



Chapter 5:

Leveraging Informality for Affordable and Adequate Housing

Quick facts

1. While the percentage of people in informal settlement and slum conditions has decreased, the absolute numbers have risen from 895 million in 2000 to 1.16 billion in 2024.
2. The response to informal urbanization in many countries continues to be dominated by large-scale evictions.
3. Informal urbanization is a dynamic process that has vastly different outcomes depending on the interplay of community organization, incremental housing development, infrastructure, livelihoods and land tenure.
4. While past policy has tended to focus on deprivations within informal settlements, informal urbanization has the potential to promote inclusive and sustainable city-making.
5. Despite substantial progress around informal settlement upgrading in recent decades, policy bottlenecks and trade-offs continue to undermine the potential of informal urbanization.

Policy points

1. A hybrid approach, based on co-produced knowledge and genuine partnership involving residents, civil society and governments, is essential to effectively leverage informal urbanization.
2. Enhancing land tenure security in all its diverse forms, through a wide-ranging approach that includes rentals and collective ownerships models, is critical to address the housing crisis.
3. Governments and other urban authorities should adapt outdated legal and planning frameworks to reflect the reality of informal urbanization on the ground.
4. To adapt to climate risks, housing and infrastructure improvement must be anchored in local practices and knowledge, with a focus on in situ upgrading rather than displacement.
5. Housing and infrastructure interventions must support mixed-use functions, home-based enterprises and livelihoods through community-based construction and maintenance practices that ensure local ownership and long-term sustainability.

Informal settlements are a pervasive feature of urbanization across the world. Today, over 1.1 billion people are living in informal settlements and slums, and in many cities, informality is the norm rather than the exception. Bearing that in mind, this chapter draws on a robust and growing body of scholarship and practice that recognizes informality not as a discrete sector or spatial area isolated from the formal city, but as an intrinsic mode of urbanization, deeply intertwined with formal urban production.¹ As such, it attempts to move beyond the informal/formal binary, understanding informality as a difference rather than a deviance.² This knowledge base offers a deeper and context-specific understanding of informal urbanization across cities and regions to guide action and research, as well as reassess policy approaches based on the formal/informal dichotomy.³

In addition, this chapter builds on the call to distinguish between poverty and informality.⁴ Consequently, an effort has been made to cease conflating informal settlements and slum conditions. To that end, informality is understood as a mode of urbanization that can produce diverse outcomes, including slum conditions. By disconnecting the process from the outcomes, this analysis sees the core challenge as

not informality itself, but the specific deprivations that may or may not result from it. This means that when governments engage with urban informality, they should refrain from anti-informality approaches. While the impacts of evictions are severe and wide-ranging, ill-conceived formalization can also burden residents with administrative and financial costs that are difficult to bear.⁵

In short, there is an urgent need to reframe how urban informality is seen and responded to. More recently, as monitoring and identification have improved, recognition of their existence has progressed – yet too often, as a problem to be solved through demolition and resettlement. However, given its prevalence, simply ignoring or stigmatizing informality is no longer an option: it is not possible to address the global housing crisis without engaging seriously with the reality of informal urbanization. It is against this backdrop that this chapter explores how, despite its many challenges, urban informality can be leveraged as part of the solution. This entails recognizing and supporting the potential of informal urbanization to drive inclusive and sustainable city-making, while simultaneously addressing the persistent issues that prevent it from doing so.



Arvet, a Swedish architecture firm, presented the Swedish Wooden Pavilion "In Praise of Shadows" at the first United Nations Habitat Assembly in Nairobi and donated it afterwards to the local communities in Mathare as a playground and public space © UN-Habitat/Kirsten Milhahn

The chapter is organized into five sections.

- An overview of the latest trends in informal urbanization, reframing informality not as a sector or specific area in the city, but as the predominant mode of urbanization in many developing cities. It also explores the ongoing stigma facing slums and informal settlements, as well as the role this plays in perpetuating large-scale evictions, despite their well-documented negative impacts (Section 5.1).
- A summary of the key elements that shape informal urbanization – including insecure land tenure, community organizations, incremental development, livelihoods and co-production – with an analysis of both the opportunities and limitations of informal urbanization for addressing the global housing crisis (Section 5.2).
- An examination of the evolution of in situ upgrading as a comprehensive strategy for leveraging informality, with a discussion of some of the key bottlenecks and emerging possibilities in a shifting global context (Section 5.3).
- An exploration of innovative ideas and approaches to improve tenure security, participation, informal housing, livelihood and infrastructure, including a discussion on the importance of knowledge co-production and digital technologies in sustaining these solutions (Section 5.4).
- Finally, the chapter culminates with concluding remarks and lessons for policy (Section 5.5).

5.1 Reframing the Challenge of Urban Informality

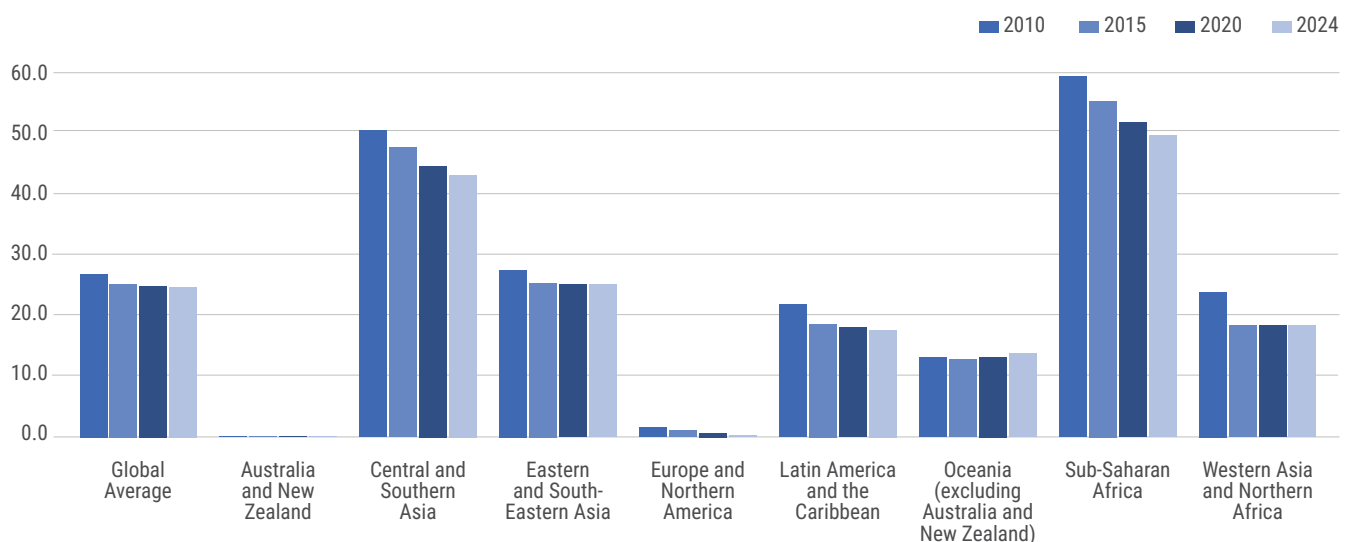
The concept of informality has gained in prominence in recent decades. This section examines its origins, analyses the latest trends and explores the continued stigma affecting informality, despite improved understanding. Over time, approaches to informality have evolved from eradication (forcible demolition and clearance) and then formalization (attempting to bring it in line with formal planning and regulations) to the approach advocated in this chapter: namely, to leverage the potential of informal urbanization as a solution to the global housing crisis.

5.1.1 Informal growth: trends and dynamics

As Figure 5.1 shows, the percentage of the urban population living in informal settlements and slums declined between 2010 and 2024 in all regions, except Oceania. However, this picture is complicated by the fact the absolute number of people living in slum and informal settlements has grown against a backdrop of rapid urbanization, with the annual rate of change almost quadrupling from 0.4 per cent between 2008 and 2016 to 1.5 per cent between 2016 and 2020.⁶

Globally, 1.16 billion people resided in slums and informal settlements in 2024 – a 27 per cent increase compared to the total in 2000 (895 million).⁷ This figure, it should be noted, is the minimum based on the data that is available and would likely be significantly higher if information on tenure security was more widely accessible. Meanwhile, further exacerbating the situation, forced eviction and informal settlement clearance have continued in all regions.⁸

Figure 5.1: Share of urban population living in informal settlements, 2010–24, by region



Source: UN-Habitat, 2026a.

Given their longstanding invisibility, significant progress in tracking, enumerating and monitoring the prevalence of slums and informal settlements has been key (Box 5.1). Beyond the headline figures, however, a number of other features are evident:

- *Urban informality, while present everywhere, is disproportionately concentrated in some regions and cities.* As of 2024, around 85 percent of the world's population in informal settlement was situated in Central and Southern Asia (340 million), Eastern and South-Eastern Asia (370 million), and Sub-Saharan Africa (254 million).⁹ In the coming years, projections suggest that the largest proportional increase of slum conditions will occur in Sub-Saharan Africa.¹⁰ Additionally, data indicates that future growth of informal settlement will likely concentrate in secondary cities rather than major metropolitan areas.¹¹
- *The challenges associated with urban informality frequently intersect with other areas of discrimination, such as gender.* For instance, data shows that women are typically overrepresented in informal settlements. In a survey of 59 countries across Latin America and the Caribbean, Central and Southern Asia, and Sub-Saharan Africa, women between the ages of 15 and 49 were found to be generally overrepresented in slums informal settlements in 80 per cent of these countries.¹²
- *Female residents face particular vulnerabilities due to lack of access to adequate sanitation, gender-based violence and higher risks of eviction.* Recent estimates suggest that as of 2020, there were between 350 and 500 million children living in slums and informal settlements, representing between a third and a half of the total population there.¹³
- *Informal housing is closely correlated with other areas of informality, including informal employment.* As in the case of informal settlements, the informal economy is a significant and persistent feature of life for millions of the urban poor.¹⁴ Though stigmatized and undervalued, informal workers make a vital contribution to household income, poverty reduction and local culture.¹⁵ It is estimated that 43 per cent of the urban work force are in informal employment, without adequate social security arrangements, workplace safety measures and legal protection.¹⁶ However, there are major difference across regions. In Latin America and the Caribbeans and Asia the percentage of informal employment in urban areas is 47 and 49 per cent respectively. In Africa urban informal employment represents 72 per cent, while it is 60 per cent in Arab States.¹⁷ The relationship between informal livelihoods and informal settlements is closely linked as an important share of people work at home as own-account workers and contributing family workers.¹⁸

It is estimated that 43 per cent of the urban work force are in informal employment

Box 5.1: Defining and measuring slums and informal settlements

A crucial milestone for the policy agenda on slums and informal settlements at the global level was the adoption of the Millennium Declaration, in particular Target 11: “By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers”. This was followed in 2003 by UN-Habitat’s report, *The Challenge of Slums*, which provided the first comprehensive global overview of the issue. One of its key achievement was to present an authoritative estimate of the number of slum dwellers based on an operational definition composed of five deprivations: (i) lack of access to improved water services, (ii) lack of access to improved sanitation facilities, (iii) lack of sufficient living area, (iv) lack of housing durability and (v) lack of security of tenure. More recently, these elements were operationalized as key metrics for tracking and recording progress on Sustainable Development Goal (SDG) Target 11.1: “By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums by 2030”.

Source: UN-Habitat, 2003 and 2018; United Nations, 2000 and 2015b.

5.1.2 Stigma and misconceptions

While the increasing policy attention on urban informality has been welcome, it has also provoked extensive debate around the terminology used to discuss it – in particular, the use of the word “slum”. While the operational definition proposed in the early 2000s was crucial for supporting international efforts, public policy, data generation and research, the term itself – used to refer to a variety of urban spaces, from refugee camps and peripheral shantytowns to inner-city tenements – has become increasingly imprecise, undermining its capacity to explain the spaces it is supposed to describe.¹⁹

The word has also been criticized for its stigmatizing overtones. As the term “slum” frequently conflates the physical characteristics of the settlements with its residents, it risks framing housing deprivation as a product of their personal failings, further perpetuating their marginalization.²⁰ Even though its negative connotations have been subverted in some instances by residents themselves – most notably, in the case of the organization Slum/Shack Dwellers International (SDI) – the term continues to be critiqued by numerous academics and practitioners alike. Though UN-Habitat and other agencies continue to use it to classify settlements according to their specific deprivations, in line with its official definition, every effort is made to avoid using it in ways that perpetuates stereotypes about these communities. This is vitally important, given that these assumptions can have real-world consequences in shaping and justifying exclusionary policies such as

evictions. This was reflected in the misdirection of the Cities Without Slums initiative in the early 2000s, for instance, which prompted some countries to undertake a programme of slum eradication and elimination – an exercise that had the exact opposite effect of integration.²¹ This points to the fact that many destructive policies towards slums and informal settlements are founded on a fundamental misunderstanding of the drivers and effects of urban informality.



The term “slum” frequently conflates the physical characteristics of the settlements with its residents

The promotion of more inclusive terminology goes hand in hand with more equitable, collaborative approaches to informal settlement, enabling stakeholders to collectively redefine how informal settlement is understood. A compelling precedent was set by the Brazilian Institute of Geography and Statistics when it replaced the pejorative census classification “subnormal agglomerations” with “favelas and urban communities”. This shift was the result of co-production processes between the Institute, social movements, communities and academia. Ultimately this designation shifts the narrative from stigma to affirmation, valorizing the unique sociability, cultural identity and distinct forms of mode of urbanization at the core of these communities. A similar process occurred in Argentina, leading to the adoption of the term “popular neighbourhoods”.²²

There are other generalizations about urban informality that need to be challenged. Contrary to common assumptions, informal housing is not the exclusive preserve of the urban poor. Over the last few decades there has been increasing recognition of elite actors in cities across the world engaging in informal housing and planning practices. In Bogotá, Colombia, upper-income illegal housing was built in the eastern hills of the city with the contribution of public institutions.²³ In Hong Kong, China, privileged groups have engaged in informal housing and land transformation practices throughout the colonial and post-colonial periods.²⁴ In Islamabad in Pakistan, elite actors engage in informal urbanization for profit-seeking.²⁵

Contrary to common assumptions, informal housing is not the exclusive preserve of the urban poor

Informal urbanization is also not confined only to developing countries. Informal housing practices are present and increasingly prevalent worldwide, driven significantly by the current housing crisis. In the United States (US), informally built Accessory Dwelling Units have been widely adopted: in Los Angeles, California, it is estimated that about 10 per cent of single-family housing units have an informal second unit.²⁶ In Europe, too, the informal adaptation of formal or state-built housing complexes is a widespread practice. In London, United Kingdom, incremental backyards extensions are common in both high- and low-income areas.²⁷

These informal housing practices coexist with encampments and substandard housing experienced by undocumented migrants, unhoused people and other vulnerable groups.²⁸

Often, these informal practices involve the reuse and regeneration of vacant or abandoned public or private buildings for housing purposes. When properly leveraged, informal self-organization and squatting can contribute to housing provision without surplus land consumption, transforming underutilized spaces into lively, inclusive neighbourhoods (Box 5.2). Moreover, informal urbanization is shaping the transformation of post-socialist cities in South-East Europe.²⁹

Box 5.2: Leveraging urban informality in Port Fluviale, Rome, Italy

In June 2003, around 200 people occupied Porto Fluviale, a former air force warehouse in Rome, Italy. An internal management assembly coordinated the transformation of the building into housing, with residents constructing upper-floor accommodation using lightweight materials and integrating individual bathrooms connected to the sewer system. Communal spaces – such as a kitchen, tailor’s shop, bike repair workshop and tearoom – were created on the ground floor. Infrastructure improvements included fire safety upgrades and separate clean water and sewage systems. Spaces were adapted to household needs through participatory design. Over the years, Porto Fluviale opened to the neighbourhood and developed strong community ties through local workshops and a collaboration with Roma Tre University, evolving into a socially rooted regeneration project.

In 2021 a formalization process began, promoted by the Municipality of Rome and funded by the Ministry of Infrastructure and Transport’s National Innovative Programme for Quality Living programme. Under the Law on Cultural Federalism, the municipality acquired the property free of charge, conducted a census with residents and temporarily relocated them to public housing for the duration of the works. The project includes the realization of approximately 150 public housing units on the first floor, a photovoltaic garden on the terrace and a public square on the ground floor providing a range of services to the local neighbourhood – from a “zero kilometre” market to an anti-violence help desk.

Source: Mira, 2025.

5.1.3 The persistence of evictions

Global understanding of slums and informal settlements has greatly improved over the past three decades. The principles espoused by UN-Habitat back in 2003 – in particular, the importance of well-planned, participatory in situ upgrading, supported by adequate infrastructure, tenure security and livelihood opportunities³⁰ – have gained traction in cities and across the world, as evidenced by progressive in situ upgrading programmes such as Baan Mankong in Thailand (Box 5.3). Yet despite the demonstrated benefits of this approach and the broader move away from the harmful “eradication” policies of the past (see Chapter 2), a number of seemingly intractable problems remain, including the persistence of large-scale evictions.

This is due in no small part to the continued stigmatization of urban informality. Informal settlement demolitions have been associated, for instance, with the organization of large-scale events such as the Olympics and the resulting obsession of host cities to project an image of “world class” urban modernity, regardless of local context.³¹



Evictions are often implemented without proper consultation, adequate resettlement options or fair compensation

More recently, evictions have been fostered by inadequate responses to climate change,³² particularly in coastal cities in South, South-East and East Asia, where flooding risks are especially high.³³ Ill-informed climate adaptation measures over the last decade have led to the eviction of informal settlements along the Gujjar nullah and Orangi nullah in Karachi (Pakistan), the Cooum River in Chennai (India), the Saigon River in Ho Chi Minh City (Viet Nam) and the Ciliwung River in Jakarta (Indonesia).³⁴ Crucially, evictions are often implemented without proper consultation, adequate resettlement options or fair compensation for residents. Slum clearance typically results in serious consequences for those displaced, including violations of human rights, worsening poverty conditions and increased vulnerability.³⁵

There exists major regional variation regarding eviction. A study based on a sample of 60 cities revealed that in Latin America and the Caribbean, the demolition of informal settlements remains low and that the use of land when clearances do occur is often for public space, or kept empty due to its exposure to natural hazards.³⁶ Asia and Africa, on the other hand, have higher rates of informal settlement demolitions. However, the use of land after demolition varies. In Asia, an important share of land is allocated to private urban development and infrastructure, consistent with the pursuit of urban modernism and world-class city making. In Africa, land is left vacant or used for private urban development. Nevertheless, the high demolition rates highlight how informal settlement clearance remains commonplace. Chapter 4 documents in more detail the situation of urban evictees and what action can be taken to mitigate the impacts of displacement.

Box 5.3: Thailand's pioneering Baan Mankong Programme

As an alternative to eviction and resettlement, the Baan Mankong programme in Thailand offers crucial insights on how governments can support residents of informal settlements to achieve sustainable housing solutions in situ. Initiated in 2003, the programme is implemented by the Community Organizations Development Institute (CODI), an autonomous public entity with direct access to state resources and greater freedom and flexibility than traditional government bodies. CODI functions as a demand-driven entity, recognizing that people are active producers of their housing and CODI's role was to support them. The programme has been operating through two main principles: working with communities rather than individuals (thereby addressing the privatization of urban resources) and network building (which plays an important role in the process of upgrading).

The task of identifying and acquiring land is entrusted with the communities and citywide networks. This is enabled through the accessible and flexible financing programmes that enable residents to negotiate and acquire public or private land through a variety of leasehold agreements, often with the support of the local authorities. Thus, the collective nature of the land-owning guarantees the continuity of the programme. Furthermore, security in land tenure ensures that communities are able to invest in their social relationships, helping households to address their situations of poverty and vulnerability. The legal entity that facilitates the purchase or leasing of land and receives loans from CODI loans is set up through a community cooperative. It functions on the condition that the land tenure remains collective in the first 15 years as communities repay their loans.

The Baan Mankong programme represents a radical response to the challenges of privatization and the commodification of essential urban resources. The provision of secure collective tenure and upfront financial assistance from the government enables urban poor communities to invest deeply, albeit incrementally, in their homes. Crucially, the focus of the programme on the whole city, rather than on specific neighbourhoods, is a key element in the programme's success: land plots are often acquired in multiple locations simultaneously following a citywide survey.

Charoenchai Nimitmai community upgrading through Baan Mankong Programme: Sketch plan and final plan after re-blocking



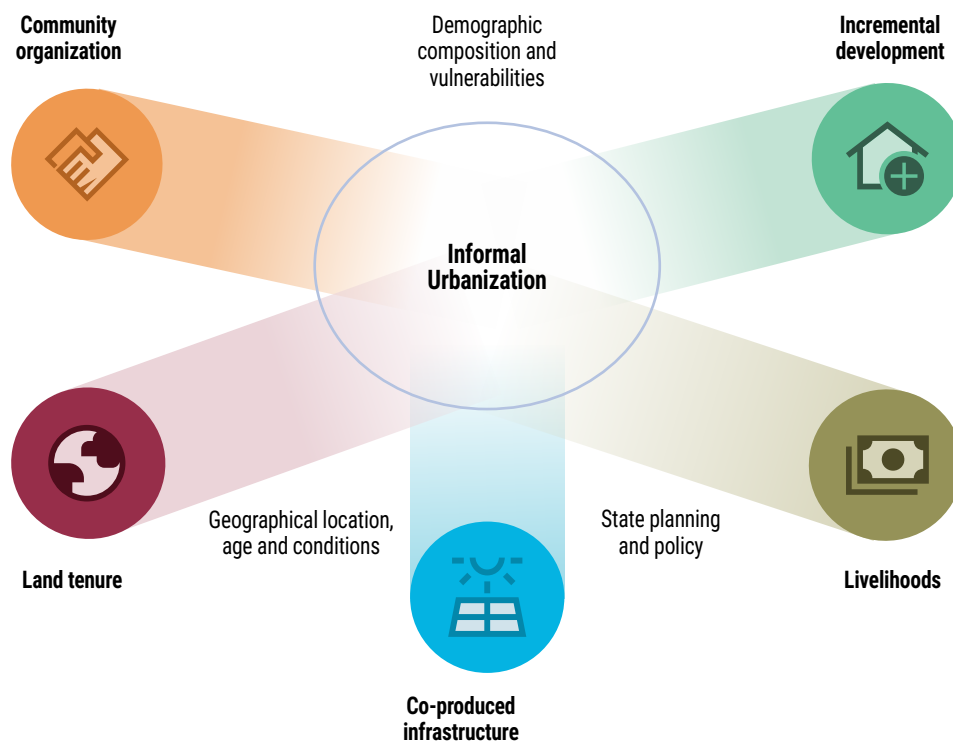
Source: Shelby, 2024; Boonyabancha, 2009; Boonyabancha & Kerr, 2018; Asian Coalition of Housing Rights, 2021.

5.2 Informal Urbanization: Characteristics, Opportunities and Challenges

The recognition of informality as the predominant mode of urbanization that is not merely as the antithesis of the formal, allows an understanding on its own terms. In this line informal urbanization can be best understood as a broad continuum, a process shaped by multiple elements – namely land tenure, community organization, incremental development, informal livelihoods and co-produced infrastructure (Figure 5.2) – in different configurations. For instance, informal urbanization might occur with high levels of community organization but without secure tenure; it might have residents working formal jobs, but using the income to incrementally upgrade their housing.

These elements also play out in different contexts, with different geographies, different state planning and policy and different demographic compositions and vulnerabilities. Thus, informal urbanization cannot be understood as a simple binary or even as a spectrum between formal and informal. Each informal settlement has a unique profile and presents specific opportunities and limitations in relation to the current housing crisis. This section will explore each element in detail to illustrate the diversity of urban informality today.

Informal urbanization cannot be understood as a simple binary or even as a spectrum between formal and informal

Figure 5.2: Key factors shaping informal urbanization outcomes

5.2.1 Informal land tenure

Informal urbanization has conventionally been linked to squatter settlements, but the reality is that land tenure is more diverse, including unauthorized subdivisions, customary tenure, collective land ownership and regularized tenure conditions. These can also change over time. In the case of squatter settlements, where land has been occupied without permission – for example, unauthorized settlements established on rooftops and pavements, incremental occupations and organized land invasions, particularly in Latin America and the Caribbean – residents may eventually gain some form of tenure security and even a degree of formalization, such as occupation certificates. These provide administrative recognition, leading to essential government actions like inclusion in city registers and the possibility of accessing basic urban services. Furthermore, these certificates grant residents legal status to assert and defend their housing rights and determine their settlement’s future development.³⁷

Informal urbanization has conventionally been linked to squatter settlements, but the reality is that land tenure is more diverse

In unauthorized subdivisions, legal landowners sell or lease plots to individuals to build their own homes. Despite the legal ownership of the land, these developments remain unauthorized due to regulatory failures such as irregular plotting, zoning violations and lack of infrastructure or permits.³⁸ This type of informal growth commonly occurs on peripheral

rural land, in some cases facilitated by private landowners. In other cases, land tenure may be supported by customary laws, as is the case with some “urban villages”. An increasingly common phenomenon in many developing countries, as urban growth spreads to formerly rural communities, urban villages occupy a grey area in terms of state recognition, leaving them at risk of demolition and exclusionary urban planning.³⁹ In addition, informal urbanization also occurs on formally owned land, particularly within public housing and sites-and-services schemes. In both cases, residents frequently engage in informal housing practices and alternative service arrangements.

While informal urbanization is often framed as a disruptive force that undermines formality, it is also the case that it is shaped and to some extent actively driven by official laws and planning codes such as zoning. By determining what is formal and authorized in a city, these regulations – themselves the product of outdated and often inappropriate Western and colonial norms – also determine what is classified as informal and unauthorized.⁴⁰ These planning standards, often decades old and developed for contexts very different to those in developing cities today, are generally ill-suited to the needs and realities of the urban poor. As a result, these regulations may have the perverse effect of forcing many to secure land and shelter informally.⁴¹ Nevertheless, most of the time residents gradually bring their informal housing into regulatory compliance with building and land use regulations. This gradual approach is crucial when financial limitations prevent immediate adherence to all land and construction regulations.⁴²

5.2.2 Community organization and resident action

Informal settlements are fundamentally shaped by their inhabitants. Residents actively participate in the construction of their houses and settlements,⁴³ simultaneously building (with their labour or hiring people) and living in their homes.⁴⁴ Therefore, informal urbanization is as much a process as an outcome,⁴⁵ with residents frequently serving as active co-producers of neighbourhoods and cities.⁴⁶ Though it can unfold as the result of individual housing production, more often than not it is driven by groups of residents who have organized themselves informally. In Latin America, for instance, organized land invasions are a common tactic for communities to gain access to land.⁴⁷ In Asia, collective and cooperative land management by informal settlement communities is a common feature (see Chapter 7 for their role in supporting housing inclusion).

Community-based organizations (CBOs) and local non-governmental organizations (NGOs) can also play a crucial role, organizing collective action within settlements and engaging with state authorities.⁴⁸ This is of vital importance as the settlement's needs and aspirations, such as infrastructure provision and financing, go beyond individual demands. Crucially, women act as key drivers in this collective action, frequently leading urban popular movements, and assuming active decision-making

roles.⁴⁹ Often the active role of CBOs and NGOs results in a hybrid approach that balances informal self-governance mechanisms and local bodies to guide incremental development. For instance, in China, where much affordable housing is built by village collectives, the self-initiated redevelopment of Maquanying village in Beijing (China) represents a community-led model that combines (in)formal governance for redevelopment and incremental housing expansion (Box 5.4).

Nevertheless, it is by no means the case that informal urbanization is always driven by its residents. Other key participants of informal urbanization are tenants, developers, rent agents and protection racketeers, alongside landlords ranging from subsistence owners to absentee petty-capitalists.⁵⁰ In many informal urban settings, land and housing may be controlled by local elites or criminal networks, with residents housed in highly exploitative conditions such as inflated rents and insecure contracts. Even among residents themselves, complex hierarchies may emerge between owners and renters. One study of backyard renting in Johannesburg, South Africa, for instance, has highlighted how the impacts of “grassroots rentierism” can deepen inequalities between owner-residents and their tenants – the latter composed of recent arrivals or migrants living precariously on temporary wage labour.⁵¹

Box 5.4: “Self-governing” incremental redevelopment in Beijing, China

Maquanying in Beijing, China, is one of many “urban villages” that have gradually been subsumed into the capital as it has expanded outwards. While most have been subjected to highly destructive, state-led demolitions, Maquanying is notable for having pursued a different path of “self-governing redevelopment” through a protracted process of community-driven and incremental improvement. This model stands in stark contrast to the top-down, exclusionary development usually imposed on similar communities elsewhere in the city. At the heart of the process was Maquanying’s village committee, a local governance body elected by and from local villagers. The committee took responsibility for planning and maintaining public infrastructures, managing collective land and assets, setting construction standards, enforcing limits on extensions, representing and protecting villagers’ interests, acting as an intermediary with the municipal government and implementing public policies within village boundaries.

In the first phase, the committee initiated the area’s redevelopment with the approval of local villagers, the township and district government. It facilitated an agreement among villagers on plot allocations and the contribution of individual households to the redevelopment. Though local authorities did not directly oversee the implementation, they regulated the powers and activities of the village committee. Funding came entirely from the community through land requisition compensation, collective savings, profits from collective companies and villagers’ contributions. The new layout, designed by the committee based on traditional principles, included two standard plot types, wide lanes for safety and collectively owned public facilities. As a result, 700 new houses were built and over 13 hectares of land reserved for future development.

As urbanization accelerated, a second phase saw villagers incrementally expanding houses to accommodate migrants in independent rooms. The committee introduced “self-governance regulations” to guide extensions, while floor area added through cantilevering was managed through informal verbal agreement among residents. The consistent and orderly application of such practices highlights the strength of cultural norms and social cohesion. The high quality of the housing and public spaces, even after the extensions, led the municipality to condone the redevelopment, enhancing the perception of tenure security of villagers and migrants and their willingness to follow local rules.

Source: Yang & van Oostrum, 2020.



Laneway in Maquanying urban village © UN-Habitat/Matthijs van Oostrum

5.2.3 Incremental housing

Informal urbanization is characterized by incremental development: housing and neighbourhoods are not planned in advance and built in one go, but developed over time and built in smaller phases. While incremental development is often conflated with “unplanned” development, this is a misrepresentation. Rooted in geographical location and conditions, including available materials and local knowledge,⁵² incremental development typically follows observable patterns and an organized process governed by explicit and implicit rules. In Indonesia, the development of urban kampungs is shaped by clear, socially accepted protocols, communicated verbally or in writing and in the physical environment (for example, with property numbers and boundary markers). Kampungs are also shaped by an array of standards

and behaviours that are not explicitly communicated, allowing for more adaptability in how they are interpreted.⁵³

Informal urbanization, then, can result in the evolution of a built environment that is improvisational and make-shift, reflecting the needs and priorities of individual households but also informed by a shared agreement of what is and is not permissible. As shown in Table 5.1, it can encompass a variety of physical forms, often in original or ingenious ways. Incremental development is generally hybrid in its approach, incorporating formal processes alongside highly individualized functions. For instance, in the context of a lack of basic infrastructure, decentralized and small-scale informal systems involving a single household or small networks are often developed to provide diverse resources and services including energy, water, food, mobility and waste.

Table 5.1: Different typologies of incremental development

Extend	Vertical and horizontal expansion of existing structures.
Attach	Construction of spaces that alter the transition between private and public areas such as porches, roof terraces and balconies.
Replace	Improvement or replacement of materials and construction methodologies.
Divide	Subdivision of existing interior space for generating additional dwelling units or reorganizing internal functions.
Infill	Reuse of existing and underutilised formal construction through the construction of an informal enclosure.
Connect	Establishment of building connectivity to essential utility networks. Provision often transitions from an initial informal status to subsequent formalization.

Source: Kamalipour & Dovey, 2020.

Incremental development is often conflated with “unplanned” development

Incremental development is financed gradually over time rather than all at once.⁵⁶ The most common finance sources are savings, remittances, loans from informal lenders (relatives, friends, neighbours, moneylenders and pawnbrokers) and financial self-help organizations such as Rotating Credit and Savings Associations, and Accumulating Savings and Credit

Associations. Over the past decade housing microfinance has expanded, although it remains a secondary product for microfinance institutions, which primarily focus on economic development.⁵⁷

For its part, in Durban, South Africa, two community-led housing initiatives – Stop 8 and Piesang River – demonstrate how informal financing mechanisms, when supported by enabling institutions like uTshani Fund and the Federation of the Urban and Rural Poor (FEDUP), can successfully support incremental housing construction and improve socio-economic conditions over the long term (Box 5.5).

Box 5.5: Leveraging informal finance mechanisms in Durban, South Africa

Leveraging and integrating informal finance mechanisms, such as savings groups, can significantly improve housing quality in informal settlements. When combined with capacity building and resident-led design and construction, this approach enhances community ownership, social cohesion and long-term sustainability. This requires flexible, informal financing mechanisms that reflect the economic realities of low-income households and can work with them to provide accessible funding for incremental upgrading.

At Stop 8 in Durban, South Africa, three women-led savings groups established an “Urban Poor Fund” to finance incremental housing constructions. This promoted the development of a saving culture allowing the Federation of the Urban and Rural Poor (FEDUP) – supported by the uTshani Fund, the financial facility of the South African SDI alliance – to co-finance higher quality and larger homes than those typically built through the government-led Reconstruction and Development Programme. The initiative followed the People’s Housing Process, a participatory model centred on delivery by community contractors. FEDUP acted as a community contractor and led the provision of self-build housing, together with a Community Construction Management Teams (CCMTs) supervised by uTshani Fund and composed of approved professional contractors, who ensured technical support. This process not only improved the technical quality of housing but also cultivated financial literacy, construction skills and a strong sense of ownership among residents.

Similarly, at Piesang River, groups of women-initiated savings group took responsibility for book-keeping and fund management. These efforts enabled access to additional subsidies channelled through uTshani. The additional funds enabled FEDUP to support the process through bridging finance (pre-financing), allowing community members to contribute with time and labour and repay the loan at a later stage. A local Steering Committee organized semi-skilled residents into groups according to their specific abilities including technical design and construction, management and social facilitation. With the assistance of professional builders brought in by FEDUP, participants – this time including youth groups – received hands-on training in construction techniques and land negotiation. Overall, the process helped reduce social tensions, strengthened social bonds, created local job opportunities and contributed to a noticeable decrease in crime.

Source: Georgiadou & Loggia, 2024.

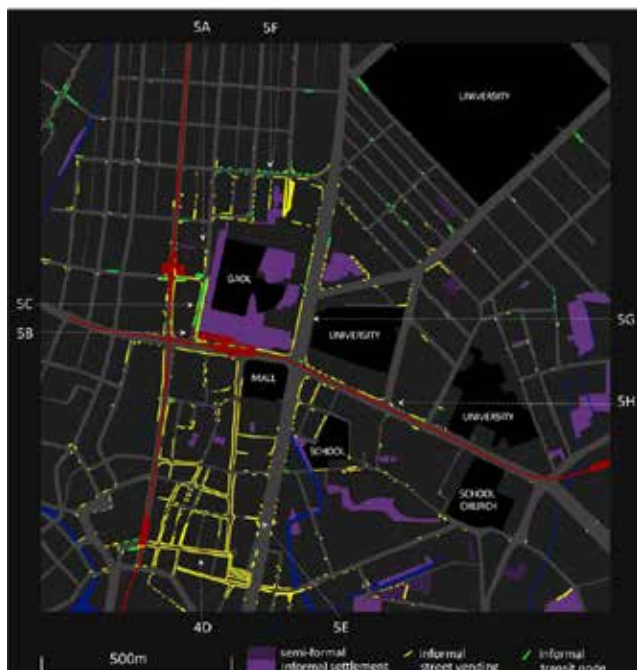
5.2.4 Informal livelihoods

The informal economy also shapes informal urbanization, as wages and earnings are determinants in building housing incrementally.⁵⁸ Furthermore, a significant share of informal workers also live in informal settlements and in some cases have helped transform them into industrial hubs, as in the case of Dar es Salaam (Tanzania).⁵⁹ Specifically, for home-based informal workers housing is frequently used as a place to work as well as live, as well as a storage place for street vendors and other informal workers. In this regard, housing design and adaptations are in part shaped by work-related needs, while the location of housing and settlements are determined by the proximity and accessibility to economic opportunities.

For example, informal settlements in Manila (the Philippines) maintain a symbiotic relation with street vending and transport infrastructure (Figure 5.3). In the Recto area of Quiapo district, informal settlements allow street vendors to access affordable housing at walkable distance to markets, as well as space for cart parking and storage. They also serve as production hubs where the goods sold on the street are made or prepared, ensuring readily available and inexpensive products for residents. Furthermore, informal settlements allow drivers in the informal transport sector to access affordable housing and space for parking, while enhancing mobility options for residents.⁶⁰ The symbiotic relationship between informal housing and livelihoods underpins workers’ preference for well-located housing over well-built housing in a location that make

it impossible to earn a living. Therefore, upgrading interventions need to factor in not only the improvement of living conditions, but also how to support and maintain people's livelihoods. The Yerwada project in Pune, India, demonstrates how housing improvements and livelihood support can be mutually supportive, offering a blueprint for effective upgrading (Box 5.6).

Figure 5.3: The mix of informal vending, transport and settlement in Quiapo, Manila



Source: Dovey & Recio, 2024.

Incremental development is financed gradually over time rather than all at once. The most common finance sources are savings, remittances and loans from informal lenders

5.2.5 Co-production of infrastructure and services

Informal urbanization is a co-production, involving a broad range of actors who each contribute in distinct ways to the process. This is particularly evident in infrastructure. Whether sewage networks, electricity supply or road networks, governments and urban authorities typically provide the trunk infrastructure, while community organizations and residents build connections to their own streets and homes. The benefit of this approach is that municipal services are generally more effective and equitable when both public actors and citizen groups are involved.⁶¹ In Lilongwe, Malawi, for example, the co-production of services by a public utility and civil society groups addressed longstanding inefficiencies in delivery and built social capital within communities.⁶²

Box 5.6: The Yerwada project in Pune, India: improving livelihoods and housing

The Yerwada project in Pune (India), launched under India's Basic Services for the Urban Poor (BSUP) scheme, illustrates how a participatory in situ upgrading can support residents' livelihoods. Led by civil society organizations SPARC/Mahila Milan and MASHAL, the project engaged residents in a participatory, house-by-house upgrading process. The initiative retained existing street layout, respected residents' established social networks, and supported livelihoods by maintaining their proximity to the city centre.

Upgraded homes were designed for incremental vertical expansion and featured adaptable spaces for home-based income-generating activities, including roll-up storefronts, verandas and flexible interiors that could be used for tailoring, basket-weaving, vending and small shops. These features not only improved living conditions and enhanced livelihoods, but also helped to reduce the stigma previously associated with poor housing conditions.

By tapping into locally available skills, economic practices and social networks, the project enabled residents to improve their homes affordably and incrementally while responding flexibly to changing needs and circumstances. Community members, particularly women, were involved in the implementation as workers and local contractors. In later iterations, residents were formally allowed to serve as their own contractors, deepening their economic empowerment and strengthening ownership over the process.

Source: Lamb & Vale, 2024.

Whether in public transport, or garbage collection, informal settlement communities and informal service providers typically provide feeder services to more formalized systems. In urban villages in Guangzhou, China, for instance, local authorities only provide infrastructure to the edge of their territory, leaving local collectives to plan, manage and build the "last-mile" connectivity.⁶³ Similarly, in the neighbouring city of Shenzhen, informal e-bikes significantly extend the catchment area of its rapid transit system, helping to reduce the social exclusion of informal settlement residents.⁶⁴ This co-production can happen in different ways. Through participation, non-state actors have become co-producers of urban development with the local governments and its institutions.⁶⁵

“Supplementary” co-production occurs when informal institutions are set up where governments are too weak to implement their formal rules or provide services; “complementary” co-production is when there is an absence of formal rules and so informal and customary practices become formalized over time.⁶⁶ Understanding how formal and informal systems can work together is critical in leveraging informal urbanization.

Governments and urban authorities typically provide the trunk infrastructure, while community organizations and residents build connections to their own streets and homes

5.2.6 The potential and limitations of informal urbanization

The key factors shaping informal urbanization also reveal its potential to alleviate the housing crisis (Table 5.2) in contexts where formal housing provision is often costly, inflexible, slow and exclusionary. Informal urbanization has the potential to contribute in the following ways:

- *Asserting the right to the city:* Informal urbanization contributes to the provision of affordable housing and accessible land to low-income urban dwellers.⁶⁷ Excluded from formal markets, informal land development gives people a chance to assert their “right to the city”. As a result, despite their precarious conditions, informal settlements can still enhance the well-being of its residents.

A survey of residents in informal settlements in Burayu City, Ethiopia, found that more than half (54 per cent) were satisfied with their residential area, in particular, with the cost of living, housing acquisition process and tenure options.⁶⁸

- *Community building:* Informal urbanization based on co-production processes contributes to the strengthening of community networks, kinship, a greater sense of belonging and a more inclusive mode of governance.⁶⁹ In Harare, Zimbabwe, informal settlement dwellers report significant levels of residential satisfaction which were associated with social networks and place attachment, among other factors.⁷⁰
- *Flexibility and adaptability:* The incremental logic of informal urbanization fosters flexibility and spatial adaptiveness, enabling informal settlements to adjust quickly to the ever-changing needs of its residents and evolving challenges such as climate change. Moreover, this environment encourages the emergence of innovative strategies such as the productive reuse of plastic waste and other circular economy practices.⁷¹ The gradualist nature of informal urbanization also enables residents to accumulate financial and social assets over time, thereby strengthening their stability, security and well-being.⁷² In this regard, informal urbanization not only addresses the pressing needs of residents, but also creates the conditions for alternative futures.⁷³



An informal settlement in Indonesia in the process of upgrading © Matthijs van Oostrum

- **Livelihood support:** The close relationship between informal urbanization and a variety of livelihood opportunities supports household income and savings, sustains local economies and provides entry-level access to the job market to unskilled workers and young people.⁷⁴ For instance, in Mumbai, India, informal settlement dwellers report feeling happier and more satisfied with life than the rural population, given their social capital and socioeconomic trajectories.⁷⁵ Informal jobs play a critical role in key industries, such as waste recycling, that formal processes are unable or unwilling to engage in.
- **Walkable and mixed-use environments:** The spatial development of informal urbanization can be diverse, from low-density peripheral settlements to inner-city slums. Many informal settlements are already highly walkable neighbourhoods encompassing a mix of land uses and embodying many of the principles of proximity-based planning (discussed in more detail in Chapter 7). While their urban forms are sometimes dismissed as unplanned and chaotic, their pedestrian and mixed-use design can offer a range of benefits that local authorities need to work with.








Many informal settlements are already highly walkable neighbourhoods encompassing a mix of land uses and embodying many of the principles of proximity-based planning

Notwithstanding these opportunities, however, informal urbanization must contend with a range of persistent and emerging limitations that hamper its ability to deliver broader social and environmental goals (Table 5.2). These include:

- **Insecurity and land grabbing:** The lack of tenure security in many informal settlements can discourage residents from making long-term investments in upgrading due to the risk of eviction. This uncertainty is exacerbated by the fact that a significant proportion of informal settlements are situated in hazard-prone areas vulnerable to natural disasters. At the same time, criminal groups may exert control over service provision and informal land markets. In Rio de Janeiro, Brazil, for instance, militias are in charge of basic utilities such as water, electricity, transport and protection services. They are also involved in land grabbing and the construction of unauthorized residential building for low-income groups.⁷⁶
- **Stigmatization and exclusion:** Informal settlements dwellers are frequently stigmatized and excluded from broader urban decision-making.⁷⁷ This exclusion is often exacerbated for groups who also experience discrimination on the basis of their identity, including religious and ethnic minorities, recent migrants and Indigenous Peoples.⁷⁸
- **Overcrowding and overdevelopment:** Housing in informal settlements are frequently overcrowded and built with low quality materials and poor structural integrity.⁷⁹ Climate change further exacerbates these physical deficits, leading to increasing thermal discomfort and other critical issues.⁸⁰ Ongoing vertical extensions to housing and “tunnelling” over public spaces can lead to overdevelopment, whereby access to light and ventilation becomes restricted.
- **Exploitative labour practices:** Informal employment operates outside the reach of legal protections or labour regulations. The absence of official recognition can generate significant problems for informal workers, such as eviction or harassment, negatively impacting their livelihoods.⁸¹ In African cities, government action towards informal employment typically oscillates between eradication and repressive tolerance,⁸² but generally overlooks the need to support the sector or prevent exploitation.
- **Infrastructural deprivations and environmental externalities:** Informal settlements frequently lack basic infrastructure such as water or sewage and have little in the way of public and green spaces. In many cases, the high density of informal settlements exacerbates infrastructure and connectivity deficits as well as health risks.⁸³ These conditions can significantly increase health risks, as shown during the COVID-19 pandemic,⁸⁴ and foster the prevalence of communicable diseases conditions such as cholera.⁸⁵ Limited access to other services, such as digital technologies, can also widen existing inequalities. The widespread absence of solid waste management, in areas that often combine dense residential development with significant industrial activity, often leads to the dumping or incineration of informally produced waste and pollutants.

In sum, housing in informal settlements has the benefit of being relatively affordable and often in proximity to economic opportunities and transport – characteristics that for many of the urban poor are at the very top of their priorities – but is also characterized by inadequate living conditions and insecure tenure (Table 5.2).⁸⁶ Therefore, addressing these limitations is essential to realizing the full potential of informal urbanization to contribute to addressing the current housing crisis.

Table 5.2: Potentials and limitations of informal urbanization

Characteristics shaping informal urbanization	Potentials to leverage	Limitations to address
 Land tenure	Informal land market gives poor people access to land and a chance to assert their “right to the city”.	Insecure land tenure discourages long-term investment, and the involvement of land mafias can lead to exploitative tenure.
 Community organization	Co-production processes contribute to the strengthening of community networks, kinship, a greater sense of belonging and more inclusive modes of governance.	Informal settlement dwellers are frequently stigmatized and excluded from broader urban decision-making.
 Incremental development	The gradual logic of informal urbanization fosters flexibility and spatial adaptiveness, enabling adjustment as conditions change.	Housing in informal settlements are frequently overcrowded and built with low quality materials and poor structural integrity. There is also the risk of overdevelopment.
 Livelihoods	Informal urbanization supports household income and savings, sustains local economies and provides easy entry level in the job market to non-skills workers and young people.	Informal employment operates outside the reach of protective laws or regulations, exposing residents to exploitative practices.
 Co-produced infrastructure	Informal urbanization oftentimes produces neighbourhoods that are highly walkable neighbourhoods and with mixed land use.	Lack of basic infrastructure, such as water, sewage and public space. Limitations in basic infrastructure can lead to environmental externalities.

5.3 Leveraging Informal Urbanization through In Situ Upgrading

Since the mid-1990s, policy approaches to informal settlements have shifted towards in situ upgrading based on citywide and multidimensional perspectives, favouring multisectoral, multi-programmatic and multiscale interventions over demolitions and resettlements. These have informed the development of programmes that not only focus on improving conditions within informal settlements, but also strengthening their linkages with the rest of the city.⁸⁷ By recognizing, supporting and integrating informal settlements, these interventions represent a crucial strategy for leveraging informal urbanization.

Nevertheless, while the principles and practices of in situ upgrading have been refined over decades of global experience,⁸⁸ it is still the case that evictions and resettlement are routinely carried out by governments despite the well-documented evidence of their adverse effects (Section 5.1.3). While the role of innovative approaches to upgrading will be showcased later in this chapter (Section 5.4), this section will examine the achievements of community-based upgrading and how to improve its effectiveness in the face of continued challenges.

5.3.1 Comprehensive community-led in situ upgrading

In situ upgrading interventions exhibit a wide range in their size and complexity, ranging from the small-scale or discretely sectoral (for instance, focused specifically on the provision of a basic service such as clean water or electricity) to comprehensive programmes of physical, social and economic renewal. Comprehensive in situ upgrading projects are fundamentally *participatory* (mobilizing local knowledge and expertise to respond to the specific needs and aspirations of residents), *multidimensional* (based on the understanding that poverty is itself multidimensional and requires coordinated, cross-sectoral efforts) and *multi-scalar* (integrating informal settlements into citywide and country programmes to avoid isolated or fragmented interventions).⁸⁹ An illustrative example is the experience of Brazil, where local and national upgrading strategies have been enabled by a progressive legal and institutional framework (Box 5.7).

It is still the case that evictions and resettlement are routinely carried out by governments despite the well-documented evidence of their adverse effects

Box 5.7: Implementing the “right to the city” in Brazil’s favelas

Brazil’s ground-breaking 1988 Constitution, with its provision that urban development policy “is aimed at ordaining the full development of the social functions of the city and ensuring the well-being of its inhabitants”, introduced various provisions that are central to the concept of the “right to the city”. This legislation, in particular its empowerment of municipalities to develop their own urban policies, provided the basis for the subsequent rollout during the 1990s of Rio de Janeiro’s Favela-Bairro programme. This ambitious urban development strategy sought to integrate dozens of its favelas through a comprehensive, participatory and citywide approach.

Building on the principles in the Constitution, the Brazilian government subsequently enacted the City Statute in 2001, regulating the upgrading of favelas. A succession of complementary federal laws for land tenure were also enacted to streamline regularization and support vulnerable communities: for instance, by removing financial barriers, supporting tenure regularization at the local level and enabling the formalization of separate ownership titles above pre-existing buildings. Alongside these legal reforms, major institutional changes were implemented to support implementation, including the creation of the Ministry of Cities in 2003, the National Cities Council in 2004 and the National Social Housing Fund in 2005.

The announcement of the Growth Acceleration Programme (PAC) in 2007 ushered in an era of major investment in urban infrastructure, including a specific component on favela upgrading. PAC Favelas was built on the robust institutional framework for social housing that Brazil had established and the specific upgrading experiences gained during the 1980s and 1990s, including Favela-Bairro. It represented a significant shift from the localized and fragmented interventions that had characterized the country’s previous upgrading efforts to a comprehensive national strategy with an unprecedented budget, implemented at scale across numerous municipalities.

The programme provided a flexible institutional framework in which local governments were able to tailor strategies to their specific needs and build on their previous experience. Through its integrated approach, including urban-environmental interventions and land regularization programs, PAC Favelas aims to address the specific challenges of each favela. Its diverse range of projects include housing improvements in the Greater São Paulo region, drainage in Recife and the construction of a cable car in Complexo do Alemão in Rio de Janeiro.

Source: Carvalho & Roszbach, 2010; Denaldi & Cardoso, 2021; João, 2019; Riley et al., 2001; Pamuk and Cavallieri, 1998; Federative Republic of Brazil, 1988.

The role of community-led organizations in upgrading projects has expanded significantly over the past three decades, with countries in every region integrating them into upgrading programmes (Table 5.3). These efforts have focused in particular on the following areas:⁹⁰

- *Community-driven planning:* Community organizations are particularly well-placed to generate social, economic and spatial data on their settlements to identify priorities for upgrading. For instance, the Indian NGO SPARC (the Society for the Promotion of Area Resource Centres) has worked to support communities with data production through mappings and surveys to inform upgrading projects.⁹¹ This research not only helps clarify needs and aspirations for residents, but also strengthens their negotiating position: community enumerations, for example, have contributed to preventing evictions.
- *Tenure security:* Many informal settlements have customary land tenure systems which rely on complex but locally understood arrangements for distributing land and resources, as well as internal processes of conflict resolution, that may not be formally documented with local authorities. Community-led organizations can deploy fit for purpose tenure tools that integrate local knowledge with official government registers, enabling communities to record their rights within the formal legal system. Increasingly, too, the use of digital technologies is enabling the creation of alternative tenure security arrangements as innovative solutions for communities.
- *Housing and service delivery:* Community groups can also play a leading role in the construction and management of housing units, spanning not only the building process itself but also the provision of infrastructure such as waste, water and sanitation, as well as internet access, day care and other “soft” services. Financing is also an important component in this, supporting residents with accessible credit and loans to fund upfront housing costs. The Asian Coalition for Housing Rights (ACHR) focused on financial empowerment,⁹² including working with poor urban communities in Phnom Penh, Cambodia, to establish community savings groups and revolving funds to support upgrading.⁹³ Hybrid governance approaches, bridging local authorities with communities, have also supported settlement upgrading processes in Kigali, Rwanda (Box 5.8).
- *Employment and livelihoods:* Residents in informal settlements can be supported by the development of community-based enterprises for small-scale service delivery, for example, the provision of lending opportunities for individuals or local businesses, and the creation of livelihood options (in particular, work for vulnerable groups). Organizations like WIEGO (Women in Informal Employment: Globalizing and Organizing) have influenced research and policy discussions on the informal economy and promoted the empowerment of informal workers and organizations with data production.⁹⁴

Box 5.8: The role of hybrid governance in community upgrading in Kigali, Rwanda

In Kigali, Rwanda, the Umudugudu Committee – a local decision-making body – plays a key role in community upgrading. It illustrates how informal governance structures can be leveraged to coordinate actions, mobilize funding and foster collective responsibility in the upgrading process through collaboration. In addition to facilitating consensus on infrastructure priorities such as community water taps, pavements, bridges and draining systems, it also helps coordinate the mobilization of financial and human resources. Typically, funding comes from a combination of government allocations and community-driven contributions. These included the Umudugudu funds collected from residents, neighbourhood funds from adjacent households and individual voluntary contributions. In addition, the community contributes through the Umuganda, a collective action mobilized monthly to clean and maintain community infrastructure and the environment.

Cost distribution was guided by the principle of shared benefit. Interventions serving the entire settlement were financed mainly through common development funds, following discussion with residents; while for interventions involving a smaller number of households, community members discussed and adjusted cost-sharing arrangements ranging from the degree of benefit received, flat rate or a flexible system based on income levels.

Source: Ono & Adrien, 2024.

Table 5.3: Selection of upgrading approaches in different regions

Region	Case studies
Latin America and the Caribbean	<p>Examples include Brazil's favela upgrading programme (Box 5.7), the transformative "social urbanism" approach in Medellín (Colombia) and the "reurbanization" of slums in Buenos Aires (Argentina).⁹⁵</p> <p>More recently, a coalition of regional and international organizations, NGOs, academia and civil society organizations jointly published the "Decalogue for Participatory Slum Upgrading", a 10-point recovery strategy for the region prioritizing human rights, well-being and environmental sustainability.⁹⁶</p>
Sub-Saharan Africa	<p>Various countries have implemented in situ upgrading projects, particularly through the UN-Habitat led Participatory Slum Upgrading Programme (PSUP), launched in 2008. These interventions encompass a wide range of areas, including livelihood development, gender security and climate change, with a focus on multi-stakeholder collaboration and financial sustainability.</p>
Middle East and North Africa	<p>Countries such as Egypt and Morocco have addressed the challenges associated with informal settlements with regularization policies and provision of basic infrastructure.</p> <p>In Gulf nations, the main challenges are overcrowding and informal rental. Accordingly, Qatar and the United Arab Emirates (UAE) have worked on labour housing reforms and regulatory actions for minimum housing standards.⁹⁷</p>
Asia and the Pacific	<p>Several countries have launched major upgrading initiatives. For instance, India's Pradhan Mantri Awas Yojana supports in situ rehabilitation projects.⁹⁸</p> <p>Similarly, Thailand's Baan Mankong Programme (Box 5.3) is community-driven slum upgrading supported by the government that focuses on housing improvement, infrastructure and secure tenure.⁹⁹</p>
Europe and North America	<p>The emphasis in this region is on formalization, including privatization of occupied state-owned land, the provision of ownership titles, and revised zoning and planning procedures.¹⁰⁰</p>

5.3.2 Implementation bottlenecks

Despite the substantial progress yielded regarding informal settlements upgrading over the past decades, policy bottlenecks in key areas continue to undermine the possibility of leveraging informal urbanization to address the current housing crisis.

- *Inappropriate and inequitable planning systems:* Frequently, the planning frameworks in cities in developing countries are transposed from the Global North, in many cases as a direct result of colonialism. Consequently, they are inherently unjust as they were established against a backdrop of control and domination, making them especially ill-suited to meeting the needs of the poor in contemporary urban settings.¹⁰¹ Crucially, they fail to recognize the reality of informal urbanization and tend to be outdated in their approach to the complex challenges of cities today.
- *Poorly implemented land tenure programmes that exacerbate social exclusion:* Land tenure programmes can be a catalyst for enhanced quality of life, livelihoods and environmental conditions in informal settlements. Crucially, successful interventions safeguard the land rights of vulnerable groups, including women. Yet despite the potential benefits, poorly executed land tenure security efforts can have severe unintended consequences, aggravating existing inequalities through higher rents and gentrification processes. In particular, land regularization through individual titling can lead to rent increases and ultimately the displacement of lower-income residents who are less likely to own the properties they live in.¹⁰² Moreover, interventions that lack transparency and accountability often fuel disputes and land grabbing. In some cases, these interventions can exacerbate the vulnerabilities of residents who struggle to meet new formalization rules.¹⁰³



Land regularization through individual titling can lead to rent increases and ultimately the displacement of lower-income residents

- *Lack of community input as a result of inadequate participation:* While participation has been at the core of upgrading approaches for decades, conventional models tend to be outcome-focused and rigid, undermining meaningful engagement with residents.¹⁰⁴ All too often, their implementation remains confined to one-way “updates” on project progress or tokenistic consultations. Consequently, these interventions overlook local needs and aspirations, while failing to engage the invaluable skills and knowledge of the communities themselves. Furthermore, upgrading interventions often assume that all dwellers have similar priorities and aspirations, failing to capture the differentiated needs of vulnerable groups, particularly women, young people and older people.¹⁰⁵ Chapter 7 will elaborate more on what a pro-poor approach to participation looks like.

Upgrading interventions often assume that all dwellers have similar priorities and aspirations, failing to capture the differentiated needs of vulnerable groups

- *Limited attention given to the importance of housing itself in the upgrading process:* Upgrading approaches have tended to focus on the needs of people at the settlement level (for instance, the installation of communal infrastructure such as water and sanitation networks) rather than on individual housing needs.¹⁰⁶ However, the combination of overcrowding, high population density and the increasing effects of climate change create a pressing need to focus on improving the quality, safety and resilience of informal housing (see Chapter 6 for more detail). This includes in the rental sector – increasingly, the predominant housing option for the urban poor in many cities¹⁰⁷ – especially as tenants are at particular risk of substandard living conditions and excluded from conventional owner-led upgrading programmes. Re-envisioning housing itself as a primary component of upgrading interventions can have a direct impact on living standards, health and education. One comprehensive global study on informal settlements worldwide estimated that ensuring adequate housing to all could deliver significant economic growth (more than 10 per cent) while increasing life expectancy by 4 per cent (an average of 2.4 years) and years of schooling by 28 per cent. Furthermore, housing improvements contribute to gender equity, political inclusion and climate justice.¹⁰⁸
- *Prioritization of physical upgrading at the expense of other dimensions, in particular livelihoods:* There continues to be a disconnect between informal settlement interventions and livelihoods.¹⁰⁹ Although there has been a clear shift towards a more multidimensional approach, upgrading interventions still tend to prioritize physical components while overlooking other elements, especially informal livelihoods. As a result, upgrading projects frequently overlook the role of housing units as places of work, and more broadly the importance of informal settlements as local or citywide economic hubs.¹¹⁰ Consequently, when relocation or resettlement occurs, livelihoods tend to be severely impacted.¹¹¹
- *Failure to factor in long-term infrastructure maintenance costs:* While the expanding coverage of basic infrastructure remains a major concern, maintenance work has emerged as an equally critical challenge. Evidence suggests that without the technical and financial resources in place to ensure ongoing repairs and servicing, gains are quickly lost. For instance, in Rio de Janeiro, Brazil, infrastructure deterioration became a primary issue just a decade after the implementation of the first Favela-Bairro projects.¹¹² Similarly, a study of in situ redevelopment in Ahmedabad, India, found that the structural integrity and overall living conditions severely degraded in less than nine years.¹¹³ Moreover, these challenges are exacerbated by infrastructure solutions that neglect climate change and environmental sustainability.

5.3.3 Shifting contexts, emerging opportunities

These policy bottlenecks must be addressed within a profoundly altered global context. First, urban issues – particularly those relating to informal settlements – have become highly visible in international development agendas, repositioning participatory and integrated upgrading as a key priority. The elaboration of the 2030 Agenda fostered a crucial debate around sustainable urbanization, including the prevalence of informal settlements and slum conditions,¹¹⁴ resulting in the elaboration of SDG 11 and its specific target on adequate housing and upgrading (Box 5.1).

Subsequently, the Habitat III process catalysed a re-evaluation of existing policies for informal settlements and promoted a strategic analysis for future action.¹¹⁵ Its outcome, the New Urban Agenda, establishes participatory upgrading as a central pillar of urban planning and housing policy. More recently, the 2022 Global Action Plan (Table 5.4) sought to accelerate the delivery of the SDGs in informal settlements and slums, particularly Target 11.1.¹¹⁶ Its launch was followed in 2023 by the United Nations Habitat Assembly Resolution 2/2 on accelerating the transformation of informal settlements and slums by 2030.¹¹⁷

Looking ahead, UN-Habitat's Strategic Plan 2026-2029 seeks to transform lives by expanding access to adequate housing, land and basic services, with a particular focus on people in vulnerable situations, including those living in informal settlements and slums.¹¹⁸

In addition, the Open-ended Intergovernmental Expert Working Group on Adequate Housing for All (OEWG-H) is focusing on the specific challenges of informal settlements, including definitions, policy responses and land tenure security strategies. The OEWG-H has released recommendations for countries on how to improve the lives of people living in slums and informal settlements.¹¹⁹

Other changes in the context that offer opportunities relate to climate change and digitalization. While climate change and biodiversity loss present acute challenges for informal settlements, they have simultaneously catalysed a wave of community-led innovation. New strategies are emerging that intertwine upgrading interventions and climate action, highlighting the unique potential of communities to drive urban resilience.¹²⁰

The digital age, meanwhile, is reshaping informal urbanization¹²¹ and offering new ways to produce urban data and knowledge.¹²² For instance, field-based mapping such as community-led enumerations¹²³ and disaggregated household data coexist with human visual imagery interpretation and machine learning image classification. While these mapping approaches are often implemented in isolation, integrating them can create a robust data ecosystem capable of driving effective advocacy, planning and decision-making.¹²⁴

Table 5.4: Global Action Plan: guiding slum transformation

Principles of Transformation	Management of Transformation
Inclusive and participatory, in the spirit of co-production	No quick fix: long-term, streamlined policies
Evidence and data-driven, leveraging the localization of actions	No half-hearted approaches: comprehensive interventions delivered across multiple sectors
Integrated and proactive, providing a strategic framework for continuous transformation	No one left behind: disaggregated, people-centred focus, including vulnerable groups
Equitable and catalytic, meeting the needs of everyone and progressively delivering human rights	No one solution fits all: diverse and flexible solutions
Sustainable and climate-smart, aiming for a healthy urban living environment	No dimension left out: multidimensional and cross-sectoral
Affordable and replicable, prioritizing most impactful interventions at scale	No place left behind: a citywide approach that recognizes and integrates informal settlements

Source: UN-Habitat, 2022c.

5.4. Leveraging Informal Urbanization: Innovative Approaches

In response to both the strengths and challenges of conventional upgrading, innovative approaches and strategies have emerged that build on the consolidated lessons of these experiences and address the bottlenecks that have hindered their implementation on the ground. Capitalizing on the opportunities created by the current context, these initiatives leverage informal urbanization while mitigating its associated limitations. Rather than relying on rigid and static frameworks, public action must be flexible and adaptative to local dynamics, needs and aspirations. This section examines these approaches, organized into key spheres of action: enhancing tenure security, strengthening participation, improving informal housing, prioritizing livelihoods and co-producing infrastructure (Figure 5.4). Through practical examples and interlinkages, this section offers an action-oriented way forward, integrated with the Open-ended Intergovernmental Expert Working Group on Adequate Housing for All.

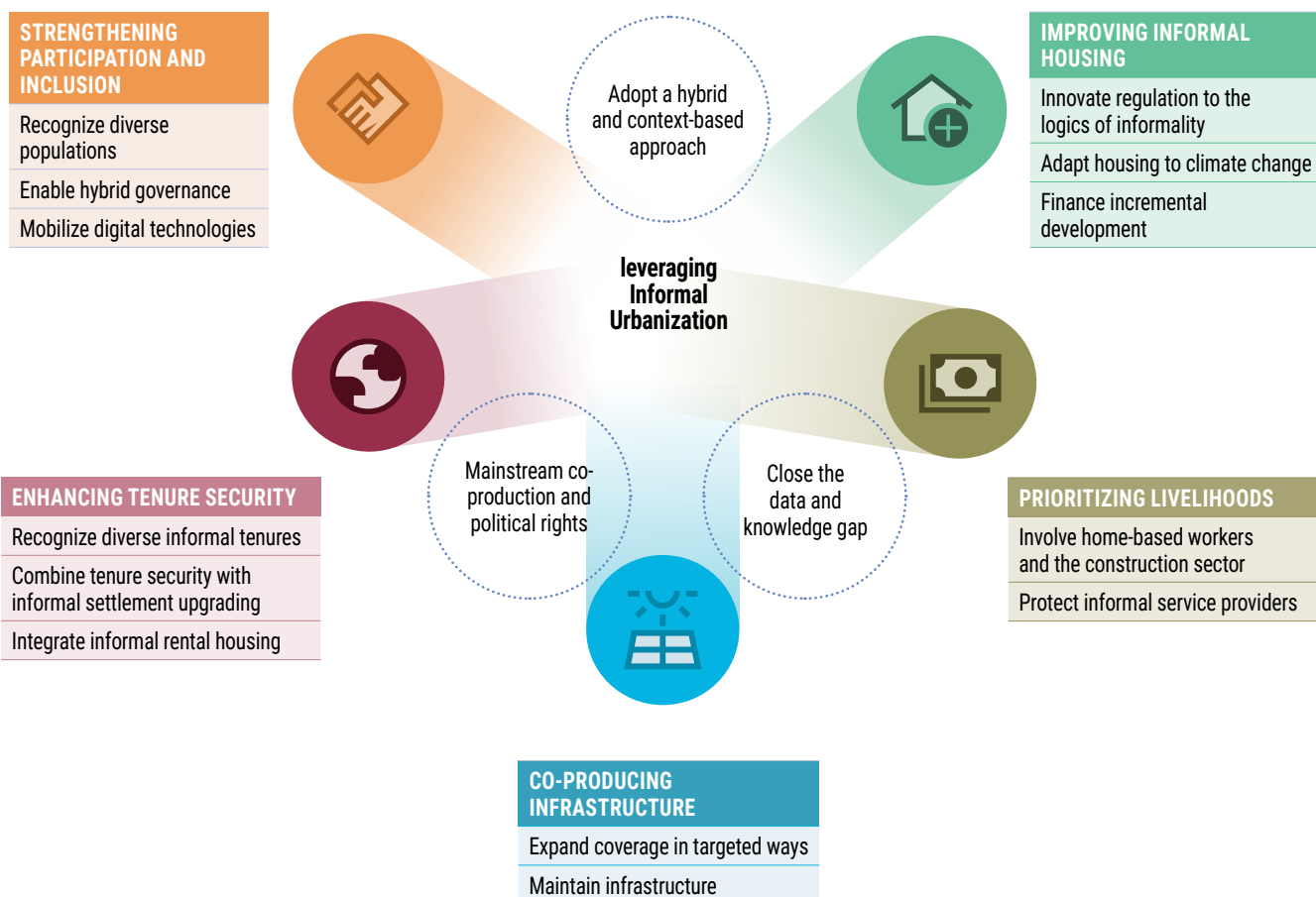
5.4.1 Enhancing tenure security

Enabling tenure security and land readjustment interventions is critical for the long-term success and durability of an upgrading programme.¹²⁵

This should be done in a way that leverages the potential of informal urbanization and acknowledges people’s right to the city.

Recognize diverse forms of informal tenure: Land tenure strategies are evolving beyond a singular focus on freehold titling to embrace a more pluralistic view. Governments are increasingly recognizing a broad spectrum of tenure forms, including informal rights, by validating long-term occupation as in the case of *usucapião* in Brazil. These mechanisms are instrumental in securing adequate housing by protecting residents against forced displacements, improving access to basic services and generating confidence to invest in home improvements.¹²⁶ Working with diverse forms of tenure offers a critical opportunity to craft innovative, context-based and locally relevant interventions that increase tenure security for a range of groups. Other forms of tenure that have increasingly gained recognition are communal and cooperative land tenure models, where land is under collective stewardship and its social and ecological functions are prioritized. Consequently, these models not only enhance tenure security but also foster long-term affordability, social cohesion and resilience.¹²⁷ Illustrative examples include Community Land Trusts (see Chapter 7 for more information), supporting the rights of local villagers to develop their land (as illustrated by the case of Maquanying in Box 5.4) and collective land ownership (as in Thailand’s Baan Mankong Programme in Box 5.3).

Figure 5.4: Leveraging informality: key spheres of action



Combine tenure security with informal settlement upgrading: Leading upgrading strategies have shifted away from treating land tenure as an isolated legal formality. Instead, they combine land tenure schemes with upgrading interventions such as the provision of water, sanitation and public spaces. In the case of Brazil, favela upgrading has been underpinned by tenure security through evolving legal frameworks and regulations, as well as national and subnational upgrading interventions (Box 5.7 and Box 5.9). Furthermore, adopting a co-production approach that enables residents to actively participate in the transformation of housing and settlements reinforces overall tenure security.¹²⁸

In addition, upgrading strategies are increasingly adopting a gender perspective to address inequalities in land rights. This type of approach is crucial for guaranteeing secure tenure to historically excluded groups, including women and youth. For example, a cornerstone of the Yerwada upgrading project in Pune, India (Box 5.6) was the assignment of certificates of occupancy to women upon completions of upgrading works. This gender-responsive measure not only allows female owners to use homes as collateral for loans, but also to sell them after five years, potentially providing them with more secure tenure and empowering them financially.¹²⁹

Upgrading strategies are increasingly adopting a gender perspective to address inequalities in land rights

Integrate informal rental housing: The informal rental market has gained greater visibility in recent decades. In the case of cities in Latin America and the Caribbean, rental housing was historically a marginal sector within the context of informal urbanization¹³⁰ but in recent decades has expanded, fostered not only by major economic and social changes but also the development of upgrading interventions.¹³¹ In Africa, rental housing has remained high in the past few decades, although it has been neglected as a sector. In the case of Nairobi, Kenya, nearly 70 per cent of residents rent single-room accommodation, distributed equally between informal shacks and tenements.¹³²

Rental housing capacity needs to be integrated into settlement upgrading policies. While informal rental housing is frequently characterized by precarious and substandard conditions, it is critical to harness this growing market. Two key guiding principles are critical. First, policy makers and planners should acknowledge the interaction between upgrading interventions and informal rental markets, and design and implement housing alternatives based on diverse tenure and typologies to facilitate a mix of different incomes in specific areas. Second, regulations such as tenancy credit scoring, lease mediation and dispute-resolution mechanisms are needed to guide this market.¹³³ Nevertheless, it is crucial to find flexible and hybrid solutions in collaboration with community-led organizations to ensure a more secure and transparent rental market.

5.4.2 Strengthening participation and inclusion

An inclusive approach to informal settlement upgrading is critical. This is heavily dependent on the ability of upgrading programmes to facilitate full participation to leverage the potential of all community members. While Chapter 7 offers more detail on achieving inclusive participation in housing, this section highlights three key concerns for participation of informal settlement communities.

Recognize diverse populations: Strengthening participation requires a fundamental understanding that the priorities and perspectives of residents in informal settlements are not homogenous. This diversity results from the intersectionality of multiple factors, including age, sex, gender, ethnicity, citizenship status and livelihood. Accordingly, upgrading strategies must be explicitly designed to address this diversity. Specifically, three critical dimensions can be considered for addressing diversity:¹³⁴

- **Diverse needs and aspirations:** moving beyond one-size-fits-all solutions to implement interventions that respond to specific resident priorities.
- **Differentiated impacts:** assessing how upgrading interventions affect various groups differently to mitigate unintended negative effects.
- **Active participation:** actively addressing unequal power relations at the settlement level, to ensure that decision-making includes the interests of the most excluded voices.

Addressing diversity across these dimensions requires the integration of gender mainstreaming and intersectional analysis.¹³⁵ The programme Transformative and Organizational Hubs for Social Inclusion and Harmony (UTOPIAS) in Iztapalapa, Mexico, offers a practical example of this approach. It moves beyond the provision of generalist social services to target gender-specific urban challenges. The programme prioritizes the development of physically and socially accessible infrastructure for women and caregivers, with specialized nodes dedicated to specific care activities such as the Casa de Día (Day House), providing support for seniors, to the Casa de las Siempre Vivas (Always Alive House), which offers survivors of domestic violence legal aid and referrals.¹³⁶

Enable hybrid governance: Innovative forms of hybrid governance and co-production among governments, CBOs and residents can help strengthen participation. It aligns with recommendations by the OEWG-H on “embedding community participation in the design, execution and oversight of housing and informal settlements’ transformation initiatives” and to “establish multi-stakeholder efforts to transform informal settlements”.¹³⁷

From the leveraging of informal governance structures in Nyarugenge District, Kigali, Rwanda (Box 5.8) to the balance of informal self-governance mechanisms and local bodies in Beijing, China (Box 5.4), there are many possible models to facilitate collaborative decision-making and implementation processes.



Community participation in the UTOPIAS programme in Iztapalapa, Mexico © Itzel Fuentes

A good example of how this approach can be applied to participatory engagement is the Mukuru Special Planning Area in Nairobi, Kenya. The participatory planning process was implemented by the Nairobi City County Government with the support of Muungano, Kenya's national federation of slum dwellers and urban poor. Eight consortia made up of professionals and academics were created to collaborate with Mukuru residents to identify key issues and propose interventions in areas such as housing, infrastructure, commerce, land and institutional arrangements. To mitigate power imbalances, the participatory process prioritized engagement from resident households over the building owners.¹³⁸

Mobilize digital technologies: Digital technologies have the potential to enhance participation in a variety of ways (see Chapter 1). For instance, Integrated Land Information Management Systems are being implemented to map critical zones of precarious tenure, monitor displacement and guide housing strategies. In the Flaming Crescent project in the City of Cape Town, South Africa, advanced Global Positioning System (GPS) and Geographic Information System (GIS) technologies to manage spatial

data were combined with traditional, user-friendly tools such as paper maps to generate a more comprehensive understanding of the informal settlement context to guide its re-blocking.¹³⁹ Digital tools are also being used to empower grassroots initiatives to accurately map, document and formalize customary land tenure. Lastly, technological innovations are playing a pivotal role in democratizing access to land services, particularly for women and smallholders. Tools such as mobile payments, digital certificates and remote sensing streamline transactions.

However, digital solutions will only succeed in strengthening tenure security if they are guided by accountability and inclusion. It is essential they are used in a way that responds to local community needs and aspirations rather than bypasses them.¹⁴⁰

Digital tools are also being used to empower grassroots initiatives to accurately map, document and formalize customary land tenure

5.4.3 Improving informal housing

Institutionalizing support for incremental, self-help and community-led housing upgrading is key.¹⁴¹ This requires engagement with the actuality of informal housing production and a willingness to support incremental development approaches.

Align planning regulations with the realities of informal urbanization on the ground: The OEWG-H has recommended to enact legal frameworks to integrate flexible zoning, land and planning systems in informal settlements.¹⁴² Innovative regulations have been developed to harness the dynamics of informal urbanization while mitigating its drawbacks. Rather than merely lowering standards, governments are implementing comprehensive frameworks to adapt conventional planning standards to the logics and characteristics of informal urbanization, as evidenced in São Paulo, Brazil (Box 5.9). Other innovative regulations are based on acknowledging and supporting “relational” rules and neighbourly consent.¹⁴³ Relational rules are grounded on proscriptive regulations (rules that forbid or restrict specific actions) and function within a relational framework. These recognize and build on the explicit and implicit rules that guide the incremental logic of informal urbanization. The example of Indonesia’s kampungs (discussed in Section 5.2.3) illustrates how this relational approach can be applied in practice. Rules are established with the support of local leaders and experienced builders: unlike statutory codes, they are iterative, evolving to match the community’s needs and aspirations. For instance, homeowners may extend cantilevers or slightly encroach upon public space, but only if these modifications respect the collective “do no harm” principle, such as ensuring that traders’ vehicles can still navigate the laneway unobstructed.

For its part, neighbourly consent operates as a community-driven framework centred on collective agreements rather than fixed rules. This model creates a dynamic regulatory environment capable of adapting to the specific characteristics of informal settlements. However, the reliance on private negotiations means that the fairness of outcomes depends heavily on local power dynamics. Consequently, equitable and inclusive decision-making platforms are needed to mitigate the risk of elite takeover. As mentioned earlier, in the case of Maquanying, Beijing (Box 5.4), as urbanization accelerated, the village committee, a local governance body elected by and from local villagers, introduced “self-governance regulations” to guide extensions, while floor area added through cantilevering was managed through informal verbal agreement among residents. The consistent and orderly application of such practices highlights the strength of cultural norms and social cohesion. However, the implementation of these innovative regulation frameworks require a careful understanding of the local context to be successful.¹⁴⁴

Rather than merely lowering standards, governments are implementing comprehensive frameworks to adapt conventional planning standards to the logics and characteristics of informal urbanization

Box 5.9: São Paulo’s Special Zone of Social Interest (ZEIS)

In line with Brazil’s 2001 City Statute (Box 5.7), the Strategic Master Plan of São Paulo established Special Zones of Social Interest (ZEIS) that allows for the application of tailored urban parameters to promote low-income housing in each zone. The ZEIS facilitates comprehensive favela upgrading, land regularization instruments for improving tenure security, such as *usucapião* (adverse possession), as well as the development of new social housing projects and the development of statutory master plans for cities over 20,000 inhabitants.

The 2014 Strategic Master Plan of São Paulo establishes five types of ZEIS based on the characteristics of land use and occupation and the actions needed to address housing problems in each context. This includes areas with slums and informal settlements (ZEIS 1), vacant or underused land (ZEIS 2), empty or deteriorating properties (ZEIS 3), vacant land in watershed protection areas (ZEIS 4) and vacant or underused properties in areas with services, facilities and infrastructure (ZEIS 5). To guarantee housing for low-income groups, the Strategic Master Plan mandates that ZEIS 1, 2, 3 and 4 allocate at least 60 per cent of the built area to families earning up to three minimum wages, which represent most of the housing deficit.

In addition, the Strategic Master Plan mandates the elaboration of ZEIS Urbanization Plans. This instrument seeks to integrate administrative, legal, urban planning and social measures, according to each case: prepared by the municipal government, it must integrate social participation as a core objective. To finance social housing, the Master Plan also established a permanent quota of funding for social housing policies and created a counterpart mechanism, the “Solidarity Share”, requiring large developments must donate 10 per cent of their built area to affordable housing. In 2016, the Municipal Housing Plan Bill proposed the development of an Integrated Intervention Plan, in line with the Plan of Urbanization for ZEIS foreseen in the Strategic Master Plan. These instruments sought to guide interventions in informal settlements that required complex solutions by articulating urban and environmental improvement, land regularization and housing improvements.

Source: Prefeitura de São Paulo, 2014 and 2016.

Urban informality offers both opportunities and challenges for effective climate adaptation

Adapt housing to climate change: There is broad consensus that urban informality offers both opportunities and challenges for effective climate adaptation.¹⁴⁵ Given the prevalence of informal urbanization, particularly in hazard-prone urban areas, it is critical that housing interventions work with informality, rather than against it.

Many informal communities are already adapting their homes to climate change, as in Makoko in Lagos, Nigeria, where houses float on the water using stilts. Existing limitations and deprivations in informal urbanization should be approached as opportunities to “leapfrog” to low- or zero-emission systems and practices.¹⁴⁶ An example is the adoption of solar panels in community micro-grids in informal settlements, enabling households to transition directly to decentralized carbon-based energy production. In South Africa, the iShack Project works with communities to supply solar panels while enhancing local enterprising capacity, developing skills and creating livelihood opportunities.¹⁴⁷ For its part, in the Yerwada project in Pune India, launched under India’s Basic Services for the Urban Poor (BSUP) scheme, implemented strategic construction

measures to mitigate environmental risks such as elevating homes against floods (Box 5.5).¹⁴⁸ Chapter 6 offers further examples of how housing can be adapted to climate change.

Provide financing to support incremental development: Conventional housing finance systems have generally failed to engage with the reality of incremental upgrading. In this vacuum, hybrid financing schemes have proven effective for improving housing in informal settlements. For instance, the Urban Poor Fund and Revolving Fund in Namibia is a community-managed financial model that in recent decades has contributed to closing the gap in financial access for urban poor populations. The fund allows residents to implement upgrading interventions in stages, in accordance with the incremental logic of informal urbanization. Crucially, donor agencies and national and local governments contribute to the shared pool of funds.¹⁴⁹ The case of Stop 8 and Piesang River in Durban, South Africa (Box 5.5) illustrates how informal financing mechanisms supported by enabling institutions can successfully deliver dignified housing and improve socio-economic conditions over the long term. Moreover, the OEWG-H stresses that it is important to “put in place long-term financing mechanisms to upgrade informal settlements, including land-based financing, community-managed funds and inclusive credit solutions for informal dwellers.”¹⁵⁰



Housing on stilts in Lagos, Nigeria © Alexander Macfarlane / IIED & UCL

5.4.4 Prioritizing livelihoods

Livelihoods have often been neglected in upgrading as well as resettlement programmes. Leveraging informal livelihoods and local skills is an effective entry point to settlement upgrading.

Involve home-based workers and the construction sector: In informal settlements, housing often serves as both a living and working space. Consequently, in situ upgrading is preferable to resettlements that disrupt residents' livelihoods. However, when in situ upgrading is unfeasible and relocation projects are implemented, their development must at all times prioritize livelihoods and involve the participation of affected residents to reduce the likelihood of negative impacts.¹⁵¹ To support livelihoods, interventions must recognize that improvements in housing and services are critical not only for enhancing living conditions, but also for supporting economic activity.

To sustain livelihoods, policy interventions can also strategically leverage the construction sector. Characterized by its low barriers to entry and high impact on the economy, this sector is a vital source of informal employment. Informal settlement upgrading offers a major opportunity to operationalize this potential. The Yerwada in-situ upgrading project (Box 5.5) offers a compelling example of how informal construction practices, local knowledge and job creation can be leveraged to improve

housing conditions and livelihoods without displacing communities, enabling residents to quickly adapt to changing circumstances. Furthermore, while the complexity of construction supply chains makes the measurement of indirect employment difficult, their impact is estimated to be significant.¹⁵²

Consequently, understanding and sustaining these value chains is critical. The connection between building material supply chains and associated employment opportunities – such as extraction, processing, transportation and storage – offers a strategic opportunity for improving livelihoods while building sustainable housing and settlements.¹⁵³

Protect informal service providers: Another key area for sustaining livelihoods is infrastructure and services. Often, their provision overlooks the informal systems that operate within informal settlements to deliver basic services, generating disruptions and eroding individual and community livelihoods.¹⁵⁴ Therefore, infrastructure interventions should recognize and account for the hybrid nature of informal systems, particularly their links with formal infrastructure networks. In this spirit, in a number of cities such as Pune and Bangalore (India) and Belo Horizonte (Brazil), local governments have worked closely with waste pickers to integrate



Informal livelihoods in Mumbai, India © Matthijs van Oostrum

them into solid waste management.¹⁵⁵ This recognition is essential to strengthen the flexibility and adaptability of informal systems, combating communities' marginalization while enhancing the legal protection of workers involved in informal service provision. This effort must simultaneously focus on reducing risk and significantly improving working conditions, particularly for women.¹⁵⁶

While government schemes for formalization are valuable in reducing the vulnerability associated with informal work, they are insufficient when implemented in isolation. In this context, planning and design represent crucial leverage points for supporting livelihoods in the informal economy. For these efforts to succeed, they must be inclusive and supportive, balancing regulation and control. This is especially relevant when public spaces are subject to competing demands – such as conflicts between vendors or disputes over commercial versus social uses – and where home-based work generates negative externalities for neighbours.¹⁵⁷ A case in point is the urban renewal of the Warwick Junction in Durban, South Africa, where local governments collaborated with street traders to implement a project to improve the quality of the area.¹⁵⁸

5.4.5 Co-producing infrastructure

Providing improved infrastructure and basic services to informal settlements is one of the main recommendations from the OEWG-H.¹⁵⁹ But the density and peripheral location of many informal settlements can make such provision difficult, requiring urban authorities to develop innovative solutions to extend coverage to unserved areas.

Expand coverage in creative ways: The implementation of basic infrastructure in informal settlements is crucial for harnessing residents to invest in their houses. It is also an effective strategy to disrupt illegal armed groups and criminal organizations by establishing service access and security in informal settlements. The Urban Integrated Projects in Medellín (Colombia) are an illustrative example of this, upgrading informal settlements by extending transportation systems like cable cars, electric stairs and new bus lines into formerly inaccessible spaces controlled by criminal organizations.¹⁶⁰ Climate adaption is another area where well-designed upgrading interventions can promote hybrid solutions that address social and environmental challenges at the same time. For instance, in Kibera, Nairobi (Kenya), a community-managed green-blue-grey drainage system was implemented in public spaces,¹⁶¹ demonstrating the potential for innovative, locally-led infrastructure projects that deliver a range of benefits.

The spatial patterns of informal urbanization can make service delivery difficult, in particular in high dense settlements. One solution to this is the use of participatory re-blocking. In this approach, residents collaborate to map existing housing units and their floor area, creating a preliminary land register. Then the structures are dismantled and reconstructed according to an agreed layout that creates space for basic services, including water, sanitation and electricity, as well as roads and pavements to improve mobility for pedestrians, goods and services.

Re-blocking has been commonly applied across Baan Mankong projects (see Box 5.3) but is currently most common in South Africa. In the aforementioned Flaming Crescent project, residents worked in partnership with the Cape Town municipality, the Informal Settlement Network and the Community Organisation Resource Centre, to conduct a community-led enumeration and mapping. The re-blocking was overseen by a local community project steering committee responsible for design, planning, savings coordination, demolition and construction. Residents were responsible for collectively dismantling and rebuilding their structures and a community-based saving scheme was established for financially supporting the building new structure, while the municipality funded the installation of basic services. The project allowed residents to improve their lives, foster a sense of belonging, and prevent eviction. Beyond physical improvements, the participatory mapping process created a first land register, creating an interim step in demarcating land parcels.¹⁶²

Plan for infrastructure repair and maintenance: In addition to expanding the coverage of basic infrastructure, ensuring a system for monitoring and maintenance is in place is critical for ensuring the long-term success and sustainability of upgrading interventions. For instance, the installation of complex infrastructures such as sanitation systems in informal settlements requires ongoing management and repairs that need to be factored in. In contexts where local authorities are unwilling or unable to provide this follow-up themselves to informal settlements, programmes have sought to include community upskilling and training to facilitate long-term local involvement. This approach not only creates the foundation for more durable service provision, but can also empower residents and create new employment.

A promising source of inspiration is found in the experience of the Municipal Offices for Social and Urbanistic/Building Orientation, implemented in favelas of Rio de Janeiro (Brazil). In the context of the Favela-Bairro programme, after the completion of works the municipality opened offices in the upgraded favelas to support land regularization and monitoring, among other functions.¹⁶³ This model offers lessons that, combined with robust community engagement, can create effective and lasting follow-up strategies.

Infrastructure interventions should recognize and account for the hybrid nature of informal systems, particularly their links with formal infrastructure networks



5.5 Concluding Remarks

The magnitude of the global housing crisis demands a fundamental reframing of the issues at stake to envision alternative pathways. This chapter has posited that informality should be viewed not as a deviant exception, but as a distinct mode of urbanization. Deeply intertwined with the dynamics of formal urbanization, informality represents an incremental development process – while this process can produce slum conditions, the core challenge is not informality itself, but the specific deprivations that may result from it.

Policy makers must therefore recognize the distinct yet equally valid nature of informal urbanization vis-a-vis formal urban development. This means discouraging forced evictions while prioritizing the in situ transformation of informal settlements. Crucially, this orientation cannot function in isolation; it must be articulated alongside broader housing and planning policies, including interventions that improve the delivery of housing through the formal system.

Since informality as a mode of urbanization has become the norm in many developing cities, not the exception,¹⁶⁴ it can no longer be regarded as an aberration. Instead, it is a policy imperative to leverage informality as a solution to the housing crisis and other urban deprivations. This approach, however, requires a significant reorientation from governments, developers and other players to recognize and support the potential of informal urbanization to contribute to city-making and sustainable urbanization.

To consolidate comprehensive in situ upgrading, this chapter highlights major pathways for leveraging informality: adapting legal frameworks and regulations, strengthening participation, improving informal housing, expanding and maintaining infrastructure, prioritizing livelihoods and enhancing land tenure security. To successfully implement these pathways this chapter proposes three crucial enabling conditions for guiding policy response:

- *Adopt a hybrid and context-based approach.* Effective policy responses must be capable of responding to the complexity of informality by generating context-based interventions that balance formal and informal drivers and practices. This necessitates a flexible and adaptative “chameleonic” approach,¹⁶⁵ rather than rigid and static frameworks that are disconnected from the specific dynamics, needs and aspirations of communities and cities. Innovative approaches for leveraging informal urbanization entail the adaptation of laws and regulations to work with the existing reality of informal urbanization. A critical guiding principle for such innovations should be the “right to the city”, which enshrines the right of all inhabitants, including informal settlement dwellers, to collectively inhabit, produce and enjoy inclusive cities. It reframes the city as a common good that must remain inclusive, safe and sustainable.¹⁶⁶
- *Close the data and knowledge gap.* It is impossible to effectively leverage informality without robust data, particularly in small- and medium-sized cities where data is often fragmented or incomplete. Governments and stakeholders should invest and collaborate in generating data and research to gain a comprehensive understanding of informal urbanization. This commitment to data co-production is a fundamental prerequisite for crafting policies that can respond to local conditions and the needs of residents themselves. The OEWG-H recommends to develop data systems and strengthen localised knowledge of housing needs, income levels and coping strategies to inform inclusive and context-specific housing policies.¹⁶⁷ The production of data and knowledge has been shifting from a specialized activity – performed by only a few actors such as academics and specialists – towards greater co-production, bringing together residents, civil society, governments and experts to harness the potential of informal urbanization while addressing its drawbacks.¹⁶⁸ The successful implementation of data and knowledge co-production with academia requires a tailored approach that carefully assesses the capacity, strengths and limitations of academic institutions and research communities, in particular in secondary cities, and finds ways to support them.¹⁶⁹
- *Mainstream co-production and political rights.* Co-production approaches have gained significant traction, emerging as a prerequisite for effective policy, as well as in data and knowledge production.¹⁷⁰ By institutionalizing collaboration between residents, governments, civil society, academia and other relevant stakeholders, co-production can foster robust and equitable partnerships. Furthermore, the consolidation of South-South dialogue amplifies this impact, refining practical methodologies and strategies to leverage informal urbanization.¹⁷¹ Policy response must be designed and implemented in partnership with residents, civil society organizations, local governments, and other relevant stakeholders such as academia, NGOs and CBOs. Furthermore, leveraging informality requires granting full urban political rights to informal residents – beyond secure tenure – to ensure they have a voice in municipal planning and budgeting decisions that affect their communities. Special attention must be paid to include vulnerable groups, particularly women, in decision-making processes.

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Escalators take residents up into a hillside community in Medellín, Colombia © Julius Mwelu/UN-Habitat