction of sites and services found that ownership was the single most important outcome for most residents and an element that enabled residents to overlook other project shortcomings. Despite most residents being less satisfied with the services, they were more satisfied with their dwelling units.[40]

Despite donors' withdrawal, the sites and services model continued in several countries as part of government housing policy or civil society advocacy. Sites and services

[36] Srinivas H. (undated), Sites and Services.

[37] UN HABITAT (1991). "The Incremental Developmenr Scheme_ A case study of Khuda-Ki-Basti in Hyderrabad Pakistan ".

[38] Mayo, S. K. and D. J. Gross (1987). "Sites and services—and subsidies: The economics of low-cost housing in developing countries." The World Bank Economic Review 1(2): 301-335.

[39] UN HABITAT (1991). "The Incremental Development Scheme_ A case study of Khuda-Ki-Basti in Hyderrabad Pakistan ".

[40] Nathan, V. (1995). Residents' satisfaction with the sites and services approach in affordable housing. Housing and society, 22(3), 53-78.

remained a preferred low-income housing policy in South Africa, with 'the Independent Development Trust (IDT), set up by then president De Klerk's government in the wake of his change of direction in February 1990', establishing 'a capital subsidy scheme (CSS). The CSS aimed to create tens of thousands of serviced sites both in un-serviced informal areas and on greenfield sites.[41] In Guyana, the government has continued to embrace sites and services to provide low-income housing.[42] The approach remains entrenched in Pakistan's government housing policy, although the majority of the plots go to diverse groups mainly those with political and administrative connections.[43] Local and international NGOs such as the Slum Dwellers International (SDI) have persistently advocated for security of tenure and services provision that would allow slum/squatter residents to incrementally build their homes. Where this has happened in countries like India, South Africa and Kenya, there has been some level of success, with communities enjoying better living conditions.

Variants of sites and services are also often driven by the private sector. In Pakistan, several housing developers create sites and services for high and middle-income groups in gated communities.[44] In Brazil, there have also been attempts by the private sector to demarcate plots with rights of way but no infrastructure and sell the same to the poor who build incrementally. With the lack of infrastructure, these have however ended up as informal settlements, though better organized than ordinary favelas.[45] In Kenya, sites and services persist to date driven mainly by private developers and land buying and selling companies. Land-buying companies and cooperative societies, which contribute to housing production through the sale of plots, have been on the increase. Between 1985 and 1992 the number rose from 108 to 227 and has been growing ever since.[46]

41 Mabin, A. (2020). "A Century of South African Housing Acts 1920–2020." Springer Nature.

42 Gattoni, G. (2009). "A Case for the Incremental Housing Process in Sites-and-Services

43 Qadeer, M. A. (1996). "An Assessment of Pakistan's Urban Policies, 1947-1997." The Pakistan Development Review 35(4): 443-465

44 Hasan, A. and H. Arif (2018). "Pakistan: the causes and repercussions of the housing crisis." iied Working Paper October 2018.

45 Informal Cities in a Global Context. What do we learn from it?, Ir. Claudio Acioly Jr. Institute for Housing and Urban Development Studies – IHS Rotterdam, The Netherlands; H. Peter Oberlander, 1985, Land: The Central Human Settlement Issue, The University of British Columbia Press.

46 Mwangi, I. K. (1997). "The nature of rental housing in Kenya." Environment and urbanization 9(22).

2.1.2 Occupancy of Sites

The expectation was that relocation to and build out of the sites would be relatively immediate, but this was not the case. At project closure, almost none of the projects had any sites fully built out. Most neighborhoods appeared underbuilt, under-occupied and thus considered a failure due to the lack of immediate response from allottees.[47] Several factors accounted for such outcomes. First, the distances between old and new residences were often too great for easy transitions. Second, readily and economically available materials were not present on the site for temporary structures thus families could not quickly move to the sites due to greater material and transport costs. This was resolved in some sites by adding a core unit, although it led to additional costs to the allottee – as the beneficiaries were required to pay the costs of the unit within project period.[48] Third, delay in land acquisition for the project and consequently the delay in service provision, which then hindered inhabitation of families such as was seen in Senegal. Fourth, the location of some project sites was far from employment opportunities, causing less occupancy as less people wanted to move farther away from urban hubs and economic opportunities. Where this jobs-housing trade-off was low, occupancy was higher and build out faster. Fifth, in some situations families had to simultaneously maintain and pay for a city residence while building new homes at the project site slowing down their relocation. Finally, lack of credit for house construction remained a major cause for low occupancy of project sites. For example, in the case of Madras, the main reason given for the fact that 31.3% of the plots remained undeveloped and unoccupied during the project period was the lack of funding available for the allottees to build their homes. Delays in occupancy also caused a rise in costs during construction due to inflation, thus creating further problems in the project.

High occupancy levels occurred in projects that did not experience the above hindrances. For instance, apart from its more strategic location in relation to centers of employment, the success of Arumbakkan (India) scheme, one of the most successful projects of its kind, was hinged on availability of house building finance from commercial banks. The project

47 Owens, K. E., et al. (2018). "Success when we deemed it failure? Revisiting sites and services projects in Mumbai and Chennai 20 years later." World Development: 260–272.

48 Wainer. L.S, Ndengeingoma B., Murray. S(2016), Incremental housing, and other design principles for low-cost housing, C-38400-RWA-1.

was already 72% occupied at the time of project appraisal in contrast to the other two project sites with 2% occupation rate at Kodungaiyur and 26% at Villivakkam.[49]

Later assessments however show that the majority of sites eventually got fully occupied.[50] A 2015 evaluation of sites and services in Mumbai and Chennai in India show over 90 percent occupancy rates in almost all sites, twenty years since the projects closed. Plot owners incrementally developed housing units, sometimes exceeding the project expectations. In some sites like Arioli in Navi Mumbai where the project had expected owners to only build two stories, the study found out that majority of them had gone up to three stories and others up to five stories, fully occupied by both owner families and renters.[51] This is an indication that occupancy rates within project period should not be a primary measure of success. Rather, projects need to allow for longer periods for complete occupancy.

[49] World Bank, Madras PPAR.

[50] Rakodi, C. (1991). "Developing institutional capacity to meet the housing needs of the urban poor - Experience in Kenya, Tanzania and Zambia."

[51] Owens, K. E., et al. (2018). "Success when we deemed it failure? Revisiting sites and services projects in Mumbai and Chennai 20 years later." World Development: 260–272.

2.2 Land and Planning Considerations

KEY MESSAGES

- **Accessing land for sites and services was and will remain a major challenge**. Future projects are likely to experience greater challenges in accessing land due to:
  - **Increase in urban land prices/values**. In North Africa the average urban land prices have more than doubled every three years since 1970. In Nairobi, the price of land rose more than six times between 2007 and 2019.
  - **Diminishing unoccupied public or government land in most cities**. Sites and Services Schemes were mainly on public land, which is almost becoming non-existent in some countries.
  - **Vibrant informal markets.** Lengthy and costly processes in property registration in most African countries means that property owners and especially lower-income owners, often do not bother registering their land, fueling illegal transfers and informal land markets.
  - **Complex land acquisition processes** and privatization of land in several contexts that make land acquisition difficult.
  - **Rapid urban expansions** that have meant limited land at the urban core and adjacent neighborhoods where most low-income households prefer to live in close proximity to job opportunities.
- **Clear strategies for land acquisition**, if needed, must be guaranteed. To prevent delays, **projects should ensure that land is available first** before moving into later stages of preparation.
- **Current diverse innovations in land and property rights provide potential solutions to providing land for sites and services.** Governments could partner with private landowners to develop these projects. Projects could move away from individual titling and freehold leasing towards communal titling and leaseholds to safeguard beneficiary rights.
- **Innovations in land instruments also present opportunities to source and finance land**, such as land value capture, transfer of development rights, charges on building rights, impact fees, land readjustment, etc.

2.2.1 Land as a Key Input in Sites and Services

Land forms a key input in the sites and services. Yet, a look into the current land conditions indicates that identifying land for future low-income housing will be the single most challenge. This stems from several factors ranging from increasing land prices, urban expansions that have meant limited land at the core, diminished unoccupied public land, vibrant informal markets, complex land administration processes and privatization of land in several contexts making land acquisition difficult.

Since the 1970s, urban land values have gone up rapidly across all regions, increasing the cost of housing development. In the Northern African region (Sudan, Tunisia, Algeria Egypt, Morocco), the average urban land prices have more than doubled every three years since 1970. This is worse in the urban fringes, which fall outside official city boundaries and where there is less government control. In such areas, land prices have gone up 15 to 20 times.[52] This is also the case in the other African regions. In Nairobi, Kenya, the price of land rose more than six times between 2007 and 2019.[53] The same is also experienced in Indian cities with land prices far outweighing their fundamental value.[54] This trend is not only limited to emerging markets but also developed economies. In the USA, the prices of land for single-family housing rose by close to four times faster than inflation between the years 2012 and 2017.[55] These high land values increase the cost of housing provision, making shelter unaffordable to majority of urban dwellers. A 2019 study by Center for Affordable Housing Finance in Africa (CAHF) shows that over 90% of households in Kenya are excluded from the formal housing

[52] UN-HABITAT (2010). The State of African Cities 2010: Governance, Inequality and Urban Land Markets UN-HABITAT (2010). The State of African Cities 2010: Governance, Inequality and Urban Land Markets.

[53] Consult, H. (2019). "The Hass Property Index: Land Price Index Quarter Four Report 2019 P."

[54] Singh, G. (2016). "Land in India: Market price vs. fundamental value."

[55] Joint Centre for Housing Studies of Harvard University (2019). The State of the Nations Housing 2019.

market whose lowest affordable housing products start from US$40,000 (KES 4 Million) and above.[56] Land costs traditionally account for about 25 percent of urban housing costs[57] but in some markets like Kenya, the figures range between 30-40 percent.[58] Future sites and services thus need to devise innovative ways to reduce the cost of land.

The available unoccupied public or government land is also diminishing in most cities. Sites and services schemes were mainly on public land or private land acquired by the state. Over time, however, unoccupied urban public land in most countries is almost becoming non-existent resulting from allocations over time, grabbing or squatting on public land. This is the case in most African counties especially in Egypt, Somalia and Kenya where land regularization and allocation of leasehold public land have made government land competitive and encouraged malpractices like land grabbing and corruption, leading to the accumulation of public land by a few politically connected individuals which lock out the poor. Upon acquisition, beneficiaries sell land at market rates generating huge profits, which leave little or no vacant public land available.[59] The limited public land in the face of soaring land prices make sites and services as originally envisaged a challenge – as most governments would be unable to provide the huge tracts of land needed. Further, the unavailability of public land in major urban areas and near the city center means that formal housing development opportunities for low-income populations is usually earmarked on the urban periphery. This is the case in Nairobi where recent affordable housing locations have been proposed in areas such as Athi River and Mavoko, which are 25 km away from the city center. As a result, the poor are likely to incur significant costs, in terms of both time and money, when they commute to employment opportunities in the city.[60]

The decrease of public land requires considerations to support incremental housing on private land. The Government of Kenya for instance has amended land laws to include freehold land into categories of urban land. Previously, only leasehold tenure system was accepted in urban areas. The incorporation of freehold land into the urban land market increases the land available for urban development including housing. The privatization of land and housing markets, as well as the opening up of cities to foreign direct investments, and the declining role of the state in the economy and especially in the 1980s and 1990s through the Structural Adjustment Programs (SAPs) also meant that the state had limited influence on urban development.[61] Tapping into private capital and resources thus remain important to the success of future low-income housing.

Complex and costly land registration processes have also led to vibrant informal market limiting access to clean developable land. In the Northern and Eastern Africa regions for instance, the process of property rights registration and transfers is lengthy, complex and costly. In Northern Africa, it requires 'a notarial act, a formal survey of the property undertaken by the specialized department, payment of a registration fee, and filing the notarial bill of sale with the land registry'.[62] Given these lengthy and costly processes, property owners and especially in informal settlements, are reluctant to register their land, fueling illegal transfers and informal land markets in these countries. In Tanzania, for example, formal urban land markets cater for less than 10 percent of the urban land demand with the rest relying on the informal land markets. In Uganda, there is barely any established formal land markets although they are beginning to develop with transactions happening informally. In Rwanda land is purely government property although the 2005 Organic Land Law recognized private ownership paving way for land market privatization. Individuals and companies can however lease land and develop within 5 years under certain conditions and fees. As most individuals and companies are unable to carry out development within the five-year timeframe due to the inability to pay fees or meet development conditions, many of them sell off and informally settle in other plots. Over 90% of residents in Rwanda operate under informal land markets and illegality.[63] These illegalities and informalities make land unavailable for projects like sites and services and put huge housing investments under risk by increasing potential

56 Gardner, D., et al. (2019). Assessing Kenya's Affordable Housing Market April, 2019, Centre for Affordable Housing Finance in Africa (CAHF)

57 Hall, M. (2018). "The Relationship Between Lot Cost and Total Building Cost."

58 Nanjala, E. (2020). Making the elusive dream of home ownership for millions come true.

59 UN-HABITAT (2010). The State of African Cities 2010: Governance, Inequality and Urban Land Markets.

60 ibid.

61 Pacione, M. (2009). "Housing." University of Strathclyde, Glasgow, UK.

62 ibid.

63 ibid.

disputes in land transactions.[64] Flexibility of land registration and development regulations is critical to allow clean land for urban development in the context of rapid urbanization in developing nations.

Land acquisition challenges were severely experienced in the 1st generation sites and services when the government attempted to buy private land for sites and services. In many countries, there were lengthy processes of land acquisition that led to delays in project execution, land related disputes, high costs of land acquisition that translated to high cost offloaded to beneficiaries and high costs of service provision, lack of land acquisition strategy and slow compensation of land to landowners by government agencies among others. Intensive delays in India and Pakistan projects arose from the need for land acquisition. Some projects were delayed by the need to acquire new land sites midway through the project which delayed the projects significantly.

Future sites and services need to have a proper strategy for land acquisition that ensures guaranteed ready land before project commences. An option to prevent land related delays caused by disputes would be to defer project approval until executing agencies have full possession that is undisputable, and where applicable, until compensation to the landowners by the government is complete and necessary approvals have been secured for the purchase of any additional parcels. This makes land banking a critical consideration in low-income housing. Hence, it would be useful for countries participating in project to have some land parcels both in major cities and regional cities in hand in order to permit the necessary flexibility to adjust its programs in changing housing markets. Projects should also include land market studies to enable the availability of up-to-date market information and the optimum land holdings required to by effectively carry out programs. Multiple land sources besides public land should be considered as sustainability and replicability of future sites and services schemes would be enhanced if they did not have to rely on governmental land, whose supply in most cities is now limited. The land location should also ensure good access to jobs that can be guaranteed through close proximity to the city or linking site to citywide infrastructure.

Many past sites and services were built on individual ownership which had benefits and disadvantages. Individual ownership was preferred as it allowed access finance for the down payments and subsequent installments. Secure land tenure supported by land titling was also an essential pre-requisite for cost recovery as it promoted ownership confidence. This also guaranteed property rights, which could be mortgaged if a potential borrower has full legal rights in the form of a freehold title. The absence of land titles in some projects especially in Morocco, led to financing impediments with most home improvements financed by private savings. However, this meant that allottees needed to be formally employed which locked out those informally employed or only interested in renting. Individual titling also made it easy for beneficiaries to sell off their lots to well off persons to cater for other social and economic household needs, which was not the objective of the intervention.

Freehold land tenure systems appeared preferable for most individuals and present extra benefits for households. Projects that adopted leasehold like in Thailand (two sites and services developments at Songkhla and Phuket) experienced slow uptake due to the reluctance of prospective customers to purchase the plots because of the leasehold nature of the development. Once the implementing agency converted the projects from leasehold land at Phuket to a freehold the rate of uptake increased. However, while freehold land tenure system provides greater flexibility, it may also leave poor project beneficiaries vulnerable to infiltration by wealthier groups as communities can easily off load property to the wealth in exchange for quick money.

The emergence of diverse models of land ownership and innovation in property rights provides new opportunities. Future projects need to incorporate diverse land and building ownership models to accommodate different contexts, income groups and preferences. The adoption of communal land ownership or use of restricted land rights in pro-poor projects has proven largely successful in protecting the infiltration of benefits to richer households. In Thailand and Kenya,[65] the adoption of communal land tenure in slum upgrading projects was able to guarantee tenure security and prevent allottees from selling off their property

[64] Colin, J.-P. and P. Woodhouse (2010). "Introduction: Interpreting Land Markets in Africa." Africa 80(1).

[65] Robertson, D. (2017). "Community Land Trust Models and Housing Coops from Around the World." RioOnWatch.

during desperate financial moments, thus safeguarding the individual rights and long-term land access of the most vulnerable in the society. The collective land ownership in Thailand has enabled communities to maximize the use of land collectively by allowing compact housing development on minimal land that in turn provide residents with extra living space through common amenities and shared spaces. It also helped to 'protect people during the vulnerable transition periods from being informal squatter to being formal land and housing owner' by preventing people from selling off rights during difficult times and becoming homeless again.[66] Another innovative land tenure model was adopted under the Favela Bairo, which does not explicitly provide titles but allows residents to own the structures.[67] Other innovate property rights include the sectional properties rights in Kenya which facilitate the registration of individual property rights in multi-story buildings or dense developments even smaller land units that may not be accommodated under conventional planning regulations.[68] The presence of these land ownership models provides diverse property rights alternatives that future sites and services could explore. Given that land and property ownership depend on existing property legislation, these need to also be examined and where applicable adapted to accommodate diverse property rights options.

Innovations in land instruments, such as land value capture, transfer of development rights, charges on building rights, impact fees, land readjustment, etc, present opportunities that can be tapped to enhance funding towards low-income housing and infrastructure investments. Cities and governments can also employ several instruments of land capture to generate funding for low-income housing. These include land value taxes, land banking, inclusionary housing, transfer of development rights, charges on building rights, impact fees, land readjustment, land leasing, special assessments, exactions etc.[69] Developed countries have extensively used these with significant success and several developing countries have experimented with mixed results.[70] Studies show that poor quality of land administration is a major hindrance to property development and transaction in Africa.[71] To effectively tap into these instruments, Africa will thus require to put-into place a number of factors. These include enabling policies especially in regards to land administration, strong local and city governments, support from national government, an established financial sector, robust public private partnerships. Annex 2 provides a list of land instruments that future low-income housing can explore.

2.2.2 Location of Sites

KEY MESSAGES

- **The location of sites is a key determinant in the occupancy of sites and relocation** of households.
- **Project sites far outside of the urban core were not connected to transport nodes and were thus undesirable to low-income households** as they led to higher transport costs and disconnected households from employment opportunities.
- Higher levels of success were found where **housing projects were incorporated into existing urban plans and linked to existing transit nodes to enable jobs access/foster job creation.**
- **Urban sprawl has meant that the available cheap land is further** out and going after available cheap land will exacerbate sprawl, with a negative impact on the carbon footprint.
- **Densification and strong integration with transportation will support sites to be closer to the core** to reduce travel costs for residents and infrastructure installation costs but depending on the size of the city, **greenfields may or may not be available within reasonable distance**.
- Projects will need to develop an **acceptable tradeoff between distance from the center of the city and affordability to allows maximum benefit and occupation** by low-income residents.

66 Boonyabancha, S. (2009). "Land for housing the poor—by the poor: experiences from the Baan Mankong nationwide slum upgrading programme in Thailand." Environment and urbanization 21(2): 309-329.

67 Handzic, K. (2010). "Is legalized land tenure necessary in slum upgrading? Learning from Rio's land tenure policies in the Favela Bairro Program." Habitat International 34: 11-17.

68 Mwenda, J. N. (2001). Registration of Properties in Strata in Kenya University of Nairobi, Kenya.

69 Building a Global Compendium on Land Value Capture- https://www.oecd.org/regional/cities/Land-Value-Capture.htm

70 Hart, M, 2020, Developing Cities Need Cash. Land Value Capture Can Help.

71 Siba E. & Sow M. 2017, Financing African Cities: What is the role of land value capture? Africa Focus, Brookings.

The high cost of land in some urban areas led to locating the 1st generation sites in the urban fringe where land was cheap. These places however tended to be far away from employment opportunities for the poor, thus cutting them off from their source of livelihoods or translating to high transport costs for those who relocate. This in turn translated to lower occupancy rates. Faced with lose of incomes upon relocation to sites and services, some beneficiaries chose not to participate and if they did, sell off their plots to higher income residents and move back to informal settlement in the inner city. This was observed in sites and services in Dacca, Kenya and other places. In Dacca, studies from two sites and services show that half of the population had left the project sites shortly after relocation and went back to build squatter settlements near the city center, citing the need to access employment and places of work[72]. These places also tended to be away from trunk infrastructure and services translating to high costs of infrastructure, which led to higher costs for beneficiaries.[73]

Higher levels of occupancy were seen in sites which had been selected as part of a larger urban plan. Examples where sites and services were incorporated into the larger urban fabric and planning like in El Salvador, the Madras project in India and Lusaka provided different outcomes with high levels of success. The projects in El Salvador chose favourable locations for most of its sites, such as in San Salvador where the locations were close to employment opportunities, public transportation, existing urban structures and services and off-site infrastructure. The Lusaka project that was off-site road infrastructure incorporated the development of urban trunk infrastructure to ease mobility that improved and created roads traversing the project site, providing access to other parts of the township. The Mumbai and Chennai/Madras projects included considerations for transport infrastructure linkages and future urban expansion. The Madras project also took consideration of metropolitan planning and employment translating to high rates of occupancy. Many of the later World Bank Group's sites and services projects adopted this new type of integrated urban development approach and were designed with considerations for the numerous agencies involved within a citywide framework and the effort to integrate with other urban investments in order to achieve an overall urban view - rather than a sub sectoral one.

The experiences from past sites and services necessitate the densification and integration of future projects into the wider urban plans and infrastructure networks, such that housing has basic services and easy access to jobs and transport. With most cities having grown in size, cheap vacant land for future sites and services will likely be further from the core as compared to past projects. Going after available cheap land away from the core will only exacerbate sprawl having a negative impact on the carbon footprint. Moving forward, it is critical to develop the typologies of available land for sites and services to help determine potential considerations. This may include incorporating sites and services into the wider urban plan based on a transit node that enables jobs access and/or the densification of existing inner-city settlements, and determining the acceptable tradeoff between affordable land and distance from jobs.

2.2.3 Planning, Building and Infrastructure Standards

KEY MESSAGES

- **Lower planning standards (e.g., small lot sizes) made the project more affordable to the beneficiaries.** High standards translated to higher projects costs for beneficiaries, locking them out where subsidies were not available. **Lower planning standards also discouraged infiltration by the wealthy**, which maintained the project benefits within the intended target audience.
- The aim of lowering standards is to provide **greater flexibility that takes into account the specific conditions of the settlement**, and some standards may need to be made higher.
- **Public spaces and infrastructure in low-income housing projects are also opportunities to be flexible**, tailored to the specific context and allowing for incremental development. The incremental growth approach can also be applied in the context of neighborhoods, allowing the neighborhood to transform as needed. Typologies of public spaces that can allow for greater density without compromise on livability.

[72] Hasnath, S. A. (1982). "Sites and services schemes in Dacca: a critique." Public Admnistration and Development 2.: 15-30.

[73] UN HABITAT (1991). "The Incremental Developmenr Scheme_ A case study of Khuda-Ki-Basti in Hyderrabad Pakistan ".

The low planning, building and infrastructure standards, under sites and services were highly contested by both municipal governments and beneficiaries alike. Sites and services prescribed lower building and infrastructure standards as a key component to lower costs and make housing affordable to the poor. This would be achieved through smaller lot sizes, use of locally available construction materials and provision of communal services instead of individual connections. The majority of participating governments and beneficiaries were however reluctant to use lower standards as they were seen not befitting of urban housing. Rather, they opted for higher conventional standards that led to higher costs of project implementation, making subsidies necessary to reach the intended beneficiaries. Where subsidies were unavailable, the target groups were excluded while participation from higher income groups increased. Bigger plots for example created incentives for initial allottees to sublet or resale to better off households. This was the case in many sites and services across countries like Nigeria, Kenya and Dacca.[74]

Projects that insisted on high standards largely made plots and buildings more expensive and out of the reach of the target poor.[75] This was the case in Kenya, where the urban elite and government officials resisted the reduced standards intended to make building easier in the First Urban Development Project, calling for a complete redesign.[76] This went on to affect the planning standards in sites and services, which were raised compromising the ability for cost-recovery for the poor. As a result the project benefits largely leaked to high-income groups.

Most projects that adopted lower standards led to significant levels of success. The use of lower standards, e.g. smaller plot sizes, was found to significantly reduce projects costs while discouraging higher income households. Project evaluations in two site and services projects in India (Chennai and Mumbai) demonstrate the contribution of lower standards in achieving relative project success. Both projects, deliberately adopted smaller plots than standard to ensure affordability by the low-income groups. The smallest plot in Chennai and Mumbai were 33m^2 and 21m^2 respectively as compared to minimum plot sizes of about 175-200m^2 in other housing developments in these cities. These small plot sizes combined with reduced infrastructure standards served to discourage plot purchase by higher income groups.[77]

Flexible planning standards also allowed for other cost-saving measures. Norms that allowed space optimization (e.g. the allocation of less space for streets) made plots less expensive.[78] Additional floors/developments were carried out later leading to greater densities that were able to accommodate more populations over time. Later studies done in India found that over time, low-income plots became densely populated housing multiple families.[79] This density increased as floors were gradually added to the buildings over time.

These experiences underscore the need to incorporate appropriate standards in low-income housing as a cost saving mechanism. An analysis of projects successes and shortcomings supports recommendations that future projects should endeavour to push standards and costs still lower, include explicit provisions and opportunities for rental arrangements and incorporate credit provisions more tailored to the needs of targeted families. The lesson from many case studies is that the first projects in a given country should generally be small and relatively simple, enabling the executing agencies to build their capacity to provide the necessary services including adapting building and planning standards.

However, it is not just simply lowering official standards but making them flexible and adjustable on the onset to allow for incremental development and other cost saving measures while keeping in mind the need for improved house/neighbourhood quality and safety. In fact low

74 Akinsola, B. N., et al. (2013). "Effective Site and services scheme as a means of solving low-income housing need in Nigeria." Proceedings of 5th West African Built Environment Research (WABER) Conference, the British Council in Accra, Ghana , on 12 -14, August, 2013 pp 429 -446.; UN HABITAT (1987). "Case study of sites and services schemes in Kenya: Lessons from Dandora and Thika."; Hasnath, S. A. (1982). "Sites and services schemes in Dacca: a critique." Public Admnistration and Development 2.: 15-30.

75 Bolton L. 2020, 'Sites and services', and in-situ slum upgrading, K4D

76 Project Performance Audit Report, Kenya Second Urban Project, (Credit 791-Ke/Loan 1550-Ke), June 28, 1991.

77 Owens, K. E., et al. (2018). "Success when we deemed it failure? Revisiting sites and services projects in Mumbai and Chennai 20 years later." World Development: 260–272.

78 Bolton L. 2020, 'Sites and services', and in-situ slum upgrading, K4D.

79 Owens, K. E., et al. (2018). "Success when we deemed it failure? Revisiting sites and services projects in Mumbai and Chennai 20 years later." World Development: 260–272.

standards can cause problems in some instances. Hence, some standards may need to be adjusted upwards, e.g to provide better community facilities such as schools, transport access and playgrounds. The goal should therefore not be about reducing standards for cost saving alone. Rather, adjusting them to enable better planning and rationalization of urban growth, increase efficiency in land use, provide better infrastructure and services and promote equity by allowing a larger share of low-income households access land and housing at lower costs while reducing public sector inefficiencies. Understanding beneficiaries' needs can be a key in determining the flexibility required – e.g limiting parking spaces and providing more playgrounds. These planning and building standards should also be embedded in a larger comprehensive approach to the housing sector. Sites and services can then be backed by specific enabling policy and regulations that allow special norms and standards with areas of application clearly defined to prevent their misuse.

Public spaces should be developed to allow for greater density without compromise on livability. The opponents of low standards in sites and services cited the creation of slum like conditions through neighborhoods congestion. Successful projects have however proved that small standards do not necessarily translate to poor living conditions. In the Mumbai and Chennai projects, the infrastructure layout allowed for greater flexibility. Further, despite the incremental vertical growth over the years, municipalities have protected the infrastructure provisions left from encroachment. The design of public spaces and infrastructure is also required to be flexible and tailored to the specific context. For example, the incremental growth approach should not only be for individual houses but also the neighborhoods where the grid allows for incremental development over time using flexible regulations to allow the neighborhoods to transform as needed.

2.3 Cost Recovery and Beneficiary Support Considerations

2.3.1 Targeting and Affordability

KEY MESSAGES

- Most projects were **affordable and accessible to the target populations**, although leakage of benefits to higher income groups was also prevalent.
- Determining the **beneficiaries' true ability to pay was difficult in the context of informal and non-traditional sources of income**. The determination process needs to be contextualized and expanded to include non-traditional income sources.
- **Beneficiary preferences** were largely assumed which meant that some of the target beneficiaries did not get their needs met. **Having clearer understanding of beneficiaries' preferences** will enhance project reach.

The majority of sites and services targeted low-income households, although in some projects middle- and higher-income groups were included particularly for cost recovery purposes. The eligibility criteria were mainly based on household incomes. The exact income levels were dependent on specific projects and country context. In Lusaka for instance, sites and services targeted all income groups but 50% of the plots were set aside for low-income households – those earning between 20 and 70 Kwacha per month in 1974 – representing the 20th - 40th income percentiles. This eligibility criteria changed over time moving up to 85 Kwacha and later 120 Kwacha due to inflation and the increasing cost of housing construction materials. The rest of the plots were free to be allocated to other income groups. Other criteria were applied that included: individuals had to be residents of Lusaka, have the intention to live in the purchased house and be self or wage employed and earning a monthly income of at least 20 Kwacha. Other factors such as family size, current tenure security and current home standards and services were also considered with priority given to those with larger families, insecure tenure and poor quality of services. Elsewhere, in Harare, projects were generally aimed at households with incomes of around Z$150 (as compared to the median incomes of families living in low-income areas of Z$175 in 1982). In other projects like

El Salvador and Senegal, the projects had broader objectives to increaser public housing that would be affordable to the urban poor. From the preceding, it is clear that most projects were intentional about reaching the urban poor.

Generally, most projects reached their target groups. Evaluations of four sites and services projects in El Salvador, the Philippines, Zambia and Senegal show that projects were able to reach low-income groups with the majority of beneficiaries falling between the 20th and 50th percentiles of the income distributions.[80] This was the case in places like Lusaka where, despite the projects targeting diverse groups, it was able to accommodate a significant number of poor households even in settlements deemed for higher income groups. The Lusaka project aimed to service three neighborhoods (Lilanda, Matero and George), which targeted different income distributions allowing for a wide range of options and catering to a wide spectrum of the urban population. Nonetheless, most of the settlements were able to accommodate low-income households. For instance, in Lilanda, about 58 percent of the beneficiaries came from the poorest 30 percent of households in the city, while Matero which had relatively more expensive plots due to the high level of services provided served 36 percent from the poorest 30 percent of the urban income distribution.[81] These findings, together with a relatively good occupancy and building rates, indicate that the projects were accessible and affordable to the target populations.

In some projects however, project beneficiaries had significant representation in the middle- and higher-income groups. This resulted from direct allocation of plots/houses to higher income groups (as part of project design) or poor project beneficiaries transferring their allocations to higher income groups. Despite the earlier discussed four projects (in El Salvador, the Philippines, Zambia and Senegal) reaching their target populations, the study established that in some instances, beneficiaries tended 'to be more representative of median income groups than of the poorest households'. In El Salvador for instance, about 85 percent of beneficiaries were drawn from the lower 65 percent of urban population but extended to about 17th percent income percentile. This is however more a case of unclear targeting rather than project failure to reach the target – the project objective was to increase by about '50 percent the annual production of public housing, as well as to achieve the acceptance of the progressive development concept and the introduction of lower-level services' (pg. 1).[82] Nonetheless, the project remained accessible to most groups including low-income households, as compared to public housing projects that rarely reached even the median income levels. Further, the low-income beneficiaries appeared to sustain the benefits and afford to repay their loans just like other income groups, meaning that the project remained affordable to the poor.

In other projects like Nairobi, Lusaka and Harare, project benefits leaked to higher income groups as a result of beneficiaries' transfer. This resulted from several factors. First, in most countries, there were no adequate provisions made to address the housing needs of middle- and high-income groups, making the demand high in sites and services. An evaluation of the Dandora (Nairobi) sites and services in 1982 noted that about half of the occupied plots were rented out fully to non-allottees while others had been sold out to higher income individuals. Second, the high standards adopted for some sites and services projects made it difficult for low-income households to consolidate housing while at the same time making them more attractive to groups with higher incomes than target groups. Third, the conditions attached to sites and services such the need to build faster (in Harare allottees were expected to build a four-room core house in 18 months while in Lusaka beneficiaries were expected to build out within 6 months) proved difficult to meet for some beneficiaries necessitating transfers.[83] Fourth, cost recovery made it difficult for low-income households to sustain their plots and eventually offloaded benefits to better off families. In many projects, beneficiaries were expected to put a down payment before plot occupation and pay off the rest within a certain time period, sometimes with no finance provided. Even where financing was available like in the Lusaka and

[80] Keare, D. and S. Parris (1982). Evaluation of Shelter Programs for the Urban Poor Principal Findings. World Bank Staff Working Papers . Washington, D.C., U.S.A., World Bank.

[81] Bamberger, M., Sanyal, B., & Valverde, N. (1981). The First Lusaka Upgrading and Sites and Services Project: Summary of the Main Findings of a Five-Year Evaluation.

[82] Keare, D. and S. Parris (1982). Evaluation of Shelter Programs for the Urban Poor Principal Findings. World Bank Staff Working Papers. Washington, D.C., U.S.A., World Bank.

[83] Rakodi, C. and P. Withers (1995). "Sites and Services: Home Ownership for the Poor? Issues for Evaluation and Zimbabwean Experience." Habitat International: Bamberger, M., Sanyal, B., & Valverde, N. (1981). The First Lusaka Upgrading and Sites and Services Project: Summary of the Main Findings of a Five-Year Evaluation.

Harare projects, repayments had to be done after 5 and 6 months respectively after obtaining loans. Lastly, the high value and potential income from the sale of plots made it appealing for low-income households to dispose plots and gain profits. The transfers were in most cases to higher income groups. In Lusaka for instance, the records of sales showed that the income levels of purchasing families was generally higher than that of sellers, and that net profits from such sales were about 100 to 120 percent.

Affordability outcomes are mixed but overall most projects were deemed affordable and accessible to target groups. In Lusaka, housing not only reached the target poor population, but was also produced at lower cost than public housing, meaning houses within sites and services were more affordable than contractor build public housing. For instance, a standard house at the sites and services houses took two months to be built at a cost of 600 Kwacha as compared to 6000 Kwacha, the cost of the cheapest contractor built public housing. The same was also experienced in El Salvador where the 'better quality sites and services project housing cost less than half as much as the cheapest conventional house' (pg. 305).[84] Affordability was more guaranteed in projects which had subsidies or where loans were available to beneficiaries.

Difficulties in obtaining actual household income and true ability to pay was a key limitation in the targeting process. A significant number of low-income households were involved in the informal sector with fluctuating incomes, which made it almost impossible to ascertain with accuracy exact household incomes. Second, some households also had multiple income sources which were difficult to demonstrate e.g. rural properties and investments which they may be willing to dispose to acquire urban housing. Third, the use of a proportion of households' incomes to determine ability to afford housing had the potential to lock out households with incomes below the threshold yet who were able and willing to pay while giving an opportunity to households who, despite having incomes above the threshold, may not in practice afford the payments.[85] Moving forward it is important that projects consider the ability to pay based on formal recorded incomes as well as other informal sources of finance. The determination of beneficiaries' ability to afford needs to be contextualized and expanded to include non-traditional income sources. In developing economies, personal savings play a significant role in the informal economy – hence, besides conventional affordability analysis future operations should consider possible accumulated wealth as well as current income to better determine low-income households' ability to self-finance.

Beneficiary preferences were assumed, leading to unintended outcomes. In the 1st generation sites and services and slum upgrading there was usually an assumption of the preferences of those targeted. For instance, in the Thailand sites and services, the project objective was to provide the majority of new housing units to lower-income families, defined as those below the 50th percentile of the income distribution. However, more middle-income residents benefitted at the Chiang Mai and Songkhla developments. This was due to various factors including the preference of lower-income families for immediately habitable housing, which was not provided on these sites. Other developments implemented later in the project were redesigned to provide small, complete houses, which were more attractive to lower-income families. The additional cost of the completed core units compared to incomplete core units plus building material loans did not affect affordability objectives.

The diversity of beneficiary needs must be understood, and projects tailored to accommodate those needs as appropriate. This may include rental options against ownership or vice versa, guaranteed good access to jobs, need for financing option etc. The inclination of project designers towards own-built housing require re-examination as research on sites and services found out that 'residents prefer complete units in terms of paying down payment'. This is to prevent financial burden in a situation where residents are paying rent in separate location as they continue to incrementally build their own homes. In some contexts, the poor may have rural homes with their immediate urban needs not owning a home but working to cater for other social needs like children education and social development. In such situations, rental options make greater sense. Other options like provision of complete affordable housing units for sale or rental to the poor, which can be provided solely

84 Mayo, S. K. and D. J. Gross (1987). "Sites and services—and subsidies: The economics of low-cost housing in developing countries." The World Bank Economic Review 1(2): 301-335.

85 "Sites and Services: Home Ownership for the Poor? Issues for Evaluation and Zimbabwean Experience." Habitat International:

by the government or in conjunction with the private sector or non-governmental actors. Additionally, there is need to balance between ownership and sustainability, security of benefits to the poor and the ability to pay or affordability by the different groups and in different contexts.

2.3.2 Cost Recovery Model and Subsidies

KEY MESSAGES

- **Subsidies were crucial for the success of sites and services projects for the poor.** Despite the burden of subsidies to governments and an impediment to replicability, many projects were not able to price the land and other costs to allow the beneficiaries to maintain their participation without subsidies.
- **Collecting payments was fraught with difficulties;** where successful, **community organizations were brought in for their assistance in the collection and payment was made to a private entity to increase compliance.**
- **The huge subsidies used by governments to promote affordability in some cases proved an impediment to project replicability** meaning a balance needs to be reached between project subsidies and long-term project sustainability and future expansion.
- **The mixed-income approach involving** sale of some plots to high-income households /commercial sites to subsidize the poorer households had better cost recovery.
- **Projects need to build a model to determine the nexus of affordability and cost recovery in today's context (including recurring cost of services)** as it is very likely that costs of land and servicing has increased disproportionately compared to the income of the poor. As in the 1st generation of projects, subsidies would still be needed to fill the affordability gap.

Most sites and services were designed on the basis of full or partial cost recovery. Beneficiaries were expected to self-build housing in addition to paying for land and servicing costs and recurring costs of power and water bills. The objective for cost recovery was to generate revenue that could be used to replicate projects on a large scale. This model meant aimed for two things: that the prices of plot and services would be adequate enough to recover costs with minimal or no subsidies and that the housing, infrastructure and services provided would be affordable to target groups.[86] The pricing of plots had to be set in accordance with the target groups' paying capacity. In most projects, this ranged from 20-25 % of the total monthly household income.[87] While some projects went for full cost recovery, others had subsidies provided for land and construction materials. Subsidies especially for the lowest income groups could also be obtained from the sale of plots to high-income households and commercial sites.

Cost recovery however remained a challenge for many projects. While some projects had a good level of cost recovery, most projects did not do well.[88] The reasons for difficulties in cost recovery varied significantly from project to project but generally include: the high costs of house construction and land payments; high and recurring service fees (water, energy, transport) that residents had to bear immediately after relocation in addition to house construction costs, sometimes facing loss of income occasioned by the move to the new site; lack or poor recovery mechanisms; lack of political will to support collection or enforce collection as was the case in areas like Zambia, Kenya, Nigeria, Bombay, Morocco and Lahore; delay in service provision and lack of sanctions for defaults or non-repayments; lack of knowledge on part of the participants of their responsibilities, and how this affected project benefits rather than lack of affordability as was seen in Zambia; very high inflation rates like in the case of Brazil that resulted in severe decrease in purchasing power causing rent strikes, mortgage refinancing schemes and less than 80% of the loans to be fully recovered; the lack of land titling as was seen in Morocco where the lack of legal title provided no firm legal base for foreclosures and repossessions.[89]

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86 Gross, S. K. M. a. D. J. (1987). "Sites and Services—and Subsidies: The Economics of Low-Cost Housing in Developing Countries." The World Bank Economic Review Vol.1 No.2, 301-335.

87 UN HABITAT (1991). "The Incremental Developmenr Scheme_ A case study of Khuda-Ki-Basti in Hyderrabad Pakistan ".

88 Keare, Douglas. H, Paris. S, (1982); World Bank, Brazil. PPAR (1988); UN HABITAT (1991). "The Incremental Development Scheme_ A case study of Khuda-Ki-Basti in Hyderrabad Pakistan "; Rakodi, C. and P. Withers (1995). "Sites and Services: Home Ownership for the Poor? Issues for Evaluation and Zimbabwean Experience." Habitat International.

89 World Bank, Morocco, PPAR (1991).

In addition, with public institutions as the implementers, beneficiaries supposed that public services are not to be paid for. For example, in Kenya a number of new plot owners did not feel obligation to pay to the government.[90] In Bauchi, Nigeria despite the number of measures taken to ensure cost recovery, the implementing agency seemed more bound by a duty to deliver housing free to the few needy it could afford to assist, while also overlooking non-payment by even higher-income renters who were victims of Nigeria's economic crisis. In the case of Nigeria, many measures like screening participants and direct salary deduction were applied but the institution was weak in its ability to effectively supervise and collect payments.[91] The inability to recover costs coupled with financial difficulties and the demand for high subsidies to ensure projects reached target groups in turn discouraged many governments from embarking on large-scale programs in squatter-settlement regularization, slum upgrading, sites-and services.[92]

Nevertheless, several projects reported effective cost recovery, providing lessons for the future. This was the case for the Madras project[93] and the El Salvador projects. A key defining factor in the El Salvador project was that the implementing was private rather than public, which is assumed to have accounted for the high rates of success. Further, the project's not for profit approach, which required it to achieve cost recovery to remain operational, as well as its success in instilling social responsibility as an inherent part of project participation is also assumed to have been a key success factor.[94] The FSDVM, which was responsible for project implementation and cost recovery in El Salvador also effectively gave understanding and awareness to the community and used incentives and penalties to ensure cost recovery. This included utilizing community organizations for their assistance in the collection of payments, screening for participants with the ability to pay project fees, and utilizing lawyers to visit families that were three months behind payment. The organization's small scale also proved an added advantage to its supervision of the project. The El Salvador project thus showed how it is easier to design projects in a local public finance context, "where the ability to operate and maintain infrastructure and services can be directly related to the resulting benefits, as well as to collections or cost recovery (pg.87)." [95] The project also proved that community participation is an important aspect that can help achieve maintenance and cost recovery objectives.

The reliance on subsidies to make housing affordable was however deemed unsustainable and as hindering replication due to the large amounts of subsidies required. In Egypt for instance, land for sites and services was priced at LE 2.25 per square meter as compared to the prevailing market prices which was LE10-LE15 and charged an interest of 5 percent while the prevailing rate was about 11 percent, meaning that such land subsidies played a huge role in enabling affordability, which would have been next to impossible. Despite such subsidies being implicit off-budget transfers, critics claimed they curtailed the long-term affordability of projects[96] and on the ability of governments to replicate projects or recover costs.

Moving forward, it is critical to assess potential solutions to the array of difficulties that hampered cost recovery. It is very likely that costs of land and servicing has increased disproportionately more than the income of the poor has increased, requiring a form of assistance to afford land and related costs. These could be addressed in several ways. First, consider a mixed-income approach where plots sale to high-income households or commercial plots subsidize low-income households. Previous sites and services projects that had mixed income tended to have higher degrees of success. In Nairobi for instance, five percent (300 plots) of the total plots was sold to high-income households at market rates, which lowered the cost of the remaining plots by 20 percent.[97] Second, assessing affordability and cost recovery for specific city circumstances (including recurring cost of services) will be crucial. Third, where cost recovery is sought, payments can be to a private sector entity to increase compliance as

90 World Bank, Kenya, PPAR (1991).

91 World Bank, Nigeria, PPAR (1990).

92 UN HABITAT (1991). "The Incremental Developmenr Scheme_ A case study of Khuda-Ki-Basti in Hyderrabad Pakistan ".

93 World Bank, Madras. PPAR (1986).

94 Keare, Douglas. H, Paris. S, (1982).

95 Keare, Douglas. H, Paris. S, (1982).

96 Mayo, S. K. and D. J. Gross (1987). "Sites and services—and subsidies: The economics of low-cost housing in developing countries." The World Bank Economic Review 1(2): 301-335.

97 UN HABITAT (1987). "Case study of sites and services schemes in Kenya: Lessons from Dandora and Thika."

this seemed to effectively work in El Salvador. Lastly, the use of technology, e.g. block-chain, can be employed to more reliably manage loan administration and cost recovery.

Subsidies proved to be huge expenses for government, indicating the need to identify alternatives. Despite high subsidies being a key impediment to replicability, the urban poor may not be able to participate in any meaningful low-income housing projects without subsidies. Future sites and services will need to consider alternatives to government subsidies such as the incorporation of mixed income groups, NGOs, private developers and financiers to reduce plot and house costs. Largely, sites that had mixed income groups tended to be more successful as they were able to lower projects costs with both the higher and low-income groups willing to live side by side.[98] This propensity toward mixed income living should be better incorporated into project design so that full advantage can be taken of the potential for cost recovery and cross subsidies that it offers. The private sector and NGOs could also play a critical role of subsidising projects for these projects. Partnerships with the private sector in the areas of infrastructure and service provision could lower government costs, while NGOs can team up with residents to provide affordable financing and building technology options. NGOs such as SDI have been instrumental in helping communities save towards homeownership and providing pro-bono technical services that help reduce project costs for the poor.

Where the subsidies are targeted -in offsetting land or construction costs- is also critical. Previous reviews of sites and services recommend providing subsidies for serviced land rather than for house construction as this grants beneficiaries a 'greater ownership and stake in their homes'. Investing in neighbourhood and community facilities is also deemed important although often overlooked.[99]

2.3.3 Financing for Housing Consolidation

KEY MESSAGES

- **Provision of construction loans to allottees was a critical factor for house consolidation**. Provision of construction loans within the project turned out to be the key element in enabling housing consolidation and vice versa. Where no loan was available, house consolidation was slower.
- **Current financial innovations** (e.g. housing micro-finance, mortgages by commercial banks tailored to low-income households, community cooperative loans and organized community savings, government programs financing low-income housing) **provide opportunities for future projects to identify and incorporate innovations in housing consolidation financing.**

Some sites and services projects provided allottees with a construction loan to buy building materials, which was to be paid back over time. This was the case in Tanzania, Zambia and, Kenya where all allottees were eligible for a construction loan backed by the government. In Tanzania, the Tanzania Housing Bank established in 1973 provided housing loans, but the cumbersome procedures and strict eligibility criteria barred many of the poor from accessing loans.[100] Some countries used Employers Saving Schemes as an alternative to loans. In Zambia for example, loan inadequacy led to an agreement 'where employer/employee contributions to the Zambia National Provident Fund (up to a ceiling) could be withdrawn for investment in housing. This mechanism gave formal sector employees access to their savings rather than to credit and was taken up by at least 40% of allottees in one resettlement area'.[101]

In other instances, there was no financing available to allottees. The Bank financed projects of the 1970s were meant to be unsubsidized but affordable to the poorer half of the population (i.e. the 20th percentile for sites and services, and lower for upgrading). The Bank's objective was to achieve

98 Project Performance Audit Report, Federal Republic Of Nigeria (Bauchi) Urban Development Project (Loan 1767-Uni) June 8, 1990.

99 Bolton L. 2020, 'Sites and services', and in-situ slum upgrading, K4D.

100 Rakodi, C. (1991). "Developing institutional capacity to meet the housing needs of the urban poor - Experience in Kenya, Tanzania and Zambia."

101 Rakodi, C. (1991). "Developing institutional capacity to meet the housing needs of the urban poor - Experience in Kenya, Tanzania and Zambia."

affordability by lowering housing standards and infrastructure costs. Capital costs of both these would however be recovered over a long time period, at near market interest rates. 'Achievement of this aim depended on the cost of provision in relation to the incomes of intended beneficiaries, policy decisions with respect to subsidies and cost recovery, the availability of credit for house construction, and the establishment of institutional mechanisms and procedures for cost recovery and housing finance'.[102] These variables did not, however, come together in many project contexts.

The provision of housing loans turned out to be the key element in enabling housing consolidation. A key impediment to the successful implementation of the sites and services was the lack of finance on both the part of governments and beneficiaries. The provision of loans to governments by development agencies such as the World Bank and subsequent loans to beneficiaries were key to ensuring house consolidation. This was confirmed in India where project analysis showed the availability of house building finance from commercial banks was the key factor in ensuring project success. Where no loan was available, consolidation was slower, underscoring the importance of providing for construction loans for allottees in future projects.

House consolidation loans from commercial banks and micro-finance institutions was a potential if not viable financing alternative. In the Lusaka Urban development project for instance, the loan program tied to it proved to be a key part of the Project.[103] Most families demonstrably had no access to alternative sources of finance, and without loans would probably not have been able to complete or consolidate their houses. Loans were, however, terminated when it was found that not much could be done with a 100 Kwacha loan. The adequacy of that figure was a design assumption rendered inappropriate by progressive inflation. As the amount of these loans could not be increased without substantially limiting the number of beneficiaries, it was finally decided to restrict loans to those in overspill areas. The slowdown in the rate of house consolidation after the discontinuance of the loans proves the necessity of adequate funding as a stimulus to the construction process.

Fortunately, the evolution of Innovative housing finance models expands shelter-financing opportunities available for the poor that could be explored for future low-income housing. These range from housing micro-finance; Transferable Development Rights (TDR); mortgages by commercial banks tailored to low-income households; community cooperative loans and organized community savings; government programs financing low-income housing.[104] Jones and Stead[105] demonstrate the success achieved by various agencies in expanding housing credit to the poor through the use of these emerging innovative housing finance models in some select African and Asian countries. They document how organizations such as LinkBuild in the Philippines and Lumanti in Nepal have achieved relative success in housing the poor through community cooperative loans. The Ansaar Management Company (AMC) in Pakistani and Casa Real in Mozambique have also been instrumental in convincing commercial Banks to provide housing finance to low-income households. Through the use of Transferable Development Rights (TDR), SPARC Samudaya Nirman Sahayak (SSNS) in India has generated over US$ 15.98 million from private developers towards low-income housing. These financing models provide additional finance sources that future sites and services can build on to enhance housing finance under such schemes.

102 Rakodi, C. (1991). "Developing institutional capacity to meet the housing needs of the urban poor - Experience in Kenya, Tanzania and Zambia."

103 Bamberger, M., Sanyal, B., & Valverde, N. (1981). The First Lusaka Upgrading and Sites and Services Project: Summary of the Main Findings of a Five-Year Evaluation.

104 Ferguson, B. and P. Smets (2010). "Finance for incremental housing; current status and prospects for expansion." Habitat International 34(3): 288-298.; Patel, S., et al. (2015). "We beat the path by walking" How the women of Mahila Milan in India learned to plan, design, finance and build housing." Environment & Urbanization 28(1): 223–240.; Weru, J., et al. (2018). "The Akiba Mashinani Trust, Kenya: a local fund's role in urban development." Environment & Urbanization 30(1): 53–66.

105 Jones, A. and L. Stead (2020). "Can people on low incomes access affordable housing loans in urban Africa and Asia?Examples of innovative housing finance models from Reall's global network." Environment & Urbanization 32(1): 155–174.

2.3.4 Provision for Rental and Other Income Activities

KEY MESSAGES

- **Opportunities for rental income and other income generating activities** (e.g. markets, artisans spaces, home-based work, etc.) facilitated extra income generation for beneficiaries, which helped subsidize project costs and guarantee affordability.
- **The rental units also provided low-income renters beyond the project with access to a wide variety of housing and community services options.**
- **Rental options also helped densify** the projects sites over time and as demand increased.
- Other provisions for income-generating, e.g. markets and workshops, had mixed outcomes.

Rental incomes from shelter projects proved critical sources of incomes that not only subsidized project costs but also provided extra income for households. Earlier sites and services ignored or even discouraged the investment aspect of housing programs for the poor through controls on the leasing of rooms and limitations on sales. In fact, the early World Bank funded sites and services did not include income-generating activities, thus limited the ability of residents to earn extra income that could boost plot repayment or supplement building costs. Latter ones however did by allowing construction of extra units for rental to supplement household incomes and providing land for markets and workshops that would be sold at higher costs to offset project costs. For example, the first sites and services in Zimbabwe were designed with provision for rental income so as to make them affordable to the lowest income groups.[106] Similarly, sites and services in Dandora, Nairobi were designed with rental income in mind to supplement allottees incomes.[107] Even in projects where this was prohibited, beneficiaries constructed rental housing to supplement incomes, which turned out to be an important factor that made plots affordable to participant families.

The rental option simultaneously provided low-income renters with access to a wide variety of housing and community services options. Rental housing in sites and services in contexts like Zambia (Lusaka) and Kenya (Nairobi and Thika) formed a large share of the housing stock and a significant source of income for the beneficiaries. Indeed, the sites and service schemes in Kenya in both Dandora and Thika are seen to have reinforced the rental market in those areas. Studies done in Dandora in 1980 and 1983, found that two thirds of the population were renters and that 96 percent of house owners sublet rooms on their plot respectively.[108] The sites and services that prohibited income generating activities in residential plots curtailed the overall growth of the rental housing stock available to the poor. With this evidence, future low-income housing should ensure explicit provisions for rental units and other income generating activities (markets, artisans, home-based work etc.).

Provisions for markets and artisans were limited with different outcomes where they were provided. The Madras project experienced significant success, while the spaces allocated for businesses and artisans in Kenya were converted into housing. Project evaluations in India have also proved that the provision of rental housing has the potential to promote density.

106 Rakodi, C. (1991). "Developing institutional capacity to meet the housing needs of the urban poor - Experience in Kenya, Tanzania and Zambia."

107 UN HABITAT (1987). "Case study of sites and services schemes in Kenya: Lessons from Dandora and Thika."

108 UN HABITAT (1987). "Case study of sites and services schemes in Kenya: Lessons from Dandora and Thika."

2.4 Implementation Considerations

2.4.1 Project Design, Project Financing and Private Sector Involvement

KEY MESSAGES

- Earlier projects were designed with **overly ambitious scopes and timelines**, threatening the completion of the project implementation.
- Financing for the projects was predominantly from IFIs, with little consideration of the private sector as potential financiers.
- **Current innovations in urban finance** (e.g. micro-financing and user financing) provide alternative financing that can complement government and IFIs financing. Private sector and **non-profits can also be included as key financing and implementing partners**, as they currently play a critical role in the provision of low-income housing and services in many developing countries.

Many projects designed by the IFIs had ambitious scopes and unrealistic projections particularly in relation to future expenditures, repayments and project timelines. In the case of Kenya, the project went for extra eight years due to the challenges of mid-way project re-design, poor initial unit cost estimates that led budget overrun, a constant rise in building standards, inflation, questionable procurement procedures and a series of fights with contractors. These issues and especially the increasing costs put housing solutions out of reach of much of the target population. Many initial allotees had to either sell plots to better of families or to landlords who never passed on the subsidies to their tenants. In Morocco, the preparation and successful implementation of the Second Sites and Services Project in Rabat was hindered by ambitions too high for the scope of the project. In Lahore Pakistani, the time initially allocated for implementation proved grossly underestimated, bearing in mind the social difficulties of project implementation, the local agencies' inexperience with World Bank projects, as this was the first Bank urban lending operation in Pakistan. Further, the Lahore project never fully appreciated the difficult problems associated with land acquisition for the sites and services component, and, to a lesser extent, for the solid waste management component at appraisal leading to unanticipated lengthy delays. Similarly, the targets of the LISP in India were achieved over a period of nine instead of five years, as expected at project inception. In Kenya, a project performance audit found that, at the time of evaluation, the project threatened to leave the cities worse off as the result of new infrastructure maintenance problems, additional debt burdens and the expense of sustaining the unproductive HDDs, new schools and clinics, which were never factored during project design.

Under the first sites and services, financing was mainly limited to international finance Institutions (IFIs). Many governments' borrowing for sites and services was limited to IFIs for all aspects of the intervention with the state/central government having a strong control over development and economy. Few other sources of financing existed with private sector's participation limited to building contractors and rarely as key partners in resource mobilization. The overreliance on IFIs therefore meant that once the majority of them pulled out, the projects almost instantly grounded to a halt. Many implementing agencies including some non-governmental agencies supporting governments were thus unable to carry out their functions due to the constrained resources.

Currently available innovative urban housing finance models provide relief to government from borrowing for all aspects of the intervention. Models such as housing micro-finance, Transferable Development Rights (TDR), mortgages by commercial banks tailored to low-income households, community cooperative loans and organized community savings, government programs financing low-income housing can be incorporated in urban and user financing to complement government and IFI financing.

The private sector is also a crucial provider of low-income housing in most cities. In Kenya for instance, over 90 percent of the urban poor rent housing from the private sector presenting the potential to bring in private sector as key partners in any housing intervention targeting the poor. The Kenya government has already entered into several PPPs in the housing sector that include government provision of serviced land while the private sector provides financial capital and the necessary technical skills.

Not-for-profit entities can also play a role as implementing partners. In El Salvador, FUNDASAL the non-profit agency mandated to implement several sites and services amply demonstrated that properly managed private organizations could play a very important role in providing shelter. It showed resourcefulness and creativity in various situations and its general performance was excellent. Even during very difficult periods, FUNDASAL managed to continue working. When contractors were unavailable, it assumed the role of coordinator and hired workers. Similarly, when complementary facilities (e.g., electricity and water) were not delivered on time, it lobbied extensively to have these provided by the appropriate authorities, and when these efforts were unsuccessful, it provided its own services through donations and assistance from other agencies. Also noteworthy is the way in which the agency managed to acquire land for the project in spite of many difficulties. The results in El Salvador, have generally, proved that, the idea of using a nongovernment organization (NGO) as the lead institution is a sound one. This is especially so in light of current discussions of the role of private firms and NGOs in shelter financing and provision of solutions.

In seeking for partners, it is important to ensure that those selected have good financial standing. FUNDASAL was heavily dependent upon charitable donations for most of its operations. The Government also provided regular grants earmarked for its administrative costs, and de facto interest-free Government loans, which arose because of FUNDASAL's poor liquidity position and its inability to make timely payments. The continued dependency of the agency on donations for substantial part of its operation meant its performance was subject to greater fluctuations than if it had its own generated pool of resources with which to operate. Such fluctuations eventually led to minimum housing production over time, with income from these investments being unsustainable over the long run.

2.4.2 Implementing Institutions

KEY MESSAGES

- **Project implementing units need to be within existing institutions**, as experience has proved that engaging with already established institutions worked better in implementing previous sites and services.
- **There is need to develop a typology of arrangements depending on the mandates of the national versus local governments in a particular country where applicable** (e.g. decentralization and democracy may have increased role of subnational institutions in some countries).
- Any future project should make use of the existing structures by creating project-implementing units (PIU) within the existing institutions. Most countries now have housing agencies, limiting the need to create new agencies to implement low-cost housing.
- Beyond their existence, **implementing agencies also needed to be able to coordinate across agencies, have sufficient and consistent technical staff, build and maintain trust and remain flexible and open to innovation and reflection.**

The implementing agencies varied across different projects and contexts but mostly tended to be existing government departments. In some contexts, however, the establishment of new agencies that could operate outside the lengthy bureaucratic government processes was necessary. This was the case in Kenya through the establishment of the Housing Development Department (HDD) to carry out project execution in Dandora, Nairobi.[109] The same was also reflected in Egypt in the Ismailia Sites and services that led to the establishment of a Project Agency.[110] Both the agencies in Nairobi and Egypt consisted of public professionals drawn from across different departments and the municipal governments. In El Salvador, the government incorporated a private non-profit agency FSVM (Salvadorean Foundation for Development and Low-Cost Housing) as the executing

[109] UN HABITAT (1987). "Case study of sites and services schemes in Kenya: Lessons from Dandora and Thika."

[110] Blunt, A. (1982). "Ismailia Sites-and-Services and Upgrading Projects - A Preliminary Evaluation." Habitat International 6(5-6): 587-597.

agency in the initial projects translating to huge success.[111] All these new agencies were responsible for various activities some of which include: planning, survey and allocation of plots, collection of payments, negotiations with other government agencies responsible for service provision such as power, water and sewerage among others.

While the establishment of new agencies permitted greater flexibility of management and avoided constraints in administration in some projects,[112] it was the contrary in others. The creation of an autonomous executing agency was one of the ways in which the sites and services challenged existing and conventional housing policy concepts. This was effective in some contexts and detrimental in others. The use of a private non-profit agency with an inherent social responsibility proved to be highly successful in project implementation and performance in El Salvador where the Salvadorean Foundation for Development and Low-Cost Housing (FSVM) was employed to execute a large-scale sites and services program. The FSVM was a small, well-managed organization with highly trained and technical staff. From the Bank pilot projects, it is evaluated to have the highest repayment rate especially due to its mix of incentives and penalties. Community participation where the community participants are made aware of their responsibilities and engaged in mutual help for the project themselves was instrumental to its success.

Sometimes, new executing units did not perform as well. Assessments of the new units in contexts like Kenya, Zambia, Nigeria, Brazil and Pakistan indicated that they instead created implementation bottlenecks leading to inefficiencies. In all these cases (Zambia, Kenya, Nigeria and Brazil), the political and economic contexts under which the institutions were formed had huge influence on project performance. In Zambia, for example, there were difficult relations between the Lusaka City Council and the United National Independence. In Kenya, the project and City of Nairobi lacked adequate political support compromising the functionality of the implementing agency and the inexperienced, understaffed and underfinanced cities had serious problems with project management and difficulties meeting loan covenants in relation to municipal taxes. In Lahore Pakistani, project completion delayed for about 4.5 years due the relatively inexperienced implementing agencies and the project being the first of its kind. Both the Lahore Development Authority (LDA) and the Metropolitan Corporation of Lahore (MCL) had weak institutional capacity and were inexperienced in handling IDA programs. This led to serious land acquisition challenges at the Gujjapura site that contributed to procurement difficulties and subsequent project implementation delays.[113]

Various factors combined to determine project performance but existing structures generally proved better placed in implementing projects. The Madras Urban Development Project (MUDPI) stands out as one of the most successful examples of institutional performance by demonstrating a successful model of metropolitan management through the effective negotiation of sectoral and local interests through the Madras Metropolitan Development Authority (MMDA). The MUDP I Project implementation consisted of over ten agencies with the Madras Metropolitan Development Authority (MMDA) acting as the project's overall coordinating agency. Prior to this project, the MMDA primarily focussed on physical planning and land use control and had successfully managed several projects, giving the Government of Tamil Nadu (GTN) confidence in its ability to execute the project. The agency experience also justified the ambitious scope of the project and reduced the risk that its scale and complexity might overwhelm the capacity of the GTN institutions to successfully implement it. The other implementing agencies chosen including the GTN departments and specialized agencies had a reputation for sound administration. The Tamil Nadu Housing Board (TNHB) for instance had thirty years' experience in awarding credits for building materials and had previously executed similar sites and services projects but for higher income and as such the nature of the project was technically easier for it to implement. The approach of building upon and perfecting the more effective parts of established programs that characterized MUDPI not only reduced project risks but also helped to promote the institutional development of GTN agencies that were already in place. Technical assistance provided under MUDPI, especially to MMDA and

111 Aliani, A. H. and Y. K. Sheng (1990). "The incremental development scheme in Hyderabad An innovative approach to low income housing.

112 Blunt, A. (1982). "Ismailia Sites-and-Services and Upgrading Projects - A Preliminary Evaluation." Habitat International 6(5-6): 587-597.

113 Project Completion Report, Pakistan, Urban Development Project (Credit Number 1348-Pak), August 2, 1994.

the Madras Corporation (MC), helped reinforce the on-the-job experience afforded by the project. In all cases, the efforts were concentrated not upon the creation of new agencies, but upon improving the performance of the existing ones. This not only led to immediate project success but enhanced future project maintenance and sustainability.

It is important to however realize that prior existence of agencies cannot be the only determining factor of selecting project implementation units. While in Brazil older existing institutions were chosen as the borrower agency and given the responsibility of executing, the institutions' attitudes remained an important factor in deciding the project's success. The initial reservations and reluctance of the National Housing Bank remained, and its limited commitment hampered project implementation along with the reorganization and changes made by a new government, which further threw the chosen implementing agencies into disorganization. This underscores that, in choosing to begin an operation with a reluctant borrower in an uncertain political climate and fluctuating sector, there are greater chances of failure of the project.

The ability for interagency coordination remained crucial for project success. Shelter is more than housing and the projects required multiple inputs from various agencies. Sites and services have demonstrated the need for close cooperation both within implementing agencies and the various local governmental agencies and utilities that provide essential services for housing developments and slum projects. Problems of inter-agency coordination contributed to implementation problems as was experienced in projects in the Philippines, Zambia and Senegal and Bombay. Firm agreement between the implementing agencies and the other agencies needs to be achieved sooner in the planning process to reduce the possibility of later delays caused by lack of utility connections or essential municipal services.

Fully staffed and functional implementation units, with a track record of success (for existing institutions). The experiences from Pakistani, Thailand, India, Kenya and Nigeria, demonstrate the importance of analyzing implementing capacities before undertaking major new investments and, especially, the need to identify project teams' capacity, additional administration, maintenance, collections, procurement, accounting and acquired debt costs. Better ex-ante analysis of the financial and political situation of projects implementation units can have the potential to establish capacity needs or flag out any issues that may hinder successful project implementation. The continuity of key personnel is also critical to ensure commitment to project objectives. The use of established implementation units that are already developed and enjoy local support is also very important for project success.

Capacity building for implementing agencies in various aspects of the project including cost recovery is also critical. Examples from Kenya and Thailand demonstrate that, problems related to cost recovery, property taxes and service payments are not solved simply by changing the rates. Improved accounting, collections and municipal administration in connection with Bank urban projects are likely to require additional staffing and training and, thus, to imply costs of their own. Furthermore, increased municipal charges generally require a change of thinking, implying careful and continuous dialogue among relevant stakeholders.

The majority of past sites and services were plagued by mistrust of and among implementing agencies. For instance, in Kenya, many covenants were flouted during the course of project implementation, making it difficult for the involved parties to harmoniously work together. Despite the government's promises to carry out reforms, the national housing reforms were never applied. This and the lack of policy impact disappointed the Bank, which stopped supporting the idea midway during project execution. The local and national technicians who hoped the project would bring about sector reforms then felt the Bank deserted them at a critical moment, disrupting the institutional relations. Elsewhere, the institutions selected to implement the projects both in Nigeria and Brazil lacked public trust.

Flexibility and tapping into current innovations during all stages of project design and implementation. The ability to change course when necessary coupled with adoption of new technologies will also be crucial for the effectiveness of future low-income housing interventions. The use of new building technologies like 3D printing and low carbon development will be crucial considerations. Governments and communities can tap into NGOs, the private sectors

and the international development community for Technical Assistance in incorporating new technologies where their capacities are limited. It is also important to critically think through the potential issues that may arise and have contingent plans beforehand. For instance, sites and services being a neighborhood-based approach can be politically challenging in picking settlements or winners and losers. So anticipating such and planning accordingly would be critical to avoid project delays.

Further, it is also important to recognize that sites and services represents a broad approach that cannot be applied uniformly in all contexts or that may not function effectively across different contexts. The spectrum of sites and services could range from an empty plot of land with minimum services to the provision of a core house (e.g. kitchen and toilet) with services. The construction can be by benefiting individuals or in involve the participation of multiple actors such as private developers, NGOs etc. Consequently, countries and cities need to pick the model that works best for each context taking into consideration socio-political conditions, land and housing markets.

2.4.3 Community Engagement

KEY MESSAGES

- **Community engagement is key to project success**. Projects with strong community engagement in past projects performed better. Community engagement also decreased the likelihood of issues such as clientelism and co-option.
- **Inclusion of NGOs in the implementation arrangements is likely to lead to better outcomes** as project can benefit from their vast know-how of delivering low-income housing and; friendly perception and interactions with local communities. **Currently there is a multitude of NGOs with experiences in land and low-income housing** that can be incorporated in project design and implementation.
- **Community-led innovations** can also play a role in safeguarding the project benefits for the urban poor.

Most sites and services never incorporated community engagement formally in projects implementation. Rather, community engagement was simply presumed through the mutual help model where it was assumed that community members would help each other build their houses and community infrastructure. Different projects therefore had different levels of community engagement with varied effects on the ability of the project to achieve its objectives.

Where strong community engagement existed, it proved to drastically increase the efficiency of the project and especially allow greater success in maintenance and recovery objectives. An exemplary case study to depict the positive impact of constant community engagement in different parts of the project is the pilot sites and services projects in El Salvador led by the NGO Salvadorean Foundation for Development and Low-Cost Housing (FSVM). Effective community participation was itself a goal of the program, which also involved social responsibility as an inherent programmatic feature. The project also included within its terms of physical objectives the generation of community centers and facilities to further strengthen the bond between residents and increase the sense of community. Due to the sustained engagement and awareness created in the community of their roles and responsibilities within the project as well as communicating the understanding that repayments are necessary for the project's survival, the project along with a mix of other strategies had a very high rate of repayment. Elsewhere in the Ghaziabad project in India, good community participation was crucial in ensuring the selection of the right beneficiaries.[114] In Nairobi, community participation enhanced the targeting of low-income beneficiaries in the first phase of Dandora, the initial urban project in Kenya. In the relatively successful sites and services projects such as El Salvador and Bombay, India, the benefiting communities were largely involved in the project. Community participation and ownership ensured sustainability through continuous maintenance.

Experiences have also showed that in projects where community participation is limited or lacking, patronage, clientelism and co-option issues are likely to occur. Experiences from the Thailand's Neighborhood Upgrading and Shelter Sector Project (NUSSP) demonstrate that projects implemented by third parties had lower commitment from the community for maintenance, thus suffering damage

[114] National Institute of Urban Affairs New Delhi (1988). "Sites and Services Projects Cities in India's Secondary - An Evaluation Study (Prepared for the Ministry of Urban Development)."

and eventually becoming inoperable. On the other hand, where residents self-implemented projects, they were more committed to maintenance, while villages with greater social cohesion were more likely to carry on with maintenance in the long-term.[115] Past experiences suggest that sites and services and slum upgrading projects are most effective when responsibility and accountability is decentralized to the lowest possible level, which in turn supports ownership and empowerment.[116] Further, experiences from previous sites and services demonstrate that citizen engagement enhances urban governance, allows for a more comprehensive response and longer-term sustainability.

Communities can also be a source of inputs including land, building materials, organization, cost recovery, etc. In some countries like Kenya, communities have in the past come together and bought land collectively for housing. Such groups provide opportunities for partnerships between the government, financing institutions among others. Where communities have ready land, the government can enter into an agreement to provide infrastructure at a fee or with conditions that guarantee affordable housing. Such organized groups can also easily access finance as they are able to guarantee each other – some NGO supported low-income housing such as the Kambi Moto Project in Kenya are based upon similar model.

The plethora of NGOs currently working in low-income housing globally make community participation a possibility in future housing projects. NGOs are critical in community mobilization and ensuring their participation in projects. The success of the El Salvador project was largely dependent on the non-profit FUNDASAL that had previous interactions with communities and therefore were clear on the requirements for community participation. Using their prior experience, they were able to fully involve communities in the project implementation processes. Globally civil society organizations have also demonstrated effective use of funds by judiciously channeling funding towards basic services and physical infrastructure improvement, land tenure and leadership training.[117] Since the 1990s several non-profits (e.g. Slum Dwellers International (SDI), SPARC, CODI)) have emerged across Asia, Africa and Latin America and have been working with community organizations supporting them to identify their own solutions to land and housing problems. Including these NGOs in housing project implementation arrangements would be crucial. Projects also stand to learn and benefit from their vast know-how of delivering low-income housing, their critical lessons and innovations.

Non-profit, community-led innovations such as Community Land Trusts, community organization, enumerations and savings have also proved crucial in safeguarding access to affordable land and housing for the vulnerable. In recent years, the use of CLT has gained attention in both USA and Europe as an approach to affordable housing provision and could also be explored in cities in developing countries.[118]

2.4.4 Environmental and Social Framework

KEY MESSAGES

- **There is need to consider ESF frameworks in low-income housing projects to prevent** social and environmental risks such as displacement of low-income households.
- **Current WB ESF frameworks provide a starting point** as it provides for social and environmental protection. For example, it provides for stakeholder engagement and increased social inclusion (e.g. including women, the disables, IPs, ethnic minorities, and other marginalized groups) and the compensation of project-affected persons.

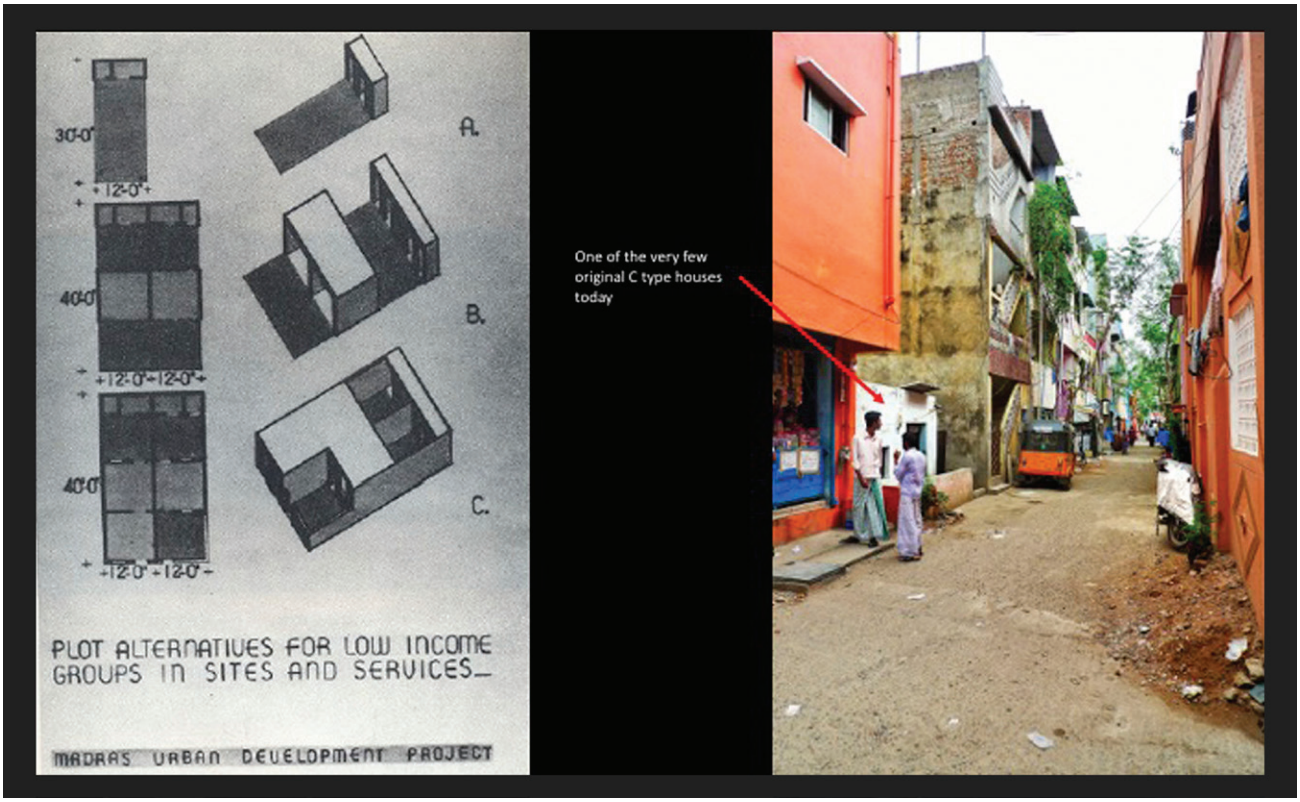
During the heyday of the sites and services approach in the 70s and early 80s, although the Bank had begun to take steps to protect E&S interests in bank-supported projects, it did not have formal environmental and social (E&S) guidelines in place. This led to several social and environmental challenges in implementing sites and services projects, like benefits going to non-target beneficiaries. In the 1980s, the Bank began to incrementally introduce a due diligence framework that centered on an environmental review process and a set of thematic operational policies.

115 Bolton L. 2020, 'Sites and services', and in-situ slum upgrading, K4D

116 Bolton L. 2020, 'Sites and services', and in-situ slum upgrading, K4D

117 Bolton L. 2020, 'Sites and services', and in-situ slum upgrading, K4D

118 Rosalind Greenstein and Yesim Sungu-Eryilmaz, 2005, Community Land Trusts, Leasing Land for Affordable Housing; PD&R, 2019, Community Land Trusts and Stable Affordable Housing; European Commission, 2020, Community-managed land and affordable housing trialled in four cities in north-west Europe.



In 1984, the Bank consolidated its E&S guidelines and policies into Operational Manual Statement (OMS) 2.36, and in 1989, adopted an Operational Policy (OP) on Environmental Assessment, Operational Directive (OD) 4.00. Through the 1990s, the Bank continued to revise its E&S policies, and in 1997, coinciding with the end of the sites and services era, adopted a final version of its guidelines, OP/BP/GP 4.01, which became known as the Safeguard Policies (SPs).[119]

Today all new IPF projects must comply with the Bank's Environmental and Social Framework (ESF), which came into force on October 1, 2018. The ESF comprises a Vision Statement, an Environmental and Social Policy and ten Environmental and Social Standards (ESSs). These ESSs cover: E&S risk and impact assessment and management; Labor & working conditions; Resource efficiency, and pollution prevention and management; Community health and safety; Land acquisition, restrictions on land use and involuntary resettlement; Biodiversity conservation and sustainable management of living natural resources; Indigenous Peoples/ Sub-Saharan African Historically Underserved Traditional Local Communities (IPs/SSAHUTLCs); Cultural heritage; Financial intermediaries; and Stakeholder engagement and information disclosure. Among other things, the ESF requires the Bank and its Borrowers to assess and manage E&S risks in accordance with the mitigation hierarchy, to inform and consult with stakeholders in a meaningful way, and to compensate project-affected people. Future sites and services projects are likely to benefit from this framework, and as result, avoid the risks and pitfalls that led to the failure of many earlier projects. Tables 1 & 2 present the ESSs and safeguards instruments that would likely apply to various potential aspects of sites and services projects.

Potential benefits of applying the ESF to sites and services will likely include: Increased social inclusion and protections for disadvantaged and vulnerable groups, including women, the disabled, IPs, and ethnic minorities; stakeholder engagement throughout the project lifecycle; incorporating opportunities for sustainability, including initiatives to reduce GHGs; ensuring measures are in place to ensure child and forced labor is not used to build homes; consideration of the health and safety of project-affected communities; and the selection of sites and services' locations with limiting resettlement in mind.

[119] The World Banks' Safeguard Policies Proposed Review and Update: Approach Paper, October 12, 2012.

2.5 Low Carbon Development Opportunities

Summary of Low Carbon and Emerging Technologies that Support Low-Income Housing

Sector	Innovations Applicable to Future Low-Income Housing Projects
Sustainable solutions to service provision: solar, sanitation, solid waste	- Simplified or distributive approaches in services such as sanitation, electricity and water allow for greater accessibility and lower costs than conventional networked approaches e.g. • Solar power can replace a lot of electricity and power service needs as a more sustainable and off-grid solution. • Sanitation: Condominial sewer networks that involve a simplified system of shallow sewers that serve a cluster of houses are a low-cost sanitation solution for Africa's urban poor. • Solid waste: An integrated solid waste management system and a circular economy can be encouraged in the creation of new lower-income communities with waste collection can also become more localized and involve waste-pickers and informal workers creating more jobs.
Water access and food innovation	- Urban farms that are being created in low-income areas such as informal settlements help with food scarcity. - Rainwater harvesting is a sustainable practice to preserve and reuse water and reduce cost as a low-income housing solution. - Green roofs can be an ideal way of reducing heat emissions and absorbing rainwater to reduce carbon emissions and promote reuse for more sustainable living. - Low-cost point-of-use water treatment systems are a solution to water service provision in developing communities. They are low cost, eliminate issues of accessibility and are also user-friendly and easy to maintain which allows for sustainability of these systems in such communities. - Overall, a complete ecosystem and plan of green growth and climate resilience should be envisioned behind the design of affordable housing plans.
Housing Design, Construction and Materials	- Material innovation in affordable housing has found a strong basis in low-cost low-tech solutions such as reinventing locally-sourced and organic materials for use or better re-use and recycle material waste. - The Zero Kilometer approach calls for the utilization of local materials/, locally sourced materials that are closer to the building site and that do not have to go through major stages of industrial processing and at the end of their life can return to the environment. This allows for sustainability, is economical and reduces environmental damage caused by monoculture and the emissions of carbon dioxide and consumption of fossil fuels during the transportation of these products. - 3D-printing is an emerging technology that can help construct much faster, lower-cost, and with lower energy consumption.
Design and planning innovations	- Alternative design approaches to incremental housing, such as the Chilean architect Aravena's Elemental firm open-source designs for Chile's national housing program, allow rethinking of basic design principles increasing the opportunity for a harmonious community. - Urban densification has come to be widely accepted as a means not only to make efficient use of resources, promote sustainable development by preventing urban sprawl but also to combat climate change by reducing green house gases. There are also other ways to achieve density other than higher buildings, including optimization of unused land and flexible grids.

2.5.1 Sustainable Solutions to Service Provision: Solar, Sanitation, Solid Waste

Current technologies allow for simplified or distributive approaches in services such as sanitation, electricity and water providing greater accessibility and lower costs than conventional networked approaches. These present opportunities to lower costs and enhance sustainability in future low-income housing. With regard to urban liquid waste, citywide inclusive sanitation approach that allows a combination of technical options including condominial sewer network has emerged as a viable alternative to traditional sewer networks. A condominial sewer network that involves a simplified system of shallow sewers that serve a cluster of houses is now under pilot as a low-cost sanitation solution for Africa's urban poor. In Burkina Faso, the government already supports a decentralized solid waste management system for households. This system of households establishing pits and compost on their own land can also help with agriculture production, decrease the burden on disposal infrastructure, save costs and lead to more opportunities for citizens to

generate income from waste.[120] Solid waste collection in future projects can also become more localized and involve waste-pickers and informal workers creating more jobs. An integrated solid waste management system and a circular economy can also be encouraged in the creation of new lower-income communities. Concerning power, consistent price reductions of photovoltaic components and rapid advances in solar technologies have allowed for solar power technology to become more accessible and less-costly, where the cost of solar cells dropped 85% due to greater manufacturing and economies of scale.[121] Consequently, solar power can replace a lot of electricity and power service needs in future projects as a more sustainable and off-grid solution circumventing the lengthy and costly electric power installations.

2.5.2 Water Access and Food Innovation

Several water and food innovations have also emerged reducing water related costs and challenges such as sourcing and piping of municipal water. Rainwater harvesting present a sustainable practice to preserve and reuse water and reduce costs for low-income housing households. Further, low-cost point-of-use water treatment systems are a solution to water service provision in developing communities. They are low cost, eliminate issues of accessibility and are also user-friendly and easy to maintain which allows for sustainability of these systems in such communities. On food, urban farms are being created in low-income areas such as informal settlements to help with food scarcity especially during Covid-19. Further, green roofs can be an ideal way of reducing heat emissions and absorbing rainwater to reduce carbon emissions and promote reuse for more sustainable living. Overall a complete ecosystem and plan of green growth and climate resilience should be envisioned behind the design of affordable housing plans.

2.5.3 Housing Design, Construction and Materials

Material innovation in affordable housing has found a strong basis in low-cost low-tech solutions such as reinventing locally sourced and organic materials for use. Increasingly, architects and the building construction industry realize that for greater sustainability, lower costs and low carbon footprints construction materials houses need to be built from locally sourced materials that are closer to the building site and utilize naturally occurring and biodegradable materials or better re-use and recycle material waste. The Zero Kilometer approach calls for the utilization of local materials, which do not have to go through major stages of industrial processing and at the end of their life can return to the environment. This allows for sustainability, proves economical and reduces environmental damage caused by monoculture and the emissions of carbon dioxide and consumption of fossil fuels during the transportation of these products. 3D-printing is also an emerging technology that can help construct much faster, lower-cost, and with lower energy consumption. It is however important to be cautious of the promises made concerning the potential of the 3D printing technology as it is still at its infancy, with safety and regulatory standards yet to be developed for commercial use.

2.5.4 Design and Planning Innovations

A variety of design and planning solutions for low-cost housing abound. Alternative design approaches to incremental housing, such as the Chilean architect Aravena's Elemental firm open-source designs for Chile's national housing program, allow rethinking of basic design principles increasing the opportunity for a harmonious community. Urban densification has come to be widely accepted as a means not only to make efficient use of resources, promote sustainable development by preventing urban sprawl but also to combat climate change by reducing greenhouse gases. Different ways to achieve density other than higher buildings also exist, including optimization of unused land and flexible grids that could be considered in future low–cost housing projects.

2.5.5 Communications and Data Innovations

The explosive growth and penetration of mobile phones and other devices such as drones provide opportunities for easy communication and large-scale data collection. Global mobile penetration rate is high, with some countries having more than 100 percent penetration.[122] Owing to their

[120] Kaza, Silpa; Yao, Lisa C.; Bhada-Tata, Perinaz; Van Woerden, Frank. 2018. What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050. Urban Development;. Washington, DC: World Bank. © World Bank. https://openknowledge.worldbank.org/handle/10986/30317 License: CC BY 3.0 IGO. P.152.

[121] Solar Solutions: Bridging the Energy Gap for Off-Grid Settlements. https://wedocs.unep.org/bitstream/handle/20.500.11822/22268/Frontiers_2017_CH5_EN.pdf?sequence=1&isAllowed=y

[122] S. O'Dea, 2021Global smartphone penetration rate as share of population from 2016 to 2020.

ubiquity, multiple functionalities and reducing acquisition and operating costs, mobile phones have been employed in a variety of ways to support data collection efforts across the world.[123] Further, with the adoption of online and mobile banking services by most financial institutions, mobile phones are also increasingly being used as banking platforms and for money transfers. In Kenya for instance, mobile phone users can carry all forms of bank transactions including obtaining loans and savings. These mobile functionalities present opportunities to circumvent the bureaucracy experienced in traditional banking systems making access to finance easy and cheaper. Airborne drones also provide opportunities to aid spatial and physical data collection by allowing people to photograph, video and map sometimes physically inaccessible areas.[124] They can also be connected to cloud computing to collect and analyze data, becoming a critical part of digital data acquisition and informing decision making processes with increased speed, safety, efficiency and reduced costs.

2.5.6 A Caveat on Technology and Innovations

Despite the emergent technologies and the potential they hold for development, it is important to understand that technology cannot be a panacea neither can it be applied uniformly. Rather the use of technology needs to be informed by context, cost considerations, skills requirements and access by different groups etc. For instance, the use of mobile phones and drones for data collection may elicit safety and data privacy concerns limiting their use in some circumstances. The use of drones is particularly restricted in areas with high air traffic like near airports and in densely populated are like cities, sometimes requiring special permits to operate in restricted areas which may take lengthy periods to obtain permission. Further, the use of some of these technologies may require training or high initial costs particularly in the case of 3D printing, where most designers and developers are unfamiliar with the technology requirements. The risk of technologies going obsolete after high initial investments should also be considered given the fast paced world of technology.

[123] Trucano Michael (2014), Using mobile phones in data collection: Opportunities, issues and challenges.

[124] Guttman Chase (2019), Drones Connect to Cloud Computing to Analyze Data from the Sky; Data capture with drones – digital engineers' eyes in the sky: https://www.aurecongroup.com/expertise/digital-engineering-and-advisory/data-capture-drones

2.6 The Broader Country and Sector Context

So far, Section 2 has assessed what can be learnt from the experiences of the 1st generation sites and services. While these factors discussed above are critical aspects for consideration when designing future sites and services, they cannot be considered in isolation of the broader country and sector context.

2.6.1 Stable Socio-political and Economic Context

Steady political and economic conditions at the local and national context. Analysis from previous sites and services indicate that the political and fiscal environment greatly affected project implementation and outcomes. Projects in countries experiencing political or fiscal instability or without political support were more likely to experience implementation delays and low levels of success. Difficult economic conditions in Nigeria, Morocco and Kenya were detrimental to project design, uptake and implementation. In Morocco for instance, project design and implementation took place at a period of rapidly changing economic fortunes. When prepared, the government's finances were thriving, but by completion public sector fiscal constraints created difficulty in continuing massive subsidized public investments in shelter. Similarly, the implementation of the First (Bauchi) Urban Development Project in Nigeria occurred during a period of economic crisis as the currency rapidly devalued and rapid inflation set in. At completion, Nigeria's GNP per capita was only a little more than a third of its level when the Project was being appraised. The economic conditions in Nigeria were further compounded by political uncertainty with the project being prepared under a civilian administration and implemented under a federal military government.

In Kenya, reduced municipal revenue due to the removal of the Graduated Personal Tax by government and declining political influence at the municipal level that were meant to implement the project led to political hesitation to adopt the second phase of sites and services. In both Morocco and Kenya, subsequent poor project uptake and execution was further exacerbated by politicians and government preference for slum eradication and replacing them with high standard, highly subsidized housing for which cost recovery was largely impossible given affordability limits.[125] This reluctance to

[125] Project Performance Audit Report, Kenya Second Urban Project, (Credit 791-Ke/Loan 1550-Ke), June 28, 1991.

provide project support meant that it took longer to draft and implement projects that in turn led to increased costs and burden to beneficiaries. Indeed, problems of government buy-in and ownership are among identified factors that led to limited project success in Egypt.[126]

In El Salvador, armed conflict made resources scarce and caused people to flee several project areas with the martial law prohibiting workers from implementing project works for several months. This led to restructuring in which, instead of 15,000 units, only about 9,600 were provided and many of the infrastructure and complementary community facilities not provided. In India, communal disturbances in Bombay during the short period between December 1993 and February 1994, and the continuous depreciation of the rupee, particularly after the Gulf War in 1991, adversely affected credit utilization. Given the above, the sustainability and replicability of future sites and services schemes would therefore require a clear assessment of the current and projected political and economic stability at both the local and country context. Even where conditions are projected to remain stable, government buy-in will require to be strong.

2.6.2 Comprehensive Housing Sector Approach

Projects should be part of a broader sector or policy interventions and not a stand-alone intervention. While incremental housing approach has proved a potential solution for low-income housing, it needs to be re-crafted into a broader approach rather than a singular type of intervention. Projects should be linked to overall sector interventions and performance including inter-sectoral coordination. This can range from coordinating multiple interventions in the overall housing sector to linking projects to transportation and employment linkages and overall community services. Evidence from sites and services and other low-income interventions such as slum upgrading has proved that, if shelter supply remains inadequate even for middle-income groups, it is likely that plots and house units meant for low-income beneficiaries in the project will get transferred to higher income groups.[127]

Countries such as El Salvador and India, which took a broader sector approach to sites and services experienced considerable success as compared to those that, did not. In El Salvador for instance, the sites and services project was national in scope, with particular emphasis on transportation and employment linkages. In San Salvador, sites were located adjacent to existing industrial corridors. Those in secondary cities were located within 10-15 minutes' walk of the main square. The availability of community facilities in areas adjacent to project sites was also examined before including additional facilities in the project.

In India, the Bombay Urban Development Project not only sought to increase overall affordable housing for the poor, but also supported efforts to improve policies and institutions affecting the overall management of urban development. Consequently, the project experienced significant levels of success with the physical targets for sites and services schemes almost fully met and the affordable, serviced plots sold to nearly ninety thousand low-income households with less interference from other income groups.

Elsewhere in Egypt, the shift from upgrading to citywide policies integrations led to better outcomes with government creation of the Informal Settlement Development Facility in 2008. The facility, which stresses safety within informal urban areas has greater focus on physical, social, juridical and economic integration.[128] Economic integration involves linking of informal urbanization to the formal property markets. Physical integration involves construction of roads to enhance accessibility with social integration addressing community needs while juridical integration includes property regularisation and land-titling.'[129] Despite the lack of a clear mode of intervention, the inclusion of slum upgrading as part of a wider policy approach has led to increasing political will and funds allocation towards low-income housing.[130]

126 Bolton L. 2020, 'Sites and services', and in-situ slum upgrading, K4D.

127 Implementation Completion Report, India, Bombay Urban Development Project (Credit 1544-In), June 10, 1997.

128 Khalifa, M. A. (2015). Evolution of informal settlements upgrading strategies in Egypt: From negligence to participatory development. Ain Shams Engineering Journal, 6(4), 1151-1159.

129 Bolton L. 2020, 'Sites and services', and in-situ slum upgrading, K4D.

130 Bolton L. 2020, 'Sites and services', and in-situ slum upgrading, K4D.

It is also important to note that, even with available public land, sites and services may not be the best solution (depending on local market and socio-political conditions) to low-income housing. Consequently, considerations for sites and services must be undertaken in the context of other options such as public affordable housing, PPPs with cross-subsidization, auction out, community land trusts etc. Further, it is important to recognize that approaches to sites and services may also differ from one context to another prompting the need to for different development approaches for different contexts.

Again, sites and services should be embedded or anchored in broader policy and regulatory framework. This allows for guidance and conformity and especially where there are deviations from conventional planning standards. Tools such as Special Planning areas can be used as enabling instruments for sites and services. Designation of slum areas as special planning areas has allowed the provision of infrastructure and services using non-conventional standards in places like Kenya.[131]

[131] https://www.muungano.net/mukuru-spa

3

Guiding Principles for Designing and Implementing Sites and Services Projects

The challenge of affordable housing is a complex issue and there is no singular approach that can claim to be the perfect solution. Addressing the challenge will require a multi-pronged approach. This review has taken a look at the potential for sites and services approach to contribute towards the housing challenge in rapidly growing urban areas. It is clear that sites and services can offer a potential policy option but important considerations emerge as we consider applying the lessons learnt from this review towards future projects and programs.

First, sites and services will not work in every context. Thus, the Guiding Principles below aim to be guidance, rather than a prescription, for operational teams when designing sites and services. The principles are drawn from the lessons learnt outlined in the previous section and aim to point out how sites and services could be more effective, and how the approach can present opportunities to further contribute to the housing agenda beyond what the 1st generation of projects may have anticipated.

Second, sites and services can be recrafted into a broader approach rather than a singular type of intervention for housing for urban poor. While the 1st generation of sites and services aimed to provide the urban poor with secure housing that they could afford, the approach can be also used by governments towards other objectives. First, the approach can support the provision of housing for all income groups. Projects may think about designing project sites with the overall cost recovery as the basis, with higher-income groups providing full cost recovery while designing subsidies for the poor. Second, sites and services can be used to support guided urban expansion. Under this objective, the focus is on providing serviced plots for all income groups across the whole city. Infrastructure and other facilities would be laid out ahead of housing construction, which is often not the case in many African cities. Achieving this objective would result in the guided development of urban land and infrastructure provision for sustainable urban growth. To design a sites and services intervention, a project team would need to first determine the country's primary objective for implementing sites and services. A project designed for the broader objective of planned urban development would likely focus primarily on the programmatic guidelines below. The project-level guidelines could be more useful for project teams focusing on the housing objectives.

Third, a programmatic approach to sites and services has the potential to address bottlenecks more holistically. In the 1st generation of sites and services, government and donors adopted a project-by-project approach, where they would take a site and focus on making that site inhabitable for a certain income group, while often excluding other land uses, other income groups and other parts of the city. This review shows that this approach is detrimental to ensuring a sustainable approach towards providing affordable housing and thriving, inclusive communities.

Adopting a programmatic approach encourages a strategic lens to unlocking the affordable housing bottlenecks. Project teams adopting a programmatic approach could influence the housing programs and standards of client governments beyond the specific sites that will be done in the projects. The programmatic approach focuses on what it would take to get a low-income lens embedded in the planning and housing framework of a municipality. As will be noted from the guidance below, the programmatic approach reconceptualizes the "site" as the whole urban jurisdiction, not the specific site of the project, and conceptualizes "services" beyond services to the project site. A programmatic approach also encourages incremental upgrading of whole neighbourhoods throughout out the city.

3.1 Summary of Lessons Learnt

The review reviewed the experiences of the 1st generation of projects across 14 thematic areas, and has shown that sites and services have a higher likelihood of achieving its objectives where the following conditions exist:

Country and Sector Context

- Where there is **social, political and economic stability at both the local and national context.**
- Where there is **government and community project buy-in** into sites and services as an intervention.
- In the context of a comprehensive housing sector approach that caters for all the different social groups.
- Where there are **flexible planning and building standards that allow for** incremental housing approach, and upwards or downwards adjustments where necessary while maintaining house and neighborhood quality and affordability.
- Where **diverse land and property rights** options exist, providing for individual or communal land ownership, freehold or leasehold land tenure systems, home ownership or rental options.
- Where there **exists robust NGOs, which allow community engagement** across all stages of the project.

Land Context

- In areas where **sufficient and 'clean' land is guaranteed** through clear acquisition processes and efficient conflict resolution mechanisms.
- Where there is **availability of multiple land sources besides public land**, whose supply in most cities is now limited.
- Where **land location ensures good access to jobs** that can be guaranteed through close proximity to the city or linking site to citywide plans and infrastructure.
- Where available sites **do not exacerbate urban sprawl** and can **be integrated into a wider urban development plan**.

In addition, the following features in project designs have indicated better outcomes:

Project Ambition, Measure of Success and Implementation

- **More realistic, less ambitious timelines** of the projects.
- **Longer time periods to assess full project build-out,** with less expectation for immediate occupancy by beneficiaries.
- The implementing agency is an existing institution, is fully staffed and functional units, has a track record of success (for existing institutions), is flexible and open to innovation, and has the trust of the public and peer agencies.

Beneficiary Targeting and Support

- **Targeting and clear understanding of beneficiary needs and preferences** are clearly understood and projects tailored to accommodate those needs as appropriate.
- **Diverse and sufficient financing for land and housing consolidation** to allow faster consolidation and build-out.
- **Opportunities for income-generation (e.g. rental)** to allow households to generate extra incomes for house consolidation.
- **Sufficient subsidies and a balance between affordability and cost recovery** is considered, incorporating mixed income groups or involvement of NGOs and private developers as financiers.
- **Cost recovery is designed** such that:
  - The nexus of affordability and cost recovery is built into the project.
  - Payments are made to a private sector entity to increase compliance and technology adopted to more reliably manage loan administration and cost recovery.
  - Services are subsidized and/or beneficiaries are provided with ready rooms for occupation as they continue to build to avoid paying rents as they build homes.
  - Determination of beneficiaries' ability to afford is contextualized and expanded to include non-traditional income sources such as personal savings and incomes from informal businesses that forma a key part of household incomes in developing economies.
- Environmental and social considerations are integrated into the design to **safeguard beneficiaries and the environment.**
- **Low-carbon opportunities** are maximised to lower costs and the carbon footprint.

3.2 A Programmatic Approach to Sites and Services

Where the context allows, project teams have an opportunity to use the sites and services approach to influence the affordable housing landscape beyond the specific sites of the project. Of the 14 thematic areas reviewed by the study, some are more easily incorporated into a programmatic approach. These areas are presented below. Project teams could consider incorporating the following activities into the projects with the objective of influencing a more enabling environment for affordable housing across the whole urban jurisdiction:

Establish and influence the degree to which planning and engineering legislation are appropriate

- Conduct a review of the planning and engineering legislation that will be applied on the project site, and where needed, include technical assistance to modify these standards.
- Determine whether mixed use and mixed-income principles are also embedded in the regulations, as multi-use of the land encourages thriving and sustainable communities.
- Review if the regulatory environment supports incremental housing and low-income rental units.
- Review the planning legislation to ensure that rental units can be established on sites and services.
- Determine whether the legislation supports innovations such as water harvesting, the use of non-traditional construction materials, and innovations to reduce carbon footprint in affordable housing.

Determine and influence the availability of public land in the municipality and establish land banking

- Ensure that there is easily available land to match the demand in the project under preparation.
- Determine if an enabling policy and legislative environment exists for land acquisition.
- Determine the extent to which innovations in land instruments, such as land value capture, transfer of development rights, charges on building rights, impact fees, land readjustment, are supported by legislation as these present opportunities to source and finance land.
- Consider embedding a land banking exercise into the project, particularly for smaller cities where vacant land is still available close to the urban core.

Strengthen the awareness and capacity of local implementing entities

- Most critical is to have the implementing entities aware that sites and services projects should be implemented as part of a broader urban plan and not as stand-alone projects.
- Lessons from past sites and services show the need to integrate sites and services projects into the wider urban plans and infrastructure networks, such that housing has basic services and easy access to jobs and transport.

Promote community engagement processes that allow flexibility on the mode of engagement

- Engage with local and international NGOs such as the Slum Dwellers International (SDI) that have persistently advocated for security of tenure and services provision for slum/squatter residents to incrementally build their homes. This engagement will allow lessons from Bank projects to feed into other projects in the municipality, and vice versa.

3.3 End Note

The study looked at the experiences of 1st generation of sites and services projects across 14 thematic areas and shows that much can be learnt from them, and that sites and services remains a policy option for governments tackling the housing challenges typical of rapidly urbanizing contexts. This review has presented lessons learnt that can be applied towards future projects, where applicable. The review also shows that a 2nd generation of projects presents a great opportunity for introducing low carbon development opportunities into affordable housing, e.g. sustainable solutions to service provision: solar, sanitation, solid waste.

The study intends to be a starting point upon which to continue building further knowledge and practice towards this approach, as governments and project teams reintroduce it as one option in a broader housing agenda of a country. Context remains the single most important consideration.

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4. Annexes

ANNEX 1: Considering the ESF In Implementing Sites and Services Projects

Implementation Considerations: The Environmental and Social Framework Tables

The table below presents the ESSs that would likely apply to various potential aspects of a sites and services (S&S) project. The relevance of the different ESSs depends on many factors, including the size, location and components of a project.

Table 1: ESF Considerations in Sites and Services Projects

Project Aspects	ESSs* to Consider
1) Provision of basic services	ESS1, ESS2, ESS10 ESS3 (Resource Efficiency and Pollution Prevention and Management) ESS4 (Community Health and Safety) ESS6 (Biodiversity Conservation and Sustainable Management of Living Natural Resources) ESS8 (Cultural Heritage)
2) Tenure security	ESS1, ESS10 ESS5, ESS7, ESS9**
3) Access to incremental housing	ESS1, ESS10 ESS2, ESS3, ESS4, ESS9
4) Housing consolidation	ESS1, ESS10 ESS2, ESS3, ESS4, ESS9
5) Provision of community services and facilities	ESS1, ESS10 ESS2, ESS3, ESS4, ESS6, ESS8
6) Livelihood opportunities	ESS1, ESS10, ESS2, ESS3, ESS4, ESS6
7) Community engagement	ESS1, ESS10
8) Land acquisition	ESS1, ESS10 ESS5 (Land Acquisition, Restrictions on Land Use and Involuntary Resettlement) ESS7 (Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Communities) ESS8, ESS9**
9) Strengthening institutional capacity and project management	ESS1, ESS10 ESS2

*ESS1 (Assessment and Management of Environmental and Social Risks and Impacts), ESS2 (Labor and Working Conditions), and ESS10 (Stakeholder Engagement and Information Disclosure) are cross-cutting themes which apply in virtually all cases.

**ESS9 (Financial Intermediaries): In the case that FIs are involved in providing financing for project activities such as land acquisition or purchasing construction materials, the requirements of ESS9 would apply.

Table 2: Screening of Potential Environmental and Social Risks and Impacts in S&S Projects

Project Aspects	Potential Activities	Generic E & S Risks/Impacts	ESSs to Consider	Applicable E&S Tools
1) Provision of basic services	- Construction of minor roads and walkways - Construction of major roads - Construction of small civil works for water supply and sanitation, and electricity supply. - Construction of major civil works for water supply, sanitation, and electricity distribution. - Training for self-help construction activities - Solid waste collection, removal and disposal - Integration of sustainable solutions to service provision (i.e., solar mini-grids)	- Positive E&S benefits in improving people's access to water and sanitation, reducing waterborne diseases in communities, and reducing environmental pollution and GHGs - Improved health and poverty reduction - Adverse impacts on natural habitats and areas - During construction, noise, dust, loss of vegetation, construction and hazardous materials and waste, potential exclusion of vulnerable groups, social conflicts, GBV/SEA/SH, labor influx, disease transmission, child and forced labor, traffic safety - Occupational health and safety risks - Community health and safety risks - Impacts on biodiversity, including in primary supply chains - Potential impacts on physical cultural resources of the project-affected communities	ESS1,ESS2, ESS3, ESS4, ESS6, ESS8 ESS10	ESMF, SEP*, GRM*, LMP*, CoCs, GBV/SEA AP, ESIA/ESMP*, ESHGs, WMP, EPRP
2) Tenure security	- Neighbourhood planning - Land titling - Review of land tenure regulations and approaches	- Stabilizing vulnerable populations, poverty reduction, conflict reduction - Building inclusive, sustainable communities - Risk of exclusion of vulnerable groups from receipt of project benefits - GBV/SEA/SH issues - Access to credit	ESS1, ESS10 ESS5, ESS7, ESS9	ESMF, SEP, GRM, IPPF, IPP, FI's ESMS
3) Access to incremental housing	- Construction of core units - Home improvement subsidies/loans to perform structural and/or qualitative improvements - Innovative housing finance (community savings, commercial banks, etc.) - New technology to manage loans - Training for self-help construction activities	- Increased resilience and social inclusion in the housing sector - Improved housing quality for lower income families - Improved living conditions - Potential adverse E&S impacts related to construction activities	ESS1, ESS10 ESS2, ESS3, ESS4, ESS9	ESMF, SEP, GRM, LMP, CoC, GBV/SEA AP, ESIAs/ESMPs, ESHGs, WMP
4) Housing consolidation	- Home improvement subsidies/loans to construct/retrofit additional space in homes - Training for self-help construction activities	- Improve housing conditions - Expand the supply of rental space and space for livelihood activities - Increased property values and tax revenues for local governments - Potential adverse E&S impacts related to construction activities	ESS1, ESS10 ESS2, ESS3, ESS4, ESS9	Same as above.

Project Aspects	Potential Activities	Generic E & S Risks/Impacts	ESSs to Consider	Applicable E&S Tools
5) Provision of community services and facilities	- Design and construction of new social infrastructure such as schools, community and sports centers, health clinics, markets, open space	- Adverse impacts on natural habitats and areas - During construction, noise, dust, loss of vegetation, construction and hazardous waste, social conflicts, GBV/SEA/SH, labor influx, disease transmission, child and forced labor, traffic safety - Occupational health and safety risks - Potential impacts on physical cultural resources of the project-affected communities	ESS1, ESS10 ESS2, ESS3, ESS4, ESS6, ESS8	Same as above.
6) Livelihood opportunities	- Providing space for income-generating activities - Access to programs to reduce poverty and vulnerability - Employment opportunities in project activities	- Job creation for beneficiaries, including women, youth, and other disadvantaged populations - Potential for income-generating activities - Risk of social conflicts	ESS1, ESS10, ESS2, ESS3, ESS4, ESS6	ESMF, SEP, GRM, LMP
7) Community engagement	- Participation of beneficiaries - Involvement of a wide-range of community actors (local and regional authorities, housing organizations, neighborhood groups, NGOs)	- Increased social inclusion, especially among vulnerable groups - Stronger community organizations - Potential social conflicts	ESS1, ESS10	ESMF, SEP, GRM
8) Land acquisition	- Acquisition of land for infrastructure provision, housing and community services	- Involuntary displacement and resettlement - Potential loss of land, assets and livelihoods - Issues of inclusion, social vulnerability, GBV/SEA/SH - Potential impacts on IP/SSAHUTLC land, resources, livelihoods or cultural practices - Potential impacts on physical cultural resources of the project-affected communities	ESS1, ESS10, ESS5, ESS7, ESS8, ESS9	ESMF, RPF, RAP, SEP, GRM, IPPF, IPP
9) Strengthening institutional capacity and project management	- Technical assistance to improve urban planning, and the operation and maintenance of infrastructure - Strengthening local community organizations and NGOs - Capacity building on ESF	- Strengthening government institutions and local community organizations - Capacity building	ESS1, ESS10, ESS2	ESMF, LMP, SEP, GRM

List of Acronyms: CoC Code of Conduct ; **EHSGs** Environmental Health and Security Guidelines ; **EPRP** Emergency Preparedness and Response Plan; **ESIA** Environmental and Social Impact Assessment; **ESMF** Environmental and Social Management Framework; **ESMP** Environmental and Social Management Plan; **ESMS** Environmental and Social Management System; **GBV/SEA AP GBV/SEA** Action Plan; **GRM** Grievance Redress Mechanism; **IPP** Indigenous Peoples Plan; **IPPF** Indigenous Peoples Planning Framework; **LMP** Labor Management Plan; **RAP** Resettlement Action Plan; **RPF** Resettlement Policy Framework; **SEP** Stakeholder Engagement Plan; **WMP** Waste Management Plan.

***SEP, GRM, LMP,** and **ESIA/ESM**P are almost always required as they are cross-cutting in nature.

ANNEX 2: Comparisons of Different Land Models & Their Application To Sites and Services

Community Land Trust (CLT)

A community Land Trust is a non-profit organization that acquires and holds land in trust for the benefit of local community. Land owned by the trust is leased to households who either buy or rent property that sit on CLT land. Residents only have a possession of the property while the CLT retains control of the land. The CLT has the right to repurchase property from owners at a resale formula agreed in the ground lease. This approach control land markets hence making land and housing affordable in perpetuity.[131]

Guided Land Development (GLD)

It a technique that guides the conversation of privately owned land on the urban fringe from rural to urban to enable development occur in a planned manner. It entails cities anticipating for inevitable urban growth and the possible direction and taking steps to provide a pathway for future infrastructure to guide development in such areas.[132]

Land Pooling/Re-adjustment (LP/R)

Entails consolidating a group of distinct land parcels for their common planning, servicing and subdivision. The sale of part of the plots is then used to cover project costs and the remaining plots are re-allocated back to the landowners in exchange for their rural land.[133]

Transfer of Development Rights (TDR)

Constitutes the buying of development rights usually in areas where development is prohibited and using them to develop land in different location, where development or density is preferred. Ideally, the owner is being paid not to develop in a certain location but to develop elsewhere.[134]

Land Sharing (LS)

This is an agreement between the authorized occupants of a piece of land and the land owner. Entails the unauthorized occupants moving off the high value land in exchange for being allowed to either rent or buy a part of the land below market value. As a result, residents gain legitimate tenure and continue living on land while original landowners are able to regain access to their land.[135]

Land Banking (LB)

This refers to the acquisition of land by public agencies in advance of urban expansion.[136] The land is later released for development in alignment with regional or local development plans and land use demands. Land banking offers public entities the authority to manage land as it sees fit by allocating land to address particular needs e.g public/open spaces, housing etc. In some cases, land banking involves acquisition of vacant or blighted property, which are then rehabilitated and returned to private ownership.

Inclusive Zoning (IZ)

Inclusive zoning allows local governments to require private developers to earmark affordable housing units in new residential developments. Municipalities offer developers several incentives to encourage them to comply with such requirements.[137]

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131 UN HABITAT (2012), The Community Land Trusts: Affordable Access to Land and Housing.
132 World Bank, (2011), MEMO TO THE MAYOR, Improving Access to Urban Land for All Residents: Fulfilling the Promise.
133 World Bank, (2011), MEMO TO THE MAYOR, Improving Access to Urban Land for All Residents: Fulfilling the Promise.
134 World Bank, (2011), MEMO TO THE MAYOR, Improving Access to Urban Land for All Residents: Fulfilling the Promise.
135 World Bank, (2011), MEMO TO THE MAYOR, Improving Access to Urban Land for All Residents: Fulfilling the Promise.
136 Seymour, Joseph J., (1976). "Land Banking as a Redevelopment Tool for the City of Providence".
137 Tang. I & McIver C. 2019, The Ins and Outs of Inclusionary Zoning.

Comparisons of Different Land Models & Their Application to Sites and Services

Model	Community Land Trust	Guided Land Development	Land Pooling/ Readjustment	Transfer of Development rights	Land sharing	Land Banking	Inclusive Zoning
Key Actors	Communities, NGOs, Govt Agencies	Municipalities, Land Owners, Infrastructure & Service providers	Municipalities, Land Owners	Municipalities, Private developers	Communities/ residents, Land owners, NGOs	Municipalities, other Govt Agencies	Municipalities, Private developers
Regions Practiced	UK and USA, Kenya and Bolivia	Bangkok and Cairo, Guinea, Indonesia and Ecuador	Japan, Republic of Korea, Taiwan, China, Southeast and South Asia	Brazil, India		USA, Canada	USA, Canada
Impacts of Land, Housing & Urban Development (Yes, No, May be)							
Increases supply on urban/rural Periphery	Yes	Yes	Yes	Yes	No	Yes	Yes
Increases supply in inner city	May be	No	May be	Yes	No	May be	May be
Directs future development	No	Yes	Yes	Yes	No	Yes	No
Supports incremental housing	Yes	Yes	Yes	No	Yes	May be	N/A
Promotes PPP	May be	May be	Yes	Yes	Yes	Yes	Yes
Controls Sprawl	No	Yes	Yes	Yes	Yes	Yes	No
Ease of Implementation (Easy, Moderate, Hard)							
Legal Complexity	Hard	Easy	Moderate	Hard	Hard	Moderate	Moderate
Administrative ease	Hard	Moderate	Moderate	Hard	Hard	Easy	Moderate
Financial Costs							
To municipality	Low	High	Moderate	Low	Low	High	Low
To Communities	High	Low	Low	Low	Moderate	Low	Low
To Private sector	Low	High	Moderate	High	High	Low	Moderate
Political Support (Support, Oppose, Neutral)							
Local government							
Dep't of Public Works	Neutral	Support	Support	Oppose	Oppose	Support	Support
Dep't Housing & Community Dev't	Neutral	Oppose	Support	Support	Support	Support	Support
Community							
NGOs &Residents	Support	Support	Oppose	Support	Support	Support	Support
Nearby residents	Oppose	Oppose	Support	Oppose	Neutral	Support	Oppose
Landlords	Oppose	Oppose	Support	Oppose	Support	N/A	Oppose
Private Sector							
Developers	Neutral	Support	Support	Oppose	Support	Support	Oppose
Business Community	Neutral	Neutral	Support	Oppose	Oppose	Support	Oppose
Application to Sites & Services (Yes, No, May be)							
Land provision	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Incremental Housing	Yes	May be	May be	May be	Yes	Yes	No
Community organization	Yes	No	Optional	No	Yes	Optional	No
NGO participation	Yes	Optional	No	No	Yes	Optional	No
Private sector participation	Optional/May be	Optional	Optional	Yes	Optional	Yes	Yes
Government Involvement	Yes, mandatory?	Yes	Yes	Yes	Yes	Yes	Yes
Source of Financing	Community, NGOs	Public agencies, land owners	Land owners, public agencies	Municipalities, private developers	Communities Land owners	Municipalities	Private sector, public agencies

Annex 3: Case Study Projects

Basic Project Information for Select Case Studies										
Project Name	Country	Project Description & Key Features	Beneficia-ries	Project Cost in USD $ millions	Cost Overrun	Approval Date	Closing Date	Time Overrun	Setbacks	Success Indicators
Sites and Services Project (01)	Senegal	400 ha of sites and services including community facilities in Dakar, providing 14,000 plots for 140,000 people and 60 ha of serviced sites in the secondary center of Thias, providing 1,200 plots for 12,000 people Key Features: infrastructure provision – water, power, roads; social facilities; commercial and small scale industrial, recreation and cultural facilities; technical assistance	20,000	8.00	10%	6/22/1972	30/12/1981	4 years	High design standards unaffordable to target groups; delays in service provision making area inhabitable for lengthy periods; inflation raising costs of construction; long distance of site from city centre making progressive construction difficult for beneficiaries: delays in land acquisition	Redesign r of the project which includes construction loans and the use of project-approved small contractors, has significantly increased the rate of house construction
Sites and Services Project	El Salvador	a) 7,000 lots: serviced with water, sewerage, storm water drainage, paved streets, foot-paths and optional electricity; (b) Core unit: approximately 7,000 sanitary units and 3,500 basic dwellings. Key features: serviced lots, core units, offsite infrastructure, construction materials loan, six model housing designs, community facilities, small industrial loans, technical assistance and training	National, 9 project sites	8.50	(cost recovery: 100% costs)	7/2/1974	5/31/1981			Reduced building standards; use of private agency as implementing agency; community partici-pation; considerations for site locations in relation to urban core and truck infrastruc-ture; employment considerations in proj-ect design; low costs achieved through labor intensive designs, modest standards and extensive use of local-ly-made materials

Basic Project Information for Select Case Studies

Project Name	Country	Project Description & Key Features	Beneficiaries	Project Cost in USD $ millions	Cost Overrun	Approval Date	Closing Date	Time Overrun	Setbacks	Success Indicators
Urban Development Project – Madras	India	Sites and services on about 175 ha, with about 13,500 serviced residential plots plots of between about 40m2 and 225m2 each and about 21 ha of serviced land for small industry and commercial uses Key Features: core units and on-site infrastructure including roads, drainage and individual property water supply and sewerage connections; commercial and industrial land provision; Provision of construction materials costing approximately Rs. 6,000,00 for self-help completion of core housing units; construction of schools and health clinics; roads and traffic improvement; bus transport enhancement; technical assistance	3 sites	24.0	19.8	3/8/1977	12/31/1982	81%	Lengthy land acquisition periods delaying project implementation; delayed house construction due to lack of funds	Use of existing agency Madras Metropolitan Development Authority (MMDA) with a track record of success as coordinating agency; Wide scale of individual components; Multiple (10) agencies involved within a citywide framework; Efforts made to integrate investments: Project designed from a broad conceptual perspective that attempted to achieve an overall urban view rather than a sub-sectoral one at the outset; provision of material loan to complete core housing units
Urban Development Project (01)	Nigeria	Development of about 2,100 new plots on about 120 hectares of vacant land in the Makama neighborhood of Bauchi town. Development of about 1850 new plots on vacant land. Key Features: construction of roads, water supply infrastructure, off-site infrastructure, provision of loans to low-income households, construction of social facilities (schools and health facilities), employment components through small scale industry estate, plots for informal enterprise, capacity building for the executing agency - Bauchi State Development Board (BSDB)	N/A	17.8	PCR: 12.7 Overrun PPAR: -23.5 (Cost Underrun)	11/13/1979	06/30/1986		Land acquisition delays; key agency staff resignation derailing project for over a year; lack of trust of implementing agency; inaccurate and unreliable topographical information affecting designs; inexperience of executing agencies and knowledge of bank processes; high standards; project capture by civil servants and high income groups; increased implementation complexity by involving several agencies from federal, state and municipal in project execution	Flexibility in the allocation of land tenure documents (with the land department giving priority and exemption to the project); mixed income residents (with the poor and rich willing to live side by side)
Lusaka Squatter Upgrading and Sites and Services Project	Zambia	1,200 plots with "basic" services: pit latrines and access to the standpipe water supply; 3,200 plots with "normal" services: individual water supplies and water borne sewer connections	31,335	20.0	N/A	6/5/1974	12/31/1981	N/A	Resistance of lower standards; limited council capacity to operate and maintain services and infrastructure provided; lack of sanctions of non repayment of loans and services fees	

Basic Project Information for Select Case Studies

Project Name	Country	Project Description & Key Features	Beneficiaries	Project Cost in USD $ millions	Cost Overrun	Approval Date	Closing Date	Time Overrun	Setbacks	Success Indicators
Rabat Urban Development Project	Morocco	Development of Plots on about 12 ha in an area known as "La Butte" and provided with contractor-built core units	% of total population: Rabat (5%); Meknbs (17%) and Kenitra (14%)	18.0	7.4	02/28/1978	03/31/1984	75%	Absence of land titles compromising financial acquisition and foreclosures and repossessions in case of default; ambitions too high for the scope of the project; high standards; declined economic performance affecting subsidies provision	
Sites and Services and Low-Cost Housing Project	Brazil	Provision of about 41,800 sites and services units; 19,500 embryo, semi-finished and finished low-cost housing units	80,000 families	93.0	N/A	1/23/1979	12/31/1984	N/A	High inflation rates that resulted to decrease in purchasing; Institutional mistrust	
Lahore Urban Development Project	Pakistan	Development of fully integrated infrastructure facilities in an area of about 225 ha to provide about 10,000 fully serviced residential plots, of which about 4,000 were for low-income beneficiaries, and some 600 commercial and industrial units, with sites for education, health, religious, cultural and recreation facilities	10,000 families	16.0	N/A	04/19/1983	12/31/1992	N/A	Underestimation of project implementation time by discounting social issues in project implementation; local agencies' inexperience with World Bank projects; difficulties in land acquisition	
National Sites and Services Project	Thailand	Sites and Services in Bangkok: development of about 3,365 residential units and 285 commercial shophouse units on a 100 ha site at Lat Krabang, including i) land; (ii) infrastructure; (iii) core houses with sanitary facilities; (iv) materials loans for house completion through self-help; and (v) health, education and social facilities. Approximately 4 ha of serviced land were for commercial and industrial development. Sites and Services in the Regional Cities of Chaing Mai, Songkhla, Chantaburi, Khon Kaen and Nakhon Sawan: about 3,000 plots on approx. 50 ha.	Five regional cities	29.0	22.0	6/12/1980	12/31/1985	62.5%	Use of leasehold tenure systems which slowed project uptake:	Redesigning of subsequent projects to provide complete small affordable houses led more low-income households benefiting

Basic Project Information for Select Case Studies

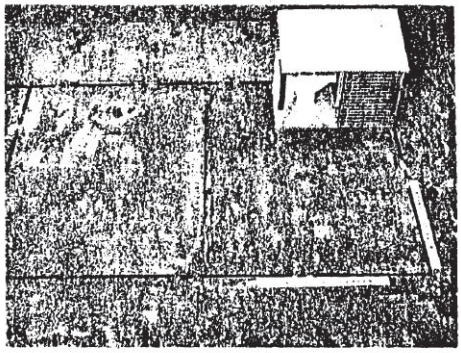
Project Name	Country	Project Description & Key Features	Beneficiaries	Project Cost in USD $ millions	Cost Overrun	Approval Date	Closing Date	Time Overrun	Setbacks	Success Indicators
Urban Development Project (03)	Philippines	a) Provision of tenure, basic services and home improvement loans to low income communities, benefitting about 160,000 persons; (b) provision of critical basic services benefitting about 300,000 persons; (c) provision of about 6,140 served plots, about one-half of which would be developed by NHA and the remaining by private developers	484560	72.0	41.4%	3/25/1980	12/31/1987	165%	Lack of project affordability by target population with studies overestimating beneficiaries ability to afford; poor project designs that underestimated potential household expenses and costs of private services; delays in land acquisition; inflations; multiple agencies leading to project delays	Densification through building additional floors and reblocking; Community involvement e.g the consultation with barangay leadership and community groups that led to the circumvention of major social disruptions during the reblocking process.
Sites and Services Project (02)	Kenya	Site and services: preparation of about 11,770 serviced plots in five sites; Settlement plots: provision of basic infrastructure for about 2,500 surveyed plots in two Project areas in Nairobi	15373(at appraisal)	50.0	Total N/A	04/18/1978	12/31/1986		Institutional changes at the start project with councils losing autonomy and financial capacity; time delays occasioned by unrealistic appraisals and assumptions about project implementation; resistance to lower standards/ use of high standards leading to increased costs; omissions in design and soil and topography issues that later led to time delays; delays and legal challenges in land acquisition; strained relations between municipalities (executing agencies) and central government/ eventual dissolution of council in Kisumu and Nairobi stalling project ; political interference in plot allocations; under staffing; limited counterpart funding	Provision for rental units/option
Urban Development - Bombay Project (BUDP)	India	Construction and financing of about 85,000 serviced residential, commercial and small industrial plots, which i nclude community facilities, core housing, and house expansion loans on about 13 sites in the Bombay Metropolitan Region	13 sites in the Bombay Metropolitan Region	138.0	N/A	January 29, 1985	09/30/1994	4 years more		

Annex 4: Sample Project Designs and Layouts

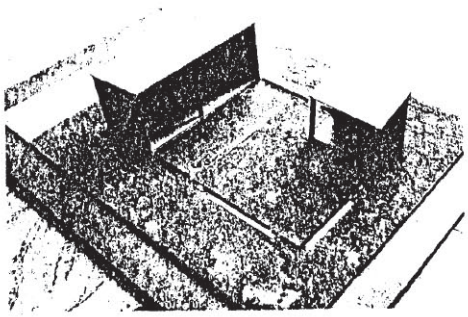
EL SALVADOR SITES AND SERVICES PROJECT - SERVICE LEVELS Figure 1

Service Level (a) Service Level (b)

FSVM's models

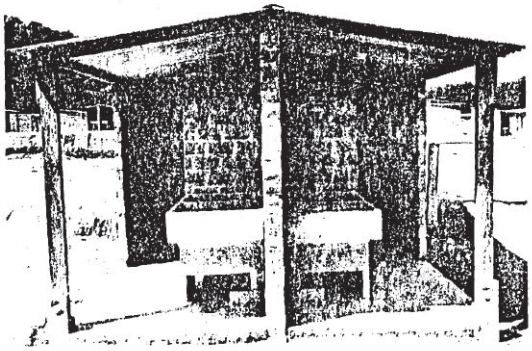


1. Serviced Lot and Sanitary Core Unit.

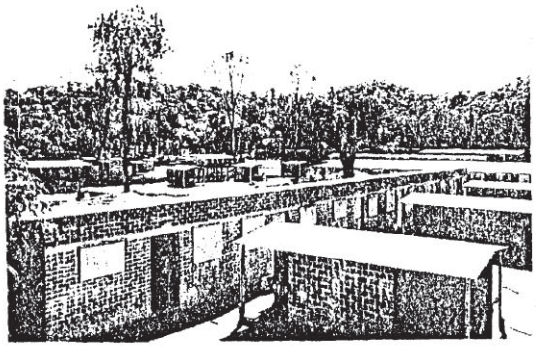


2. Lot, Sanitary Core Unit and Basic Living Structure.

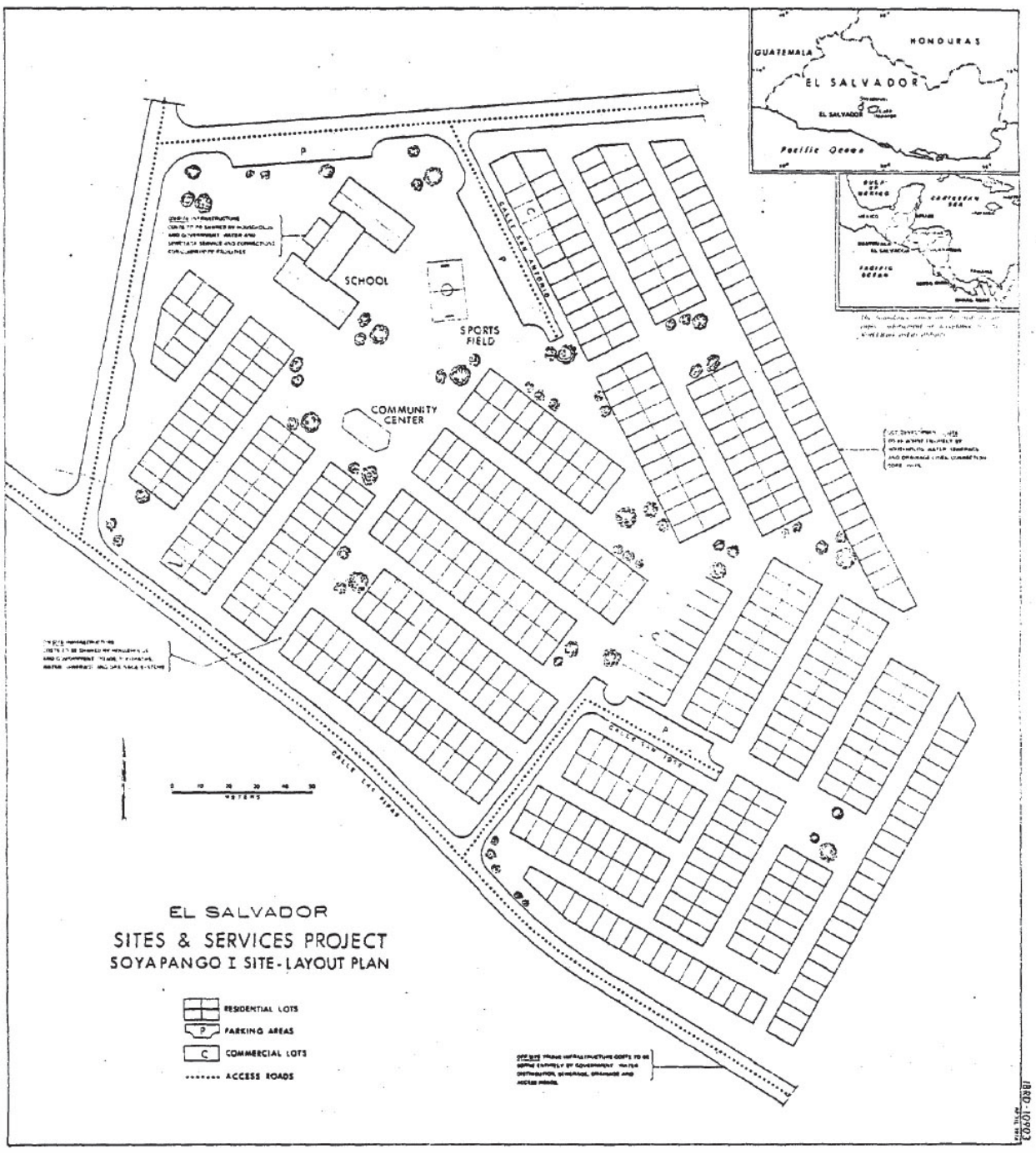
Previous Project under construction. (November, 1973)

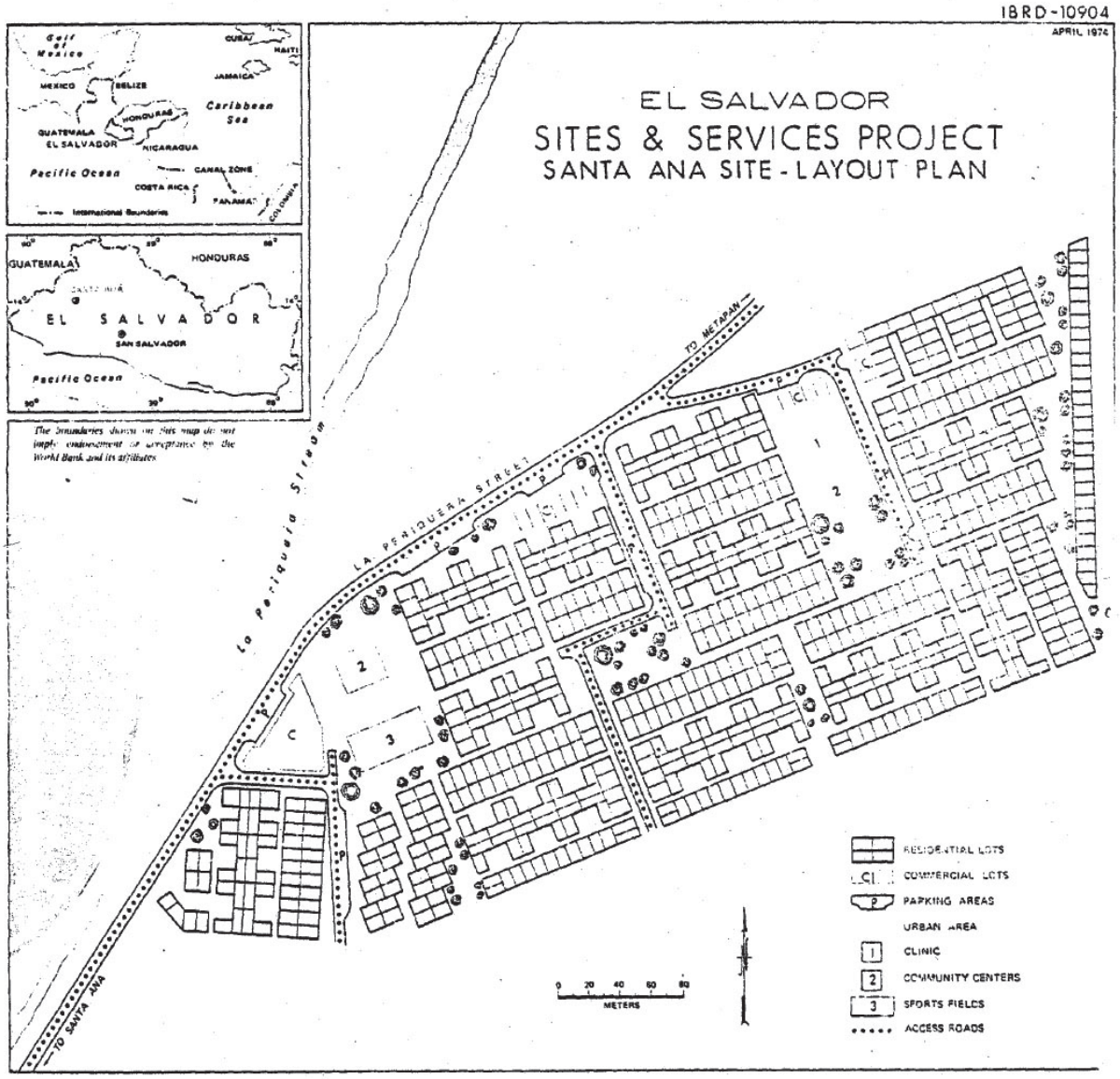


3. Close-up of 2 Sanitary Core Units, Back-to-back.



4. Lots with Sanitary Core Units and extended house units.


GUATEMALA
HONDURAS
EL SALVADOR
Pacific Ocean
SCHOOL
SPORTS FIELD
COMMUNITY CENTER
CALLE LAS HIERBAS
EL SALVADOR
SITES & SERVICES PROJECT
SOYAPANGO I SITE-LAYOUT PLAN
RESIDENTIAL LOTS
PARKING AREAS
COMMERCIAL LOTS
ACCESS ROADS


IBRD-10904
APRIL 1974
EL SALVADOR
SITES & SERVICES PROJECT
SANTA ANA SITE - LAYOUT PLAN
Gulf of Mexico
CUBA
HAITI
JAMAICA
MEXICO
BELIZE
Caribbean Sea
HONDURAS
GUATEMALA
EL SALVADOR
NICARAGUA
Pacific Ocean
CANAL ZONE
COSTA RICA
PANAMA
COLOMBIA
International Boundaries
GUATEMALA
HONDURAS
EL SALVADOR
SAN SALVADOR
Pacific Ocean
The boundaries shown on this map do not imply endorsement or acceptance by the World Bank and its affiliates
La Periquera Stream
LA PERIQUERA STREET
TO METAPAN
TO SANTA ANA
RESIDENTIAL LOTS
COMMERCIAL LOTS
PARKING AREAS
URBAN AREA
CLINIC
COMMUNITY CENTERS
SPORTS FIELDS
ACCESS ROADS
METERS

THE WORLD BANK