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LOCALLY LED PLANNING

A Guide for Building Climate Resilience in Urban Informal Settlements

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Climate Resilience in
Urban Informal Settlements**



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December 2022

Suggested citation: Global Center on Adaptation (2022). Locally Led Planning: A Guide for Building Climate Resilience in Urban Informal Settlements. Rotterdam.

Sector: Locally Led Adaptation

Region: Global

Keywords: locally led adaptation, local adaptation, resilience, urban informal settlements

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Foreword



More than half the world's population today lives in cities and, of this burgeoning urban population, one in four citizens lives in informal settlements. Successive generations are condemned to pass their lives on the margins, enduring a hand-to-mouth existence where basic services are out of reach and fear of eviction prevents them from taking a stand against the injustice they suffer.

Climate change is making this hard-scrabble existence even tougher for the world's billion urban poor. They increasingly face and endure flooding, heatwaves, landslides, and drought – with the consequent effects on their already meagre assets, their health, and livelihoods.

In this bleak scenario, Mukuru is leading the way in developing a new approach. Working collaboratively with residents, the Nairobi County government has declared Mukuru a “Special Planning Area”, with needs that could not be met through the traditional urban master plan approach.

This has brought together the Mukuru community to seek solutions and face challenges together. The “lightbulb moment” could not have been more revelatory: it was as simple as asking residents to offer their own solutions, guided by their personal experiences. Listening, consulting and acting on local needs are the basic ingredients of a paradigm shift.

The Mukuru plan is a breakthrough for all of us who seek basic infrastructure and services as a critical safety net for the residents of informal settlements. But a word of caution: there is no “one size fits all” solution to this global phenomenon. Mukuru stands as a model to emulate, not as a blueprint.

Financing resilience-building in informal urban settlements is still in its infancy. Of the funds spent to date on adaptation, only an estimated three to five percent is spent in urban spaces. New funding models are clearly needed.

Many of the lessons on resilience-building from Mukuru are deeply relevant even beyond the boundaries of informal settlements.

While space does not permit me to name all of them here, I wish to extend my heartfelt thanks to the Nairobi City County Government, Nairobi Metropolitan Services, and the 44 organizations drawn from civil society, academia and the private sector who have contributed to making Mukuru a model for others to follow by ensuring that its residents are at the heart of planning a brighter, more resilient future.

Finally and above all, my gratitude to the residents of Mukuru for pushing and advocating for change. They are trailblazers who have created a path for other informal settlements both in Kenya and across Africa.



Prof. Dr. Patrick Verkooijen

Chief Executive Officer
Global Center on Adaptation

Preface

The invisible residents of informal settlements who service our cities – but whose basic needs are not met by the city – have historically inhabited the margins. They are pushed further to the margins as cities expand, often into more dangerous environments, because city governments and urban planners fail to recognize them as legitimate citizens and continue to ignore their needs. Paying far more for basic services like rent, water, sanitation, and electricity than “formal” citizens, the residents of informal settlements hesitate to stand up and be counted, afraid that a registered address will result in eviction and the loss of even the precarious spaces they inhabit.

Informal settlements in cities are growing, in many cases driven by climatic stresses in rural areas. At the same time, the rise in climate risks is making their harsh environments even less hospitable. These settlements are regularly battered by flooding, heat stress, extreme precipitation, landslides, drought, and water scarcity, with extreme impacts on the assets, health, and livelihoods of residents. Representing over half the urban population in many developing countries, they can no longer remain ignored and unseen. Urban resilience is impossible to achieve without building resilience in informal settlements.

Traditional urban planning tools, education and master plans have little relevance for promoting resilience in confined, resource-scarce informal settlements (at least without mass displacement), where little is known about the needs and vulnerabilities of residents. This is where Mukuru has led the way.

Working collaboratively with residents, the Nairobi County government declared Mukuru a “Special Planning Area” with special planning need that could not be met through the conventional master plan approach. Residents were engaged in a two-year process to profile and “enumerate” their own needs and vulnerabilities and develop their own solutions through a participatory and multisectoral planning process. This created critical local ownership and leadership, reduced the need for displacement, and resulted in integrated solutions for intersecting problems. Most of all, the process brought together the Mukuru community to seek common solutions to address collective vulnerabilities and face challenges together. Civil society partners followed, forming consortia to put their weight behind something larger than the sum of the parts of their previous piecemeal efforts in individual sectors.

The Mukuru upgrading plan will be merged into the citywide Nairobi Integrated Development Plan, providing an important model and precedent. A plan provides government a starting point – government does not invest where there is no plan, no official document to coordinate bureaucratic action and draw local, national and even international development partners and resources.

The Mukuru plan is a breakthrough for all of us who seek basic infrastructure and services as a critical safety net for the residents of informal settlements. While it is already a very important milestone, we need to acknowledge that many improvements and changes will be needed to follow a similar process elsewhere. No two places will have the same histories or capacities (within the community or the professionals who support the process). There are important aspects that readers should keep in mind when seeking to learn from Mukuru:

- Ideally, all external and internal stakeholders should agree on the process and its outcomes. In reality, this may not always be possible. Implementors should invest in dialogue, negotiations, and trust-building throughout the entire process.
- Ensuring the participation of the residents is an uphill task that must not be taken for granted. The protocol followed to ensure democratic governance is vital.
- There are many who will constantly seek ways to disrupt the process in order to maintain a status quo that works in their favor. These risks will have to be carefully managed.
- Evidence must produce the foundations for making decisions in each step of the process to ensure that the plan serves all and that those who lose out are adequately compensated.
- Aspirations will have to be pragmatically balanced with available (or potentially available) financing. There is no point having a great plan that cannot be executed because of lack of funding.

Financing resilience-building efforts in urban informal settlements is not without challenges. In stark contrast to urbanization trends and the rapid growth of informal settlements, most climate action funding goes towards mitigation instead of adaptation. Of the funds spent to date on adaptation, only an estimated three to five percent is spent on urban adaptation.

Historically, upgrading costs are paid by the public agency supporting the initiative along with, in some cases, a small household or community contribution (usually in the form of labor for building infrastructure). Partnering with local governments is essential as household – and neighborhood – level investments do not have the scale needed to adequately address climate-related hazards. Residents cannot act outside their locality or provide trunk infrastructure for water, sanitation and storm drains.

Local funds have proven a highly effective approach to addressing climate vulnerability and building resilience in informal settlements. Financing can come from community savings schemes as well as grants, subsidies and loans from government and international agencies.

However, despite the great need, to date little to no international funds have effectively worked with local funds to support grassroots organizations and city governments to upgrade informal settlements. While international and national commitments to climate action, including under the Sustainable Development Goals, recognize the need for upgrading, they remain vague about “how, by whom and with what resources”.¹ New funding models are clearly needed.

In Mukuru to date, government has funded the necessary trunk and other arterial infrastructure while last mile infrastructure has been paid for by civil society partners as well as residents themselves (for instance, through sewer connection fees and in-kind labor).

Many of the lessons on resilience building from Mukuru on local leadership, government and non-government partnerships, and integrated approaches are deeply relevant even beyond the boundaries of informal settlements. The commitment to share those lessons through this Guide reflects the generosity of spirit of those who created the Mukuru plan and to whom we are grateful.

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About This Guide

This Guide provides resources for locally led, inclusive, multisectoral upgrading for climate resilience in urban informal settlements. Designed as a guide not a toolkit, it pays particular attention to context and its variation across cities and countries – the principles, guides and methods in this document must be translated to each unique context. It can help replicate the approaches and roles taken by institutions and people for comprehensive, transformative upgrading – based largely on the experience from the Mukuru Special Planning Area (SPA) in Nairobi, Kenya – but not the specific plans themselves. While the focus is on Africa, the lessons can be applied elsewhere as well.

Building on the scale of ambition provided by the groundbreaking Mukuru approach to upgrading and resilience, this Guide aims to support national and local champions and local governments; communities; civil society and academia; and funders in undertaking inclusive, multisectoral and inclusive upgrading to both build climate resilience in informal settlements and link locally led action with broader processes of urban and climate governance. The Mukuru SPA is the most exciting, innovative process happening in urban development in Africa today, providing a pragmatic vision towards action that addresses fundamental problems in African cities.

The Guide purposefully excludes an analysis of where this approach might be replicated – it is not a blueprint but should instead serve to convene discussions, provide questions and fuel your imagination to innovate the right approach for your context. Many countries likely have legal provisions that can be leveraged to support locally led upgrading to build public infrastructure.

Several tools and methodologies for measuring or profiling urban resilience exist and have proven useful for filling data gaps and providing the basis for consultations with local governments and other stakeholders. However, they do not acknowledge the crucial role of locally led (i.e. community- and local-government-led) upgrading to reduce climate risks in informal settlements. They offer limited support for generating the data needed for upgrading and limited influence to informal settlement residents. In contrast, the approaches, strategies and methods in this Guide put communities at the center of every step of the upgrading process by highlighting their essential roles in advocacy, local politics, research, coalition building, partnerships, planning, decision-making, implementation of locally-appropriate and enduring public investments, and operations and maintenance for upgrading processes.

Research for this Guide was carried out between March and October 2022 and included interviews and focus groups with residents of Mukuru Kwa Njenga, Kwa Reuben and Viwandani, members of the Kenyan urban poor federation Muungano wa Wanavijiji, local government staff, and civil society and academic partners; a survey for Mukuru residents with 183 responses; ongoing conversations with the staff of the Akiba Mashinani Trust (AMT)

and Slum Dwellers International-Kenya (SDI-K) as well as their Indian affiliates; and reviews of existing documentation, reports and articles.

The Guide is designed as a living repository to evolve in tandem with the work of the Global Center on Adaptation (GCA), the African Development Bank (AfDB) and their joint initiative, the Africa Infrastructure Resilience Accelerator of the Africa Adaptation Acceleration Program (AAP). It will both inform and be informed by practice on the ground. Future versions will incorporate lessons learned during ongoing efforts across Africa and beyond.

Main Sections

Overview

Summaries of key case studies in locally led, inclusive and multisectoral upgrading of urban informal settlements (such as the Mukuru SPA) and brief discussions of key concepts for the urgently needed local-to-international action to upgrade informal settlements for climate resilience.

Guides and Methods

In-depth discussions of key practices and methodologies as well as practical considerations for translating concepts to your context.

Guides and Methods are organized by theme (e.g. Roles; Community Co-planning; etc) and modularized by topic so that you can more easily pick and choose what is most relevant for your work. Additionally, each Guide and Method has target audiences to help you navigate to the ones that are most relevant to you. For more, see How to Navigate Guides and Methods.

Guides

Guides discuss key practices in-depth. These concepts are highly sensitive to local context – each guide, therefore, includes practical considerations for translating concepts to your context as well as relevant case studies (Mukuru being the primary one).

Methods

Methods are detailed methodologies that can be more directly replicated across cities and countries and aid the undertaking of concepts discussed in Guides. They also include examples of relevant data collection tools.

Videos

Short videos highlighting key lessons from the Mukuru approach and strategies for undertaking locally-led upgrading for climate resilience.

Upgrading Informal Settlements for Climate Resilience



As Africa rapidly urbanizes and climate change accelerates urbanization,¹ the poor, most vulnerable and least culpable are bearing the brunt of the colliding climate and urban infrastructure crises. This collision is taking place where 60 percent of urban Africans — and one billion people worldwide — already live, in urban informal settlements.²

Across Africa, climate resilience³ in informal settlements requires urgent attention. Residents are highly vulnerable to multiple climate hazards like extreme rainfall, floods, water- and vector-borne diseases and extreme heat, fires and water scarcity.⁴ During a heat wave in Nairobi in 2015, for example, informal settlements were 3-5°C hotter than in other parts of the city.⁵

Existing vulnerabilities due to the lack of adequate income and assets, infrastructure, basic services, and voice in governance are further exacerbated by the degradation of ecosystems and habitats and climate change-related disasters and stresses. Informal settlements are particularly vulnerable to climate change due to three underlying factors:

- Their physical location, which is often environmentally fragile.
- The socioeconomic characteristics of residents, including high levels of poverty.
- Political and institutional marginalization, resulting in the absence of risk-reducing infrastructure and support to cope with shocks.⁶

While upgrading is yet to be mainstreamed as climate change adaptation, it is a widely accepted practice in urban governance that can greatly increase the resilience of residents and infrastructure in informal settlements to climate change impacts. Flexible by nature, upgrading adapts well to different local contexts.⁷ As emphasized by the Intergovernmental Panel on Climate Change (IPCC), “urban governments are uniquely situated to reconcile development with climate change adaptation because they understand local contexts, raise local awareness, respond to citizens’ and civil society pressures and work to build an inclusive policy space”.⁸ And as demonstrated by the Mukuru SPA, government and community partnerships are crucial for upgrading informal settlements not just for improving physical infrastructure but for more inclusive, enduring resilience to social drivers of vulnerability.

Social drivers of vulnerability like low-income and gender discrimination intersect with environmental risks. Political exclusion and social vulnerability impair resilience.

Because residents in informal settlements are often trapped in clientelist relationships, they struggle to enlist the support needed from local governments for upgrading. Moreover, because they are often viewed as apart from and inferior to the formal city, local governments are often reluctant to engage in the community dialogues and partnerships required to undertake meaningful upgrading projects. This exclusion is embodied by the lack of a registered address for households living in informal settlements. Without an address, residents are often denied access to infrastructure (such as piped water, sanitation, electricity, even

roads) and services (such as public schools, health care, social protection, voter registries, banking, property insurance) crucial for resilience.⁹

Upgrading alone does not ensure inclusion. Inclusion is fundamental to resilience. Just because a local government undertakes upgrading does not ensure that all residents will be engaged, or benefit, equally. Some groups are more vulnerable to climate change impacts than others. It is therefore important to pay particular attention to what may exclude or undercut these groups by asking how does the project:

- protect infants and children?
- address the needs of residents discriminated against on the basis of age, sex, gender, ethnicity or other social group?
- account for tenants who may be excluded by providing land tenure (in particular women who are often disproportionately renters)?¹⁰

Informal settlements often play important roles in their city's economy and therefore to its resilience to disasters and shocks. As demonstrated by research done in Mukuru and elsewhere in Kenya in 2017, informal settlement residents make major contributions to their city's economy. The lack of risk-reducing infrastructure and services in settlements leaves these economies vulnerable to disasters and shocks. Therefore, upgrading builds resilience not only within settlements but for the city more broadly.

While upgrading reduces many climate-related risks, it has limits. Without investments in and integration with risk-reducing infrastructure beyond a settlement's boundaries, residents remain vulnerable to hazards like flooding that originates elsewhere in a watershed. There are also residual risks that inevitably remain even after interventions to address vulnerabilities and reduce risks have been completed.¹¹

Relocation is not viable unless it accounts for affordability, accessibility and quality. It might be tempting to try to relocate residents from informal settlements that are located in environmentally hazardous locations to formal developments that are better served by risk-reducing infrastructure and services. However, many will not want to go if the new location does not offer comparable or better access to employment, affordable housing and services, and tenure security.

For particularly hazardous sites, relocation might be necessary. But the relocation process, in particular decision-making about how it is undertaken and where residents resettle must be done in close collaboration with residents themselves. If the new locations are far from the original location, distant from employment and services, or have poor quality housing and services, residents will likely opt to move to other informal settlements that better meet their needs.¹²

Look beyond hazards to consider root causes of risk and vulnerability and mainstream risk management into urban development. Upgrading informal settlements can reduce climate vulnerability. The risks faced by urban populations in developing countries, particularly in informal settlements, are associated with poverty, informality, inadequate basic infrastructure, weak governance, and exclusionary planning.¹³ Climate risk management and vulnerability reduction efforts in these cities must therefore look beyond hazards to consider root causes of risk and vulnerability – such as informal settlements in dangerous locations, infrastructure deficits, and unequal access to decision-making, opportunities and resources.

Moreover, risk management and vulnerability reduction efforts should not only be restricted to climate and disaster risk management, but mainstreamed into urban development processes, including planning, policymaking and investments.¹⁴ The IPCC finds that reducing basic service deficits and building resilient infrastructure systems in urban areas can significantly reduce hazard exposure and vulnerability to climate change.¹⁵ This includes water supply, sanitation, storm and wastewater drains, electricity, transport and telecommunications, health care, education, and emergency response. Others have found complementarity between upgrading informal settlements and building climate resilience – effective upgrading can enhance resilience to climate risks and provide a foundation into which climate-change resilience and disaster risk reduction can be integrated.¹⁶

Elevate the role of local governments, community and government partnerships and community ownership in planning and decision-making to create locally-appropriate and enduring investments. Inclusive and locally led planning and governance approaches can improve the effectiveness and sustainability of resilience building efforts. The IPCC emphasizes the key role of urban governments in reconciling development and climate change adaptation; partnerships between local government and communities in upgrading informal settlements; and participatory inclusiveness, equity, awareness raising, deliberation, argument and persuasion in determining the legitimacy and effectiveness of action.¹⁷ It finds that adaptation in urban areas depends on a locally-rooted, iterative process of learning about changing risks and opportunities, identifying and evaluating options, making decisions, and revising strategies in collaboration with a range of actors. Locally led approaches to upgrade informal settlements can ensure broader buy-in and ownership of residents, reflect local needs and aspirations, be tailored to local circumstances, and therefore be more effective and long lasting.

Assessing and anticipating future climate-related risk. While in-situ upgrading where governments work closely with communities is a major improvement over the conventional response of city governments of ignoring or bulldozing informal settlements, these initiatives often focus on addressing current risks. Although addressing land tenure and existing gaps in infrastructure and service provision can reduce climate vulnerability in informal settlements, more needs to be done to assess and anticipate future climate-related risk.

Climate change poses real risks for cities – with global warming greater than 1.5°C, human death and illness will increase significantly, exacerbated by urban heat islands, intensified heat waves, volatile weather, floods, droughts, coastal inundation and diseases.¹⁸

Planning for future risk can be challenging for local governments and communities alike. Climate change is not always a well-understood concept and seeking to assess residents' perceptions of future risks and planning to anticipate those risks requires new, unconventional ways of thinking, engaging and acting.

Some methods for planning for future risk could include using scenarios to conduct participatory vulnerability and risk assessments (PVRA) with informal settlement residents and co-developing community-led data collection tools to fill large data gaps for environmental hazards in informal settlements (such as the knowledge of residents on water and flooding levels in the past).

Also note that while upgrading mainly addresses vulnerabilities to climate change, it can also be an opportunity to decarbonize development as in-situ upgrading counteracts sprawl.

While considering future risk is becoming increasingly necessary, it is important to weigh it against competing priorities. Funding for upgrading is limited so in some cases it may be necessary to prioritize the immediate needs of residents over uncertain future risks.

Climate change concepts may be unfamiliar to some but social and economic vulnerability will not be. As previously noted, climate change and its impacts are not always well understood by both informal settlement residents and local professionals. This includes the language used to describe climate change and build resilience to address related hazards, vulnerabilities and risks. Upgrading is a widely accepted practice and a practical language has grown with it that is well understood by communities and professionals alike. Instead of learning to speak in the language of international organizations, funders and partners should instead learn how existing practices in informal settlements aid adaptation and resilience. And as upgrading evolves to be more sensitive to climate change, residents and local governments can also learn more about related risks and begin to speak the language of funders and partners.

Key Resources on Building Climate Resilience in Urban Informal Settlements

- The **GUIDES AND METHODS** in this Guide
- **Building Resilience to Climate Change in Informal Settlements** One Earth (Satterthwaite et al., 2020)
- **Addressing the Most Vulnerable First – Pro-poor Climate Action in Informal Settlements** UN-Habitat (Dodman et al., 2018)

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3. Resilience is defined by the IPCC as the ability of a system and its component parts to anticipate, absorb, accommodate, or recover from the effects of a hazardous event in a timely and efficient manner, including through ensuring the preservation, restoration, or improvement of its essential basic structures and functions
4. Urban climate-change-related risks include “rising sea levels and storm surges, heat stress, extreme precipitation, inland and coastal flooding, landslides, drought, increased aridity, water scarcity, and air pollution with widespread negative impacts on people (and their health, livelihoods, and assets) and on local and national economies and ecosystems.” (Revi et al., 2014, p. 538)
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The Mukuru Special Planning Area



This Guide draws primarily on the experience of residents and their government, civil society and university partners in the Mukuru Special Planning Area (SPA) in Nairobi, Kenya. The SPA is an important case study in locally led, inclusive and multisectoral upgrading of urban informal settlements for climate resilience. This section summarizes the Mukuru SPA and its key strategies.

[The Mukuru Story](#)

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[The Mukuru Approach](#)

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The Mukuru Story



Starting in 2017, residents of Mukuru – one of the largest informal settlements in Nairobi, Kenya – undertook an ambitious, groundbreaking participatory upgrading process known as the Mukuru Special Planning Area (SPA). This is the Mukuru story, as told by Jane Weru, Executive Director of the Akiba Mashinani Trust (AMT) and one of its central champions and stewards.

In 2011, many Mukuru residents came to our office to request loans to purchase the land they lived on. Absentee landowners were requiring them to purchase the land or be evicted. Many evictions did occur and residents, with our support, began to mobilize to resist evictions. With assistance from the Katiba Institute here in Nairobi, we filed a court case to stop landowners from evicting residents. In 2013, women and girls in Mukuru led the “Too Pressed to Wait” campaign demanding better sanitation. Poor sanitation infrastructure posed serious health risks and dignity challenges.

But, we quickly realized that stopping evictions was not enough – the living conditions in Mukuru were terrible. In 2014, AMT with a grant from the International Development Research Centre (IDRC) and a team of action researchers from University of Nairobi, Katiba Institute, and Strathmore University documented the deeply marginalized conditions residents lived in.

Armed with these findings, we approached the Nairobi County City (NCC) government and requested that they undertake plans to upgrade Mukuru. They agreed and in August 2017, Mukuru was declared a Special Planning Area (SPA). County governments in Kenya can declare an area as an SPA if it has unique environmental and development challenges. We understood that to mobilize public resources for infrastructure and services in Mukuru, we needed an official plan.

At this point, we realized that because Mukuru is such a large, densely populated area, we would not be able to undertake planning alone. So, along with NCC, we formed eight interdisciplinary planning consortia – one for each priority sector. These included housing and road infrastructure; water, sanitation and energy; health; education; environment; and land. We also formed two support consortia, one to mobilize and coordinate residents and another to coordinate financing. The consortia convened expertise from 42 local and international civil society and private sector organizations.

We were also aware that you cannot plan without the people – if you plan without the people, you are planning to fail. Therefore, the community coordination consortium comprised of AMT, Muungano wa Wanavijiji (MWW) and Slum Dwellers International-Kenya (SDI-K) worked closely with Mukuru residents to mobilize people to attend more than 250 neighborhood planning forums and 114 formal consultation meetings held by the different planning consortia.

Throughout the process, alternative, innovative approaches to planning were taken by Mukuru residents and their government and civil society partners. We developed locally-appropriate planning standards that made sense in the context of the vulnerabilities and resource constraints in Mukuru. If conventional, statutory planning standards had been used, 100 percent of residents would have been displaced. Through negotiation and dialogue, the planning standards for the Mukuru SPA ultimately only displaced about 13 percent of residents.

To understand the upgrading process we undertook, you must first learn a little about Mukuru. It is made up of three large settlements called Mukuru Kwa Njenga, Mukuru Kwa Reuben and Viwandani and covers 689 acres of valuable land near Nairobi's Commercial Business District. It is home to over 400,000 people or about 100,000 households, 94 percent of whom are tenants. The land is privately owned by individuals granted long-term leaseholds of about 99 years by the government during the 1980s and 90s. The lease agreements included special conditions that they develop the land within two years of receiving the title. In the event that they failed to do this, the government could reclaim the land. In breach of these conditions, title holders never developed their parcels and today the land is occupied by the residents of Mukuru.

In the IDRC-funded research, we found that basic service provision in Mukuru was very poor. Water is sold by informal service providers using fragile pipes that break easily, resulting in water contamination that causes frequent disease outbreaks. Moreover, residents suffered a poverty penalty, paying 170 percent more for lower-quality service than the rest of the city. When residents were engaged during the planning process, they proposed that informal providers be stopped and that infrastructure be improved to address water shortages, reduce costs and improve health.

Poor sanitation is also a big problem. Community-led mapping of the settlement conducted in collaboration with SDI-K, AMT, and MWW found that there were only 3800 toilets, largely pit latrines, for over 400,000 people. Latrines must be exhausted manually and raw waste, with no proper infrastructure, is dumped indiscriminately. Residents proposed installing a toilet in every plot and connecting toilets to the sewer.

Drainage for frequent flooding is also a major challenge and without roads, fires from dangerous informal electricity connections destroy structures regularly. Without roads, you cannot build drains and emergency services cannot reach fires. Public transport also cannot access the settlements. Residents and planners devised plans that would build this crucial road network while minimizing the space needed and therefore the displacement of residents.

Residents also identified education as a big problem. There are about 100,000 school-age children in Mukuru. In contrast to the national government's duty and commitment to providing universal education, there are only six government schools and 182 informal schools with no government support. Many of the informal schools have poor water and sanitation facilities.

In 2020, NCC and Nairobi Metropolitan Services (NMS), a special agency formed by the national government, began building roads, trunk sewers and water mains for Mukuru. 11 boreholes have been drilled. One public school and three hospitals have also been opened.

On Mosque Road in Mukuru Kwa Reuben, a team made up of NCC's water department, NMS, the NGO Water and Sanitation for the Urban Poor and AMT have installed a pilot project with water service points as well as toilets in every plot with sewer connection for 1000 households, reducing costs, shortages and cholera outbreaks. After assessing the pilot project, we will use the lessons learned to extend services to all of Mukuru. The growing road network and storm drains have reduced flooding, fire and disease outbreaks and improved public transportation access in the areas it has been built.

As of the writing of this guide in 2022, the final Mukuru upgrading plan has yet to be ratified by the NCC Assembly. In July 2022, in the lead up to the Kenyan general elections, Mukuru residents wrote a "People's Manifesto" that outlines the goals of the Mukuru Integrated Development Plan and asks local candidates to publicly pledge support to its official ratification and comprehensive implementation. Many local candidates, including for Governor of Nairobi City County, have publicly signed the Manifesto, testament to the importance of community-led planning processes for upgrading.

While much work remains to be done, incremental improvements are being made today for the residents of Mukuru. And critically for climate resilience, mobility and accessibility in Mukuru, the upgrading plan is being merged with the citywide Nairobi Integrated Development Plan. The SPA designation has proven itself an effective mechanism for building crucial partnerships and mobilizing state resources. An SPA has been declared nearby in the Kibera informal settlement in Nairobi and a process to declare one in another nearby informal settlement called Mathare is underway as well.

The Mukuru Approach

This Guide draws primarily on the experience of residents and their government, civil society and university partners in the Mukuru Special Planning Area (SPA) in Nairobi, Kenya. Like informal settlements in cities across Africa, Mukuru is particularly vulnerable to climate change due to its environmentally fragile location, high levels of poverty, and political and institutional marginalization, resulting in the absence of risk-reducing infrastructure and support to cope with shocks.¹

One of the largest informal settlements in Nairobi, innovative, locally led informal settlement upgrading² strategies pioneered in Mukuru offer exciting and important lessons for inclusive and integrated planning as well as for enhancing the climate resilience of the majority of the population in African cities.

Underpinned by years of community organizing and protest as well as action research with university partners, Mukuru was declared a SPA by Nairobi City County (NCC) in August 2017. The declaration acknowledged that conventional planning practices were insufficient to address the unique development and environmental challenges in informal settlements. Its application in Mukuru was a novel, innovative interpretation of the SPA provision which previously had only been used for industrial development areas.³

The SPA Emerged Out of Decades of Community Organizing, Political Protest, Advocacy and Action Research

These antecedents to the SPA relied on deep processes of trial, error and learning led by the Muungano Alliance – an association comprised of the Kenyan urban poor federation Muungano wa Wanavijiji (MWW), the Akiba Mashinani Trust (AMT) and Slum Dwellers International-Kenya (SDI-K) – in collaboration with urban poor networks across Africa, Asia and beyond. Largely situated on private land, eviction threats have been the main driver for protest and advocacy in Mukuru. Organizing around anti-eviction campaigns first began in the 1990s and reemerged in 2010 with new eviction threats, resulting in the Jubilee Campaign. In 2013-2014, a new campaign called “Too Pressed to Wait”⁴ emerged, led by women and girls demanding better sanitation. Poor sanitation infrastructure posed serious health risks and dignity challenges.⁵

Advocates (led by AMT and including MWW, SDI-K, the University of Nairobi and the Katiba Institute) took advantage of the strategic political opportunity represented by the 2017 general elections and relationships with local government leaders to push for the declaration of the SPA. Because Mukuru was a significant political constituency, advocates lobbied during the lead up to the elections for the SPA declaration, seeking a political commitment from NCC to intervene in the settlements. The advocates focused efforts on the department directors of Planning and of Urban Renewal and Housing.⁶ They also relied on action research demonstrating a poverty

penalty paid by Mukuru residents for essential services (see more on this below). These efforts secured crucial buy-in from NCC. Without these political champions, the SPA process would have been severely limited in its scope and impact, or never happened at all.



“ For a very long period of time the people of the slums have been lacking the basic services that they should be getting from their own government. [...] So due to the problems that the common citizens were facing, it's what made the people to push the SPA to materialize. ”

Elkanah Nyakundi Community Mobilizer – Vietnam, Mukuru Kwa Njenga

Focus group interview on 15 June 2022.

Mukuru is situated on valuable, privately-owned parcels of land near Nairobi's commercial business district (CBD), and land tenure is a contentious issue. Residents are at high-risk of eviction. The SPA planning team did not rely solely on the SPA provision but also on Kenya's 2010 Constitution. Sidestepping the contentious issue of housing, residents and advocates initially focused on infrastructure and services for public health like roads, water and sanitation that the government was required to provide according to the Constitution. The team also researched land ownership and discovered that landowners were in breach of the conditions in their land grants, gifted by the Kenyan state to develop light industries, and had illegally subdivided and sold plots of land instead of developing them. The associated legal cases are pending in the courts.^{7,8}

Building on the momentum for devolution sparked by Kenya's new Constitution and years of community mobilization by the Muungano Alliance, the residents of Mukuru and their university partners presented compelling evidence on a poverty penalty to local government and political leaders, debunking the belief that informal settlement residents were too poor to pay for basic services.⁹

The SPA did not emerge from a vacuum – it was first and foremost a political, not a technocratic, process. The SPA declaration and subsequent Mukuru Integrated Development Plan (MIDP) would have been exceedingly difficult to achieve without this history of organizing, protest and political and legal advocacy. The SPA is as much a political process as a technical planning one (if not more so). Anyone seeking to learn from the SPA should be careful not to lose sight of the critical role political organizing and advocacy played – attempts to replicate the technocratic planning process without connecting it to existing social and political community networks will likely fail to produce the same level of community buy-in and ownership and therefore impair meaningful investment in the infrastructure and services needed by informal settlement residents.



“ Action research had revealed significant shelter deficits and predatory informal service provision: Mukuru residents, with no other option, paid far more per unit for lower-quality shelter and services than residents in nearby formal estates – nearly four times more for water, twice as much for electricity and 20 percent more for rent. Despite these high costs, there was a thriving informal economy estimated at USD 59 million annually, demonstrating that residents could pay for service delivery, a fact that garnered the attention of policymakers and the media. For public utilities, it demonstrated that they could provide services sustainably and at the same time improve public health conditions in Mukuru. It also captured the interest of local representatives as Mukuru represented a significant political constituency. ”

Jane Weru Executive Director, Akiba Mashinani Trust

On-camera interview on 2 August 2022.

The Mukuru Approach Has Taught Us That Improving Climate Resilience in Informal Settlements Requires the Urgent Coordination of At Least Four Key Strategies

1. **The meaningful engagement of residents to make planning decisions.** Participation at scale helps ensure community ownership, essential for moving beyond conventional upgrading to transformative upgrading that builds both infrastructural and social resilience to climate hazards.
2. **A genuine partnership between government, residents, civil society and academia.** Residents, working closely with government and civil society partners, collaboratively produced the Mukuru upgrading plan.
3. **Rethinking conventional planning approaches and legislation** to confront the vulnerabilities and resource scarcity in informal settlements.
4. **Recognizing the interdependent, multisectoral challenges faced in informal settlements.** Improvements in no one sector alone can solve them – it is crucial to develop sectoral plans in tandem, working together across disciplines.

Community Engagement

Meaningful community engagement in Mukuru was achieved by speaking to people’s urgent needs – which included sanitation and insecure land tenure – and mobilizing residents through **data collection activities** and a **novel organizational model** *that ensured household-level representation in the planning process.*

Through mobilization and data collection activities, as well as learning exchanges with other settlements in Kenya and beyond, residents began to better understand their challenges not just

individually but also collectively; share a common understanding of those challenges; and negotiate both among themselves and with government for solutions that would best serve them.

Most governments do not collect data on informal settlements and it can be challenging for them to gather. Community-led data collection in Mukuru included several practices refined over decades by SDI, including community mapping, settlement profiles and a household-level census. These crucial data provided the means for residents to speak to and negotiate with the Nairobi city government. In addition to providing the necessary sociodemographic data needed to begin upgrading processes, community data collection can also document residents' experiences with environmental hazards to begin assessing their climate change risk.



“ Mapping and data collection and I also knew how data defends people. How the data spoke for us in the government. And also I learned how to bring people together and empower people. I also learned how to talk with these people in these big offices, because I come from the slums, I don't have to despise myself, I have to know that I have information that they don't have. And the other thing I learned is I have also the right as a Kenyan person to have good life and the other thing is, every change to take place wherever I am, it is good for me to participate and to give also my ideas. ”

Christine Mwelu Community Mobilizer – Lunga-Lunga Centre, Mukuru Viwandani

Focus group interview on 18 May 2022.

See [COMMUNITY-LED DATA COLLECTION](#) in [GUIDES AND METHODS](#) for more.

Pivotal to the SPA planning process, the Muungano Alliance pioneered the “Tujuane Tujengane” community mobilization, organization, representation and communication model. Meaning ‘Let's know each other, so we build each other’ in Kiswahili, Tujuane Tujengane was a novel approach that sought to engage all Mukuru residents at the household-level.

Over 450 community mobilizers from Mukuru were trained, the majority of which were women and youth. Along with data collectors that they recruited from their neighborhoods, mobilizers undertook data collection to provide settlement profiles, an address system and a detailed census of all households in Mukuru. More than anyone, these mobilizers organized the community forums and championed the SPA through patient dialogue and the many negotiations the planning process required with diverse community stakeholders.¹⁰

Mobilizers also fostered horizontal and vertical accountability throughout the planning process: they mediated community conflicts and misunderstandings and informed local officials of progress.¹¹ In these roles, mobilizers built new relationships between Mukuru communities and government and gained trust and stature in their communities because of the confidence

the training and mobilization processes gave them to speak out and lead. For some, it also led to new opportunities like jobs with NGOs and even potential nominations as political leaders. At times, however, these elevated roles led to government authorities taking advantage of mobilizers for their own ends.¹²

See **COMMUNITY CO-PLANNING** in **GUIDES AND METHODS** for more.



“ I would say it brought something called bonding, that is good relations among us from SPA, our village elders, tenants, structure owners, tenants, all of us – and we became there is no stranger to one another. ”

Edith Murage Community mobilizer – Kingstone, Mukuru Viwandani

Focus group interview on 18 May 2022.



“ I used to mobilize people in the community and before we bring the people to meetings, we started forming home cells and every cell was of ten families and from the ten families, we came to make a baraza which was formed of a hundred families. And we could not just tell people this is a cell, we used to walk inside our settlement, tell the people we are bringing them together and educating them that we need a change and we do not want outsiders to come into our settlement and to tell us what we are supposed to do. We told them it is high time to stand and speak what kind of changes that we want. So I was mobilizing, I was bringing the community together forming those meetings and I was also working with the local government. ”

Christine Mwelu Community Mobilizer – Lunga-Lunga Centre, Mukuru Viwandani

Focus group interview on 18 May 2022.

In addition to the SPA, mobilizers, other residents and the Muungano Alliance leveraged the community organization model for complementary initiatives, including youth groups and savings groups. They also used it to create immediate, near-term benefits to build confidence in the SPA process. Implementation of plans can take years – residents need to see short-term benefits to maintain confidence in the process.

These community strategies ensured meaningful participation in and ownership over the SPA planning process which has led to genuine co-planning between government and residents – and therefore a plan that provides locally-appropriate planning interventions that build climate resilience in Mukuru.



“ I think if SPA was being led by outsiders, most of the things we have got, we couldn't have got them since outsiders don't know what we are going through. They don't know what we need, there is no way a visitor will come in my house and know where my saucepan is, where I put my spoons, where I put my clothes. It is the owner, so we the people who live here we are the one who knows the problems and we raise the problems to them so me I don't support the issue whereby that if it was to be led by the outsiders it would have been better than the way it was led by we ourselves. ”

Priscila Onyango Tenant – Bins, Mukuru Kwa Reuben

Focus group interview on 20 May 2022.



“ According to me, the Special Planning Area belongs to the community. Muungano [and the County government] were just assisting and giving us directions because it's us personally who know the challenges we are facing. ”

Mary Nyambura Community Mobilizer, Wape Wape, Mukuru Kwa Njenga

Focus group interview on 15 June 2022.

Genuine Partnerships

The Mukuru SPA chartered new territory in partnerships for upgrading. Instead of the historically adversarial relationship between community and civil society on one side and government on the other, the SPA provided a novel legal and institutional space for collaboration.

Residents know best what problems they face, their relative priorities and what solutions will best serve them. Local governments provide the necessary resources and institutional legitimacy for upgrading, as well as the coordination of stakeholders. Civil society, working closely with both government and community, can facilitate successful collaboration. And academia helps turn data collected by communities into the actionable knowledge critical for evidence-based planning.

See [NEGOTIATION AND ADVOCACY](#) in [GUIDES AND METHODS](#) for more.



“ In the County government, we worked closely with Mukuru residents and their civil society and university partners to collaboratively produce the Mukuru Integrated Development Plan. The SPA put the community at the center of every step of the planning process. And while planning has traditionally been left to the planning department alone, for the Mukuru SPA, every County department was engaged in the planning process. ”

Lilian Kieni Deputy Director of Urban Planning, Nairobi Metropolitan Services

On-camera interview on 1 August 2022.

Rethinking Conventional Planning Approaches

Acknowledging the unique developmental and political challenges in Mukuru, planning partners adopted an unconventional planning framework. Enabled by the SPA declaration, it prioritized immediate needs and incremental, iterative improvements and adopted alternatives to conventional planning standards to minimize the displacement of Mukuru residents without sacrificing security, health or resilience considerations.

Informal settlements pose complex challenges for planning. Unlike greenfield sites, people already live there; homes, businesses and local institutions already exist; structures are one and two story but densely built; and existing social networks are crucial for residents' resilience. In short, the entry points for development are different. While conventionally it has been evictions, demolitions and even environmental hazards, it can also be government or community-led engagements. Space is limited – the large majority of it is already taken up by semi-permanent or temporary structures. The context requires alternative, even radical, approaches to planning with deep processes of community engagement, strong political will and professionals trained for their unique environments. Mukuru provides a model for this type of brownfield redevelopment.

The Housing, Infrastructure and Commerce consortium, along with Indian partners, used iterative scenarios to model the space required according to different planning standards. Modeling done using conventional standards found that conforming to planning regulations used for public infrastructure in formal estates would displace all households in Mukuru. The alternative standards ultimately adopted instead optimized for the needs and proposals of residents while minimizing the fragmentation of community cohesion by limiting the displacement required (about 13 percent of residents) to accommodate new infrastructure and services (e.g. a 12-meter-wide road instead of the conventional 48-meter road). In particular, the alternative standards prioritized non-motorized transport as few residents own vehicles.¹³

Beyond minimizing displacement, the new standards upheld key objectives agreed on by residents: prioritizing “public health, safety, dignity, and convenience above individual interests or ownership” and the mitigation of environmental risks and vulnerabilities. As a whole, these discourses among residents and local government and civil society partners formed a loose framework for navigating

various competing priorities among stakeholders, balancing pragmatism and incrementalism with ambition and a groundbreaking scope for both participatory planning processes and subsequent investments in crucial infrastructure and services.¹⁴

The SPA also explored alternative service delivery models and technologies. As a pragmatic compromise between the small, informal water vendors and piped water to every plot, water pre-paid dispensers (PPDs), also known as “water ATMs”, were chosen as a pragmatic solution for clean water provision. Low-cost, easy to install and maintain simplified sewer systems (SSS) were also chosen for last-mile sanitation infrastructure (see the Mosque Road Pilot Project below for more). Yet to be tested, a model that would rely on informal energy providers as last-mile entrepreneurs with needed local expertise (instead of excluding them as predatory cartels and therefore adversaries) was also explored.

See **ASSESSING PLANNING STANDARDS AND NEGOTIATING ALTERNATIVES** in **GUIDES AND METHODS** for more.



“ Planning today largely abandons informal settlements. Statutory planning standards deny residents access to crucial infrastructure and services. The Mukuru SPA powerfully questioned and challenged the legitimacy of formal planning standards in the context of the vulnerabilities and resource constraints present in Mukuru and other informal settlements. For the Mukuru SPA, we evolved and retrofitted standards to meet the huge need and at the same time minimize the huge social cost of applying statutory standards. ”

Professor Sejal Patel CEPT University, India

On-camera interview on 26 August 2022.

Addressing Interdependent, Multisectoral Challenges

To address the interdependent, multisectoral challenges in Mukuru, interdisciplinary planning consortia were formed, convening expertise in key sectors including housing and road infrastructure; water, sanitation and energy; environment and natural resources; and health and education services. Local government departments, along with leading civil society organizations in each sector, led the consortia planning process to formulate sector plans and ultimately an Integrated Development Plan for Mukuru. Civil society, academic and private sector partners provided needed expertise and additional capacity for local government departments.

Mukuru residents and the consortia collaborated to co-produce the Mukuru upgrading plan through a series of community consultation forums held with representatives throughout Mukuru. This included plan formulation and plan validation meetings for all the key sectors. This co-planning process resulted in sector plans for all the thematic areas, bundled together as the MIDP which is currently being finalized for ratification by the Nairobi County Assembly.

Production of an official document, a plan, was crucial for moving the gears of local government and bringing momentum to the planning process.



“ The County government worked closely with the Muungano Alliance to bring 42 partners on board from leading civil society organizations and universities. County departments led each consortium and coordinated the partners. The consortia model proved itself an effective strategy for collaborating closely with communities and building a coalition among historically adversarial parties. The consortia also enabled members to contribute different types of expertise to develop an inclusive, locally-appropriate and integrated upgrading plan for Mukuru. We believe this model of consortia, of having different consortia, is a good model that would be able to ensure that other settlements also benefit just as Mukuru has done. ”

Marion Rono Deputy Director of Housing and Urban Renewal, Nairobi Metropolitan Services

On-camera interview on 1 August 2022.



“ The top leadership was able to buy-in because people on the ground had developed a document that actually even the President bought into. If we did not have a document actually it was very easy for our project to be thrown out. So, I think what I want to underline is the initial [SPA] initiative and whoever came up with the idea that in Mukuru there is something that can be done – people can come together, they involve all the stakeholders in Mukuru, even the political ones, develop a plan and now use that plan as a sailing point for the project. That made things easy because I remember when the President was hearing that there is a plan, actually he was ready to take it up. ”

Stephen Githinji Engineer in Environment, Water and Sanitation, Nairobi Metropolitan Services

Focus group interview on 27-28 April 2022.

Given that the planning process was something new and therefore ambiguous, a defining challenge for the consortia was assuring members had adequate resources and institutional support. County departments and civil society partners worked together to identify resources for planning activities. It proved challenging to maintain the involvement of some consortia members as they largely worked on a pro bono basis.¹⁵

Planning to date has focused on public infrastructure like roads and services like health centers to address the urgent, immediate needs of residents who suffer from dire public health conditions and frequent floods, fires and other climate-related hazards. These interventions act as enabling infrastructure, improving health and social inclusion, that will be iterated on to provide other needed but more contentious improvements like better quality housing.

Particularly important for climate resilience, the plan has also been integrated into the larger countywide Nairobi Integrated Development Plan, providing an example of how to include citizen participation in citywide planning processes.¹⁶

See **INTEGRATED PLANNING** in **GUIDES AND METHODS** for more.

With the Initial Planning Phase Complete, the Nairobi City Government Has Begun to Implement the Plan

As of the writing of this Guide in December 2022, Mukuru residents and civil society, academic and local government partners have completed an ambitious two-year planning process.

Land tenure issues remain unresolved and the government has relied on its mandate from the Constitution to provide public infrastructure and services for public health to proceed.

While the Covid-19 pandemic has delayed official ratification of the MIDP, starting in May 2020, Nairobi Metropolitan Services (NMS)¹⁷ and NCC — with support from President Uhuru Kenyatta — began to strategically implement the plan. This included the construction of roads, drainage, several hospitals, a school and a pilot water and sanitation project. The Mosque Road Pilot Water and Sanitation project — undertaken by the NCC department Nairobi Water and Sewerage Company, the international NGO Water and Sanitation for the Urban Poor, and AMT — is an important step towards full-scale implementation of the MIDP, testing key designs co-produced by residents and their government and civil society partners.

While the SPA is already a statutory obligation, official ratification of the plan is required to create dedicated public funding from the county government to build infrastructure and services. Partners have explored several other financing strategies, including from the national government and aid agencies.

Residents were employed to build new infrastructure and services — in addition to providing income for residents, local hiring also supported continued community ownership of the process and provided cost savings for local government.



“ There were houses which when it rained the water would flood in the houses but now they have connected such that when it rains the water goes to the toilet. [...] If we look on the issue of the road system, it has helped us on the issues to do with fire because if fire incident occurs, it's easy for firefighters to get here. Before it was very difficult, a lot of houses could be burnt down before firefighters arrived because we didn't have good road access. But as at now, when fire emerges and fire fighters are called, they arrive immediately. ”

Catherine Nduku Pilot Project Chairlady – Mosque Road, Mukuru Kwa Reuben

Focus group interview on 5 May 2022.



“ We had a lot of problems, toilet problems, 24/7 it blocked. But since they came and laid the pipes and connected our toilets to the sewer, it now flows well. Water also came along. We used to encounter difficulties in the plot, being told to buy water to flush the toilet, when it has become extremely dirty and blocked. But now water is available and we are using it, at least our environment is okay, inside the plot and outside is okay. Secondly, people who used to live in Mosque zone earlier knew how the place looked, these water-borne diseases were very rampant. Like myself, I feared taking water from the area because I used to see that the water in Nairobi is just sewage. I could use the water, I get a stomach ache, children in the plot were diarrhoeing, but now those diseases have reduced completely. Water is available and the environment is clean, no bad smell, now people are okay. ”

Mwanarabu Kwetu Pilot Project Cluster Leader – Mosque Road, Mukuru Kwa Reuben

Focus group interview on 5 May 2022.

New infrastructure and services have substantially reduced climate risks related to flooding, fires and exposure to diseases like cholera.

These early implementation efforts — along with the relationships formed between Mukuru residents and the local government during the initial planning phase of the SPA — provide a strong foundation for continued planning efforts to further reduce residents’ vulnerabilities and build their resilience to climate hazards.

In July 2022, in the lead up to the Kenyan general elections, Mukuru residents worked with Reuben Centre and AMT to create a **People’s Manifesto** that outlines the goals of the MIDP and asks local candidates to publicly pledge support to its official ratification and comprehensive implementation. Many local candidates, including for Governor of Nairobi City County, have publicly signed the Manifesto, testament to the importance of community-led planning processes for upgrading. If the planning process had instead been undertaken using conventional means with outside consultants conducting ‘participatory’ planning consultations, it is likely that no such manifesto would exist today and that the Mukuru upgrading plan would be collecting dust in a government office with little chance of being fully implemented.



“ [In the **People’s Manifesto**], the Mukuru people have now demanded for their rights, I think according to me that is actually a power, it’s actually a force, the community is actually a force to reckon with, yes because they understand, they have been part of the process and now they are actually putting the aspiring political leaders to task and saying whoever wants to be a leader here this SPA must be approved, we must see development, I think they’ve actually demanded for change. ”

Marion Rono Deputy Director of Housing and Urban Renewal, Nairobi Metropolitan Services

Focus group interview on 29 July 2022.

Beyond Mukuru, the Approach and Strategies Used Hold Promise for Locally Led, Inclusive and Multisectoral Upgrading for Climate Resilience

Upgrading informal settlements reduces climate vulnerability. The risks faced by those living in informal settlements are often not catastrophic or even episodic, but “everyday” – associated with poverty, informality, inadequate basic infrastructure, weak governance, and exclusionary planning.¹⁸ The Mukuru approach shows much promise for locally led upgrading for climate resilience. Its integrated approach addresses multiple intersecting challenges and is appropriate for the complex, challenging environments common in rapidly urbanizing African cities.



“Mukuru as a model of community-government [partnership] to solve problems in informal settlements can be applied in many places. And Mukuru has very hard conditions, which means, if it can work in Mukuru, it can work anywhere else. [...] It has also told us that government can actually build infrastructure [on] land which even belongs to private because it is their duty in terms of the Constitution.”

Professor Peter Ngau Department of Urban and Regional Planning, University of Nairobi

Focus group interview on 29 July 2002.

Although more can be done to assess and anticipate future climate-related risk, addressing existing gaps in service provision has already reduced residents’ climate vulnerability. Mukuru’s experience demonstrates a locally led and inclusive pathway towards climate resilience that can inform similar efforts in cities around the world.

Key Resources on the Mukuru SPA

- The **GUIDES AND METHODS** in this Guide
- The Muungano Alliance’s Mukuru SPA webpage
- *Achieving Scale, Social Inclusion, and Multifaceted Shelter Solutions: Lessons from the Special Planning Area (SPA) in Mukuru, Nairobi*¹⁹
- *Scaling participation in informal settlement upgrading: A documentation of community mobilization and consultation processes in the Mukuru Special Planning Area, Nairobi, Kenya*²⁰
- *Enabling participatory planning to be scaled in exclusionary urban political environments: lessons from the Mukuru Special Planning Area in Nairobi*²¹
- Mukuru Special Planning Area: Integrated Development Plan Report²²
- Mukuru Integrated Development Plan²³

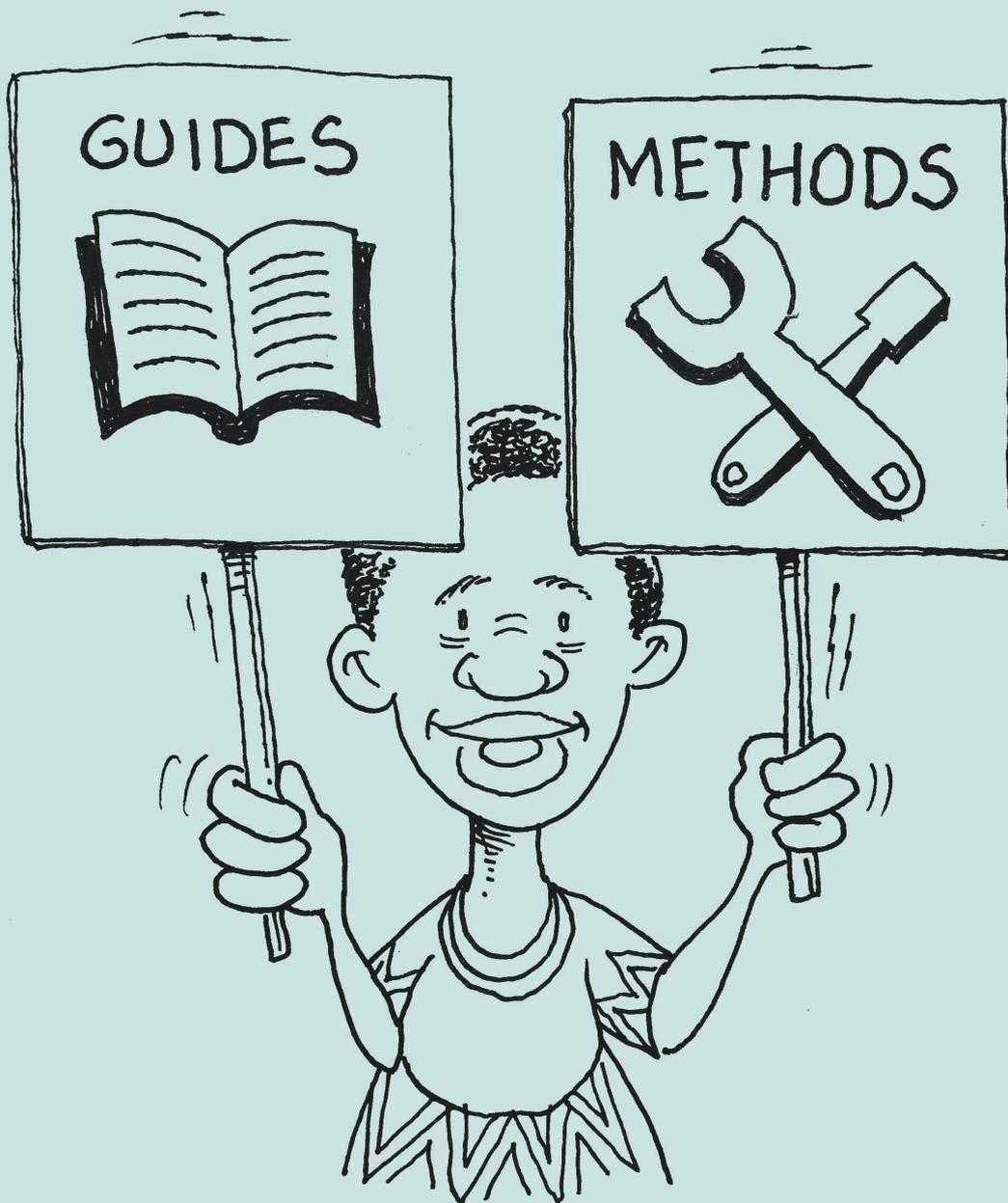
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Guides and Methods



How to Navigate Guides and Methods

Themes

GUIDES AND METHODS are organized by theme (e.g. Roles; Community Co-planning; etc) and modularized by topic so that you can more easily pick and choose what is most relevant for your work.

Sections

GUIDES AND METHODS include the following sections:

Section	About	Guide	Method
Who	Target audience(s)	✓	✓
What	High-level description of topics covered	✓	✓
Why	Relevance and objectives for undertaking activities	✓	✓
Where	Location, context and legal considerations	✓	✓
When	Timeline considerations; political and other timing considerations	✓	✓
How	Practical considerations for undertaking activities	✓	✓
Considerations	Questions for translating concepts to your unique context	✓	✓
Challenges	Challenges you may face in undertaking activities	✓	✓
Examples from the field	Case studies that provide real world examples (in particular from the Mukuru SPA)	✓	✓
Materials	Any materials required	–	✓
Example materials	Any relevant templates (with example answers)	–	✓
Related components	Links to related Guides, Methods and Videos	✓	✓
Sources	Sources used to develop guide/method	✓	✓
Additional resources	Any other relevant resources	✓	✓

Audience

The “**Who**” of **GUIDES AND METHODS**. Each **GUIDE AND METHOD** has target audiences to help you navigate to the ones that are most relevant to you. Because all the guides and methods are broadly of interest to all of the audience “personas”, the **Who** is divided into two tiers:

- **Most useful for:** The primary audience — all sections of the guide/method are important for you, in particular the **How, Considerations, Challenges, Examples from the Field, Materials** and **Example Materials** sections.
- **Also useful for:** While not the primary audience, the guide/method will provide you with information on important concepts also applicable to your work. For guides/methods, you should focus on the high-level sections like **What, Why, Where** and **When** over the other, more detailed how-to sections.

Persona

Definition

Local Champions	Proponents of locally led action in government, civil society and other local organizations
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Community

Residents	Community leaders, activists, mobilisers, youth leaders and other residents in informal settlements
CBOs	Community-based, local grassroots organizations
Urban Poor Federations	National grassroots networks for social movements of the urban poor (e.g. Muungano wa Wanavijiji, National Slum Dwellers Federation and Mahila Milan, Federation of the Urban Poor)

Civil Society

Federation-support NGOs	National NGOs that are allied with urban poor social movements (e.g. Slum/Shack Dwellers International-Kenya, Akiba Mashinani Trust, SPARC India, etc)
NGOs	National and international NGOs
Academia	Universities, think tanks and action research networks

Government

Local Governments	Staff in local government departments (e.g. urban planners, engineers)
Political Leaders	National and subnational elected officials and political appointees

International Institutions

Funders	International and regional multilateral and bilateral development banks and other international finance institutions as well as NGOs
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ROLES

Determining Roles

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Determining Roles

Locally-led, participatory and multisectoral upgrading at scale requires a broad array of roles, drawing leadership, sector knowledge and technical expertise from communities, local government and civil society as well as academia and the private sector. Building partnerships between historically adversarial parties and convening a broad array of organizations is needed to navigate local politics, overcome resource constraints and achieve genuine co-planning between communities and local government.



Who

Most useful for:

- Local Champions
- Local Governments
- Federation-support NGOs
- NGOs

Also useful for:

- Residents
- CBOs
- Academia
- Political Leaders
- Funders
- Urban Poor Federations

What

Upgrading informal settlements is as much a political process as a technical one. There is no formula or neat sequence – it is a complex process and highly subject to local dynamics. You will encounter many challenges and setbacks. Invest in people who can draw on their relationships, resources and creativity to convene the necessary leadership and expertise.

When starting out, the roles and the responsibilities of different stakeholders will not be clearly defined. Indeed, roles should not be predefined; they should instead evolve with the upgrading initiative, as it will be subject to highly local factors like existing networks, relationships, adversaries, available resources and expertise, and political will.

Strong leadership is essential. Leaders in local government know best how to navigate departments to recruit people and leverage resources. Civil society leaders can fill gaps, recruiting needed expertise and mobilizing resources when required. Community leaders know the settlement best and can spread awareness of the initiative and its goals, convince residents of its value, and mobilize them to participate.

A central champion and steward and central leadership team is crucial for holding all the partners together and keeping all the parts of the process moving towards the same goal. Planning is an inherently political process; leaders must articulate a compelling vision and cultivate alliances that will keep the process going through challenges and setbacks.

Assess who has the greatest expertise and will be best positioned to play different key roles throughout the process. This will be important for [Recruiting and Training Community Mobilizers and Co-Researchers](#) and [Forming Interdisciplinary Consortia](#). See [How](#) for more detail.

Why

Upgrading must be locally-led, both from within informal settlements and within local government. Communities know best what challenges they face and what appropriate interventions should include (and exclude). Short of meaningful inclusion and decision-making power, residents will mistrust, resist and even hinder the process. Local governments are obligated, and best positioned, to plan and develop crucial basic services for their citizens. Civil society provides the glue between communities and local government as well as needed expertise and resources for planning at scale. Partnerships between these parties are crucial; strive to build partnerships where the roles of each will complement and support the other.

In addition to convening many institutions and organizations to provide needed leadership, expertise and resources, partnerships are also important for building momentum and spreading out buy-in and responsibilities so that the process can survive inevitable setbacks and challenges

like changes of government and partners dropping out. It is also important not to rely on a single organization for community engagement; informal settlements residents often represent a diverse set of socioeconomic and ethnic groups. Engage with residents as broadly as possible through CBOs and locally-rooted NGOs to include a broad array of perspectives, interests and buy-in across these different groups. Additionally, leverage affiliations with groups in other settlements to learn from their experiences and to strengthen community strategies during the upgrading process.

Broad, inclusive partnerships across interdisciplinary networks create the synergies needed for urgently addressing infrastructure deficits and building climate resilience in informal settlements. Their ingredients cannot be decomposed into discrete pieces and moved from city-to-city. They must instead be locally-sourced to adequately leverage available leadership, expertise and resources.

Finally, because informal settlements are complex development environments, planning is political first and technical second. The required institutional capacities and resources will never be readily available – you must instead rely on dedicated people and the great things they are able to do when working together towards a common goal.



“ We learned from [the Mukuru Special Planning Area that] you don’t need to be perfect in your work. Planning is a process and at one point you need to be satisfied that you don’t have the most perfect processes at that particular time, and it is good enough, you can move on and continue. So, I think sometimes it’s good to be satisfied and not always [seek] perfection and of course continue improving on things as [you go]. But, you just need to be good enough to get to the next step. ”

Jane Weru Executive Director, Akiba Mashinani Trust (Nairobi, Kenya)

Personal communication, 17 June 2022.

Where

Developing an upgrading plan is a highly local process. Partners should be locally-based and offer local knowledge and expertise. It can also be useful to include regional and international players but they should play a supportive role for local institutions and processes, not a leadership role.

The process should also be community-rooted; plans should go beyond investments in infrastructure to cultivate leadership and decision-making power in informal settlements. This helps ensure locally-appropriate plans, better distribution of benefits and more enduring

partnerships between communities and local governments to continue building resilience after initial investments are made in the most urgently needed services.

When

Coordinating locally-led, multisectoral and participatory upgrading initiatives is not a neat or linear process. Determining roles and building partnerships will be an ongoing process. Invest early in thinking about what institutions and organizations are best suited to play different roles and how to enlist their support. Do your best to convene the right institutions, expertise and people to keep the many parts moving together. Continue to build relationships to support the process as it grows and to overcome ongoing challenges and setbacks.

How

Determine Key Roles and Responsibilities

Assess who has the greatest expertise and will be best positioned to play different key roles throughout the process. This will be important for [Recruiting and Training Community Mobilizers and Co-Researchers](#) and [Forming Interdisciplinary Consortia](#).

Key roles are discussed in the following sections.

Advocacy

Community organizers: An upgrading initiative will not emerge from a vacuum; communities must organize around key needs and threats before they will have the capacity to advocate for planning and development at scale. Activists and other organizers play a key role in building communal consciousness and awareness of issues and bringing residents together to find common cause.

Action researchers: Civil society and academia with expertise in action research methods collaboratively undertaken with communities are important for building an evidence base to advocate for upgrading.

Community co-researchers: Community leaders play an important role in action research for advocacy. They facilitate entry into the settlement where residents will likely be distrustful of outsiders and wary of researchers that come and go without producing any tangible benefits for them. They will also play an important role in recruiting and training additional co-researchers and community mobilizers in subsequent phases once there is commitment from government to undertake upgrading.

For more, see [NEGOTIATION AND ADVOCACY](#).

Central Leadership

Central leadership team: Likely comprised of local champions from government and civil society who are dedicated to the process and resourceful in the face of ambiguity and setbacks. The importance of this role cannot be overstated: this team must hold all the pieces of the puzzle together and keep all actors, and their competing interests, moving towards the same goal. Their leadership will be important for navigating political challenges throughout the process, from advocacy and inception to planning, implementation and iteration. Without a dedicated central leadership team, the process will be fallible to becoming overly technical and therefore will likely stall and even disintegrate when it inevitably encounters political hurdles and unforeseen challenges. Because upgrading is a highly political process, there is no technical formula; you must instead invest in people who can draw on their experience, leadership skills, relationships, resources and creativity.

Persuading potential government, civil society and academic partners will require dedicated local champions to steward the process. To start, this leadership team does not need to be formally organized. They should rely on their existing relationships to begin articulating a compelling vision and build momentum. This will be important for both identifying and convincing partners to join.

It is crucial to formulate a clear message of the benefits of the approach and consistently articulate a vision that captures the interests of different potential partners and presents compelling reasons for them to engage in an unknown and ambiguous process. In particular, they must clearly demonstrate the need for community participation and ownership in the process and the value of collaboration between community, government and civil society partners. Core responsibilities include:

- **Champion and steward:** Leaders must consistently champion the initiative and steward the process through its many challenges (such as navigating the inevitable turnover of local government staff and elected officials).
- **Envision and motivate:** Planning is an inherently political process not just a technical one. Leaders must articulate a compelling vision that motivates partners to join and stay engaged throughout the process.
- **Cultivate alliances:** Rely on leaders' knowledge and relationships to identify key players and build partnerships with local institutions, government departments, elected officials, civil society leaders and academics. Each will play important roles.
- **Recruit partners:** Determine what expertise and resources are needed and identify organizations that can provide them.
- **Coordinate partners:** Coordinate inter-consortia collaboration to harmonize sectoral plans. Organize inter-consortia meetings every few months during the planning period where consortia members can present their work and get input from other consortia.

- **Lead technical teams:** In some cases, these leaders will also lead technical teams in each sectoral consortium (or, at the least, help recruit technical leads for consortia).
- **Lobby:** Advocate for resources for planning and implementation, including pilot implementation projects. Lobby for ratification of the upgrading plan.
- **Communicate:** Share pertinent information about progress, opportunities and challenges with different teams and consortia that will be important for their work (and filter out any information that would complicate or confuse them).

Central champion and steward: While participatory upgrading at scale requires leadership across government, civil society and community, and partnerships are crucial to its success, even a central leadership team will at times need sustained leadership from one person who can own coordination of all the moving parts. This person should have deep experience working in the settlement and extensive relationships across government, civil society, academia and the private sector. Other leaders must know and trust her or him and s/he must be able to stay on message and consistently and tirelessly persuade different factions to stay true to their commitments and the goals of the process.

Constituency Leadership

Local government leaders: Leaders in local government know best how to navigate internal politics to manage staff and leverage resources. Their leadership also provides institutional legitimacy and access to public funding. Crucially, enlisting local government departments enables scaling of planning and development so that it goes beyond the small, piecemeal interventions typical of community and civil society projects.

Leadership from within departments is also important because staff and elected leaders who oversee departments can manage their own colleagues. And civil society can set aside its traditionally adversarial role for driving government action.

Local government leaders should also help lead technical, sectoral planning consortia. While they may not lead technical work, they need to champion the work of technical consortia members within internal government processes to ensure they have the time and resources required. They should also convene public meetings in the settlement to demonstrate to disbelieving residents that the upgrading initiative is an official government process.

Local elected and administrative leaders: A settlement can fall within multiple, overlapping jurisdictions [e.g. ward chiefs (national government); elected members of county assembly and county and subcounty administrators (local government)]. Because upgrading is a political process as much as it is a technical one, you must ensure they are aware of the initiative and its goals and secure their buy-in. They can help build greater trust in the process for residents. Their awareness and participation also helps deter their opposition to or even direct sabotage of the process.

Civil society leaders: Civil society leaders should help build a coalition across stakeholders from government, community, civil society, academia and the private sector. They can also fill gaps, recruiting needed expertise from civil society organizations and mobilizing resources when required. This leaves government free to focus on government while civil society leaders can focus on civil society and their traditional community and academic allies.

Community champions and stewards: Like other constituencies, communities also require central leadership to champion the initiative and steward the process through its many challenges. These will likely be residents with experience talking to fellow residents and working with civil society organizations and other external groups. They could be local elders, CBO leaders, leaders within grassroots social movements like urban poor federations, savings group leaders or any other resident with the capacity, experience and commitment to lead. The upgrading process will provide opportunities for new leadership within the settlement, in particular by those who have not traditionally held local positions of influence, including women, youth and disabled people.

These leaders should also provide oversight of the technical planning process by forming part of the consortia planning teams and working closely with partners.

Community

Community mobilizers and co-researchers: Central to a community's capacity to co-plan with local governments, mobilizers undertake data collection and mobilize other residents to participate in the planning process. More than anyone, they will champion the process through patient dialogue and the many negotiations required with diverse community stakeholders.

Mobilizers are important for ensuring household level participation and representation as they will recruit and train household representatives to participate in community planning forums. They also play an essential communication role, spreading awareness, answering questions, and combating misinformation. Using their local knowledge and the trust they have with their fellow residents, they start and guide dialogues among residents and patiently engage residents to overcome misunderstandings, resistance, fear and hostility. Finally, they facilitate the negotiation of scarce space and access to benefits by building community ownership throughout decision-making processes.

Mobilizers do not need to have prior experience engaging in settlement-level activities. Women and youth can make good candidates (they may be available at different times of the day to undertake data collection, especially those without permanent employment). To provide diverse representation, they should be selected considering residence location, gender, age, ethnicity and a proven commitment to the process.

Mobilizers can also foster horizontal and vertical accountability throughout the planning process by mediating community conflicts and misunderstandings and informing local officials of progress. This can serve to build new relationships between communities and government. It can also lead to mobilizers gaining trust and stature in their communities because of the confidence the training and mobilization processes give them to speak out and lead. For some, it may even lead to new opportunities like jobs with NGOs and even potential nominations as political leaders.

“ I as a mobilizer I was used to mobilize those participants as she has said because we have seen what the problem is and who is involved with water, education and who is also involved with the houses also, so we came together and talked, we encouraged each other that we must walk and see that Mukuru has been declared as an SPA because it's us who need it. All these planning if we don't do it like that, there is no way we will be included in the planning. The money from the government does not reach to us because there are no plans. So the plans are for us to push the government so it can understand us, our problems to reach them so that we can benefit from the services from the government. ”

Joseph Mwenja Community Mobilizer – Riara, Mukuru Kwa Njenga

Mukuru Kwa Njenga community, personal communication, 15 June 2022.

Household representatives: Representatives will form cells, clusters and segments to provide household-level representation in the planning process. They will be drawn from a plot or grouping of about ten households to form cells. In turn, cell representatives will select one person to represent them in clusters (of about 10 cells / 100 households). Cluster representatives then select from among themselves to send people to represent them in community planning forums at the segment level (one to three areas/neighborhoods). To learn more about the community representation model, see [Community Mobilization, Organization, Representation and Coordination Strategy](#).

Representatives can be any resident – tenant, structure owner, service provider, etc (but should not be outsiders). Household-level representation plays a crucial role in the planning process – for the majority to have influence over planning decisions, broad scale mobilization is necessary. Importantly, broad representation counteracts the special interests and hidden agendas of minority stakeholders. For example, a small-scale informal service provider may want to steer planning decisions during meetings in his favor so that it is less disruptive to his business. While this might benefit service providers, it would be detrimental to the majority. If all households have a voice in planning forums, it becomes much more difficult for these types of minority interests to influence plans. The majority households will speak in their interest when given adequate representation.

Local media: While community mobilizers (and the community engagement and coordination team from civil society) play the most important role in spreading awareness about the

upgrading initiative across the settlement and educating residents, local media can also provide an effective medium for communication. This could be in the form of a local radio station or newspaper in the settlement. Assess what local media is available and if residents actively consume it or not.

For more, see [COMMUNITY TRAINING](#) and [COMMUNITY CO-PLANNING](#).

Civil Society

Community engagement and coordination: A pivotal role, people with extensive experience working in the settlement are needed to coordinate the engagement of consortia with residents and other co-planning activities. This team will also likely play an important role in [COMMUNITY TRAINING](#) and [COMMUNITY CO-PLANNING](#) activities, in particular the [Community Mobilization, Organization, Representation and Coordination Strategy](#). They can also serve as a critical interface for communication between residents and local government and civil society stakeholders. Members will likely be community leaders, CBO and federation leaders, federation-support NGOs and other locally-rooted civil society organizations. Responsibilities include:

- Interfacing between planning consortia and residents.
- [Recruiting and Training Community Mobilizers and Co-Researchers](#).
- Supporting data collection for technical sector plans.
- Supporting the mobilization and organization of and communication between community stakeholders.
- Coordinating community planning forums.
- Reporting to planning consortia what is happening in the community planning process.
- Signaling when conditions are ready for planning consortia to begin engaging residents in planning.
- Managing negotiations between residents and planning consortia.

Perhaps most importantly, this team facilitates debate among residents, mediates disputes and guides residents while they make planning decisions. They also support community mobilizers to navigate community politics.

Academia: Professional researchers can support the process by providing oversight and validation for sectoral data collection. They can also provide broader perspectives to leaders during the process, sharing key case studies and other useful information from other cities and countries. Importantly, they can also lend legitimacy to the process by supporting evidence-based planning.

Technical Planning Consortia: Staff from Local Government, Civil Society and the Private Sector

Once the planning phase begins, central leadership will quickly realize that participatory planning at scale cannot be achieved by one party alone. It requires coordinated effort and resources from communities, local government and civil society. In particular, neither local government nor one civil society organization will have all the required technical expertise in-house to undertake necessary planning activities.

To solve for this, leaders should recruit experts from leading civil society organizations in each sector to contribute their specialized knowledge to consortia and provide additional capacity for local government departments (they may also provide links to sources of development financing to complement local government resources).

Consortia also provide opportunities to minimize competition between civil society organizations that might otherwise undermine the process. Partners can also pull and pool more resources for planning. Finally, local governments partnering with civil society leaders can link local government to broader processes of governance.

Consortia also provide an effective way to involve departments across local government instead of just the planning and housing departments.

For more, see [Forming Interdisciplinary Consortia](#).

Technical leads: Each consortium will need one leader from local government that understands the inner workings of the department to meet institutional requirements and one lead civil society organization with expertise in the given sector to lead technical planning work.

Spatial planners: Manage spatial considerations of sectoral plans; through the community coordination team, negotiate space with residents; and coordinate other technical aspects of sector plans (in particular housing, circulation infrastructure and associated services like water, sanitation, storm drains and electricity). Likely comprised of urban planners from government and civil society as well as community leaders.

Sectoral planners: Co-design data collection tools with residents to fill gaps in sectoral information, participate in community planning forums, develop sector briefs and technical sector plans, work closely with the spatial planning and leadership team to harmonize sectoral plans and their coordinated implementation. While the other primary roles likely only require one team each, sectoral planning teams should be organized into consortia by themes, such as the Water and Sanitation Consortium, the Public Health Consortium, etc. These will be likely comprised of engineers, urban planners and professional researchers from government, civil society and academia.

Engineers: Develop detailed infrastructure designs for implementation of sector plans. Ideally, each consortium will include organizations with technical engineering expertise. If not, the consortium should pull and pool resources to hire consultants.



Build Partnerships to Fill Key Roles

Building partnerships will not be a linear, formal or one-and-done process. It will be ongoing and partnerships and roles will shift as the upgrading process evolves. The central leadership team should use their networks to identify candidates for different roles. To persuade them to join, they should speak to their interests. However, the team should also clearly and consistently articulate the vision for the process, its primary beneficiaries and main goals. Where they diverge, organizational commitments should serve the agenda of the upgrading initiative instead of their own agendas.

For more on recruiting and building organizational capacities to undertake locally-led, multisectoral and participatory upgrading work, see these Guides:

- [Recruiting and Training Community Mobilizers and Co-Researchers](#)
- [Forming Interdisciplinary Consortia](#)

Considerations

What if needed expertise does not exist locally?

Look beyond your city or even your country if need be. But be selective — only enlist organizations that will contribute tangible expertise and resources and that will commit to the process. Otherwise, enlisting them will not provide meaningful input or outcomes and make already challenging coordination work even more difficult.

Challenges

Sustained Leadership

An undertaking as complex and politically challenging as participatory upgrading at scale requires persistent champions and dedicated stewards. However, if the responsibility for carrying the project forward is placed in few hands, this can compromise a project's momentum, longevity and ultimate success if these few stewards do not continue to play their crucial roles. This is more likely to happen than not, as stewards encounter challenges navigating political turnover, in their personal life, or simply grow tired. To overcome this, spread out the entry points for participation, buy-in and responsibilities as much as possible from the start so that the project is less dependent on a few people and possibly even gain some institutional momentum in the local government.

Unknown, Ambiguous Process With no Precedent

Given that this approach to upgrading will be unfamiliar to many and therefore represent an ambiguous process with little precedent, you may encounter skepticism, misunderstanding and lukewarm commitment (if not outright dismissal). And because many organizations will be involved, each may seek different outcomes that best serve their vision for, and interests in, the project. Civil society organizations and local government departments may also be unaccustomed to working together. They may also be uncertain what outcome the process will have. This can all add up to a risky proposition for potential partners. You can overcome this by persistently repeating the project vision and sharing examples from successful projects. Also look for small wins to demonstrate tangible outcomes as you go.

Lack of Community Networks Organized At Scale

Without social movements like urban poor federations, mobilizing residents at scale will likely prove challenging and perhaps even impossible. In this case, start small to learn. During this period, invite experienced practitioners from other cities and countries for learning exchanges. Once you have gained sufficient experience in mobilizing residents to co-plan and convening interdisciplinary expertise, you can attempt greater scale.

Different Interests of Partners

Partners will have a variety of interests. You can minimize this by recruiting organizations that are already doing work that aligns with the goals of the upgrading initiative so that their contribution helps them achieve their own organizational goals at the same time. Also ask stakeholders to openly discuss their interests so that you can provide opportunities to serve their goals without compromising the goals of the overall initiative.

Interests of Minority Community Stakeholders

Stakeholders like structure owners and informal service providers will likely oppose and even hinder the upgrading process as improved housing and services can undermine their businesses. To counteract this, be strategic with what plans include. For example, you may not want to start with housing so that structure owners do not become adversaries from the start. In general, engage all stakeholders and stay on message. Highlight how they can still benefit from the process. And be prepared to negotiate with them as needed.

Hidden, Unspoken Agendas

If not accounted for, hidden agendas can become landmines that will derail the process. Counteract this by mobilizing as broadly as possible to bring out the majority. If all households have a voice in planning forums, it becomes much more difficult for special interests and hidden agendas of minority stakeholders to influence plans. The majority households will speak in their interest when given adequate representation.

From Planning to Implementation: Diminished Roles for Communities and Civil Society

While local government and other partners may value community inclusion and participation during the planning phase, there will likely be a risk of this being lost when implementation begins. Including communities in implementation may be less of a priority for government and may not be required in public participation laws. Government may minimize the community's role to unskilled or semi-skilled labor. Counteract this by co-developing an implementation framework with residents, continuing to hold community meetings to provide forums for feedback, and carrying out participatory monitoring and evaluation activities.

Examples from the Field

Mukuru, Nairobi (Kenya)

The Mukuru SPA broke new ground on partnerships between local government, communities, civil society and other institutions. Its success is in large part due to these partnerships. Testimonies about the importance of involving a broad array of actors in the upgrading process are recorded below.

“ Unless we put together the different stakeholders, and the different actors that were required to address the complexities in Mukuru [we would not be able to plan at scale]. So, part of the planning process was identifying all the actors within Mukuru; the health sector, education, we appreciated that [several organizations had] a long history in working in the informal settlements, so, we realized we needed the expertise that exist within the villages and also the knowledge that exist within Mukuru; the various organizations that were working within Mukuru so we could all be able to address the complexity within the area. That is something that we had not done before, with so many institutions across so many disciplines, and across so many groups, from NGOs to civil society, to private sector to county government and within its different departments. ”

Jane Weru Executive Director, Akiba Mashinani Trust

Personal communication, 17 June 2022.

“ I think also how the SPA was organized; it had a lot of tolerance, so, organizations joined the sector they were working in, the expertise that were there, so, they just saw SPA as a way of continuing supporting their work because they had expertise in that area, so for them is a continuation of their work, even if they do it for free, they are also trying to advance the interest they have in that sector. They saw SPA as a way of trying to make it easier for them to project the area they have interest in. ”

Patrick Njoroge Program Manager, Akiba Mashinani Trust

Personal communication, 17 June 2022.

“ WSUP’s initial motivation was to see improvement in water and sanitation especially in low-income areas and so the SPA came as a partner and we joined to partner with the same sanitation specialists because that is what we were doing, and when we came in we sat and saw that, yes, this is aligning with what we are doing and already we were working within the same area, we were working within Mukuru, so it was a big opportunity also for us to improve on what we were already doing. ”

Nancy Wanyinyi Project Manager, Water and Sanitation for the Urban Poor (WSUP)

Personal communication, 27-28 April 2022.

“ Following the gazettement of the SPA coming out from the previous government, we were involved, it was our duty to give water and sanitation services as its part of our work, we are the leads of the county government in water and sanitation so it was our goal to improve the water and sanitation aspect of the SPA. ”

Kagiri Gicheru Manager of Informal Settlements Region, Nairobi County Water and Sewerage Company

Personal communication, 27-28 April 2022.

Related Components

Guides

- [Recruiting and Training Community Mobilizers and Co-Researchers](#)
- [Forming Interdisciplinary Consortia](#)

Sources

Coordination, Community Organisation and Communication (CCOC) consortium. (2022, June 17). [Focus group interview by B. Hicks]. Mukuru SPA documentation 2022, Gracehouse Resort, Nairobi, Kenya.

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NEGOTIATION AND ADVOCACY

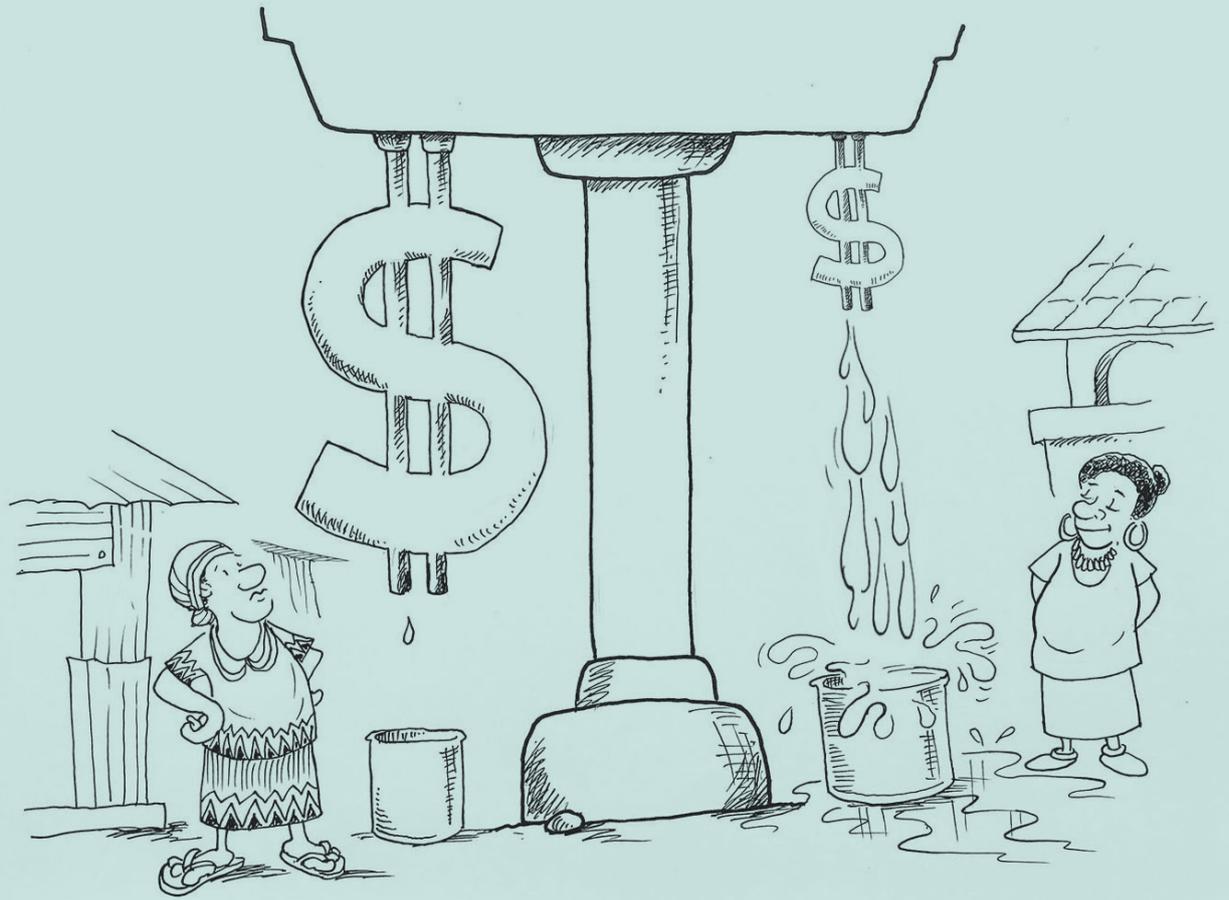
Measuring the Poverty Penalty

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Measuring the Poverty Penalty

Contrary to popular belief, the urban poor are often willing and able to pay for basic services. In fact, informal settlement residents often encounter a poverty penalty, paying more for lower quality water, sanitation, electricity, housing and other goods and services than residents in nearby formal neighborhoods. Measuring the poverty penalty, and associated service provision and revenue opportunity for local utilities, can provide compelling evidence to persuade local decision-makers to upgrade basic infrastructure and services in informal settlements.



Who

Most useful for:

- Local Champions
- Academia
- Local Governments

- Federation-support NGOs
- NGOs

Also useful for:

- Funders



What

Huge disparities in access to, and quality of, basic services (housing, water, sanitation, electricity, cooking fuel, and waste collection) often exist between formal and informal areas of cities. Public utilities and other service providers typically do not invest in infrastructure to serve residents on land with insecure tenure (whether publicly or privately owned).

Small-scale, informal service providers fill this unmet demand by selling basic services to residents. Because they are essential services, residents are willing — and often prove able — to pay inflated prices. While some informal providers are residents and operate as micro-businesses, others inevitably band together — resident and non-resident alike — to form local cartels that exploit the lack of governance to fix prices. This is the source of the poverty penalty the urban poor are forced to pay to secure basic services. It is also the source of indirect costs to their safety, time and dignity.

A **price penalty** is when a household pays an above-average price per unit for a good or service.

A **quality penalty** is when a household pays the same price for an inferior good or service.

A **poverty penalty** is when the poor must accept both a price and a quality penalty for a good or service.

Informal service providers are typically unregulated and often operate illegally. This makes it difficult for residents to identify them or to demand lower prices and higher quality and safer services. Most providers finance their businesses from personal savings as well as family and other informal savings groups. Because of the inflated prices they can charge due to high demand and low supply, they are often able to recover their capital outlay in a relatively short period of time. At the same time, they often create barriers to entry for other would-be informal service providers; these include intimidating residents who complain or attempt to access formal services and damaging services infrastructure that would undermine their businesses.

Despite these detrimental practices, they provide essential services. They do this by overcoming the operational cost barriers to scaling down to 'micro-consumers' that many formal service providers encounter. However, because there are typically many autonomous providers, it is often challenging to tax their revenues.

The gap in service provision, the potential revenue and residents' willingness and ability to pay presents a compelling opportunity for public utilities and other formal service providers. To measure the poverty penalty, first collect or source households' expenditures data in your settlement. Also procure price data for the same services from nearby formal neighborhoods. Using the average cost per unit (e.g. Ksh X per Y liters of water), compare the price differences between formal and informal for different services. See [How](#) for more.

Beyond its value for advocacy, this method also supports situational analyses of existing conditions for associated sectors. In turn, other metrics from situational analyses can provide context and framing for poverty penalty findings.

Why

While the fact that the urban poor pay more for accessing basic goods and services is well documented, it is not widely known by local policymakers and elected leaders. Measuring the poverty penalty challenges the commonly held belief that informal settlement residents pay relatively little for inferior services. Services are actually quite expensive, demonstrating residents ability and willingness to pay. This, in turn, dispels the myth that government must create special budgets to finance services in informal settlements. Instead, access for the poor and operations for the provider are the main challenges.

The quality, availability and accessibility of basic services provided by small-scale, informal service providers and cartels is typically far below commonly accepted standards. Residents must tolerate exploitative rents, open sewers, ubiquitous garbage, unsafe drinking water, dangerous, unstable electricity connections and noxious fumes from unclean cooking fuels.

This penalty contributes to poor public health conditions and even environmental degradation. It also impacts residents' ability to meet individual and community needs and their overall wellbeing and dignity. For the most vulnerable residents, it can create an intergenerational poverty trap. Unaddressed, other policy measures and plans for improvements in informal settlements will likely fall short.

The fact that residents can and will pay for services, even at a higher cost, presents an important opportunity for public utilities and other formal service providers to sustainably meet their obligations to provide services while, at the same time, improving public health conditions and expanding their revenue base. Additionally, small-scale informal service providers represent a vibrant but untaxed economy that could be leveraged to fund short- and mid-term improvements to infrastructure.

The service provision and revenue opportunity can also help make the case for improving land tenure. Improved tenure security supports improved access to better services at a lower price, for both consumers and suppliers. Finally, the poverty penalty likely indicates residents' willingness to engage in co-planning efforts to improve services.

The poverty penalty clearly demonstrates the urgent needs of residents and provides a compelling message to garner the attention of policymakers, utilities and even the media. It will also likely capture the interest of local elected representatives as informal settlements often represent a significant political constituency.



“ The issue of the poverty penalty when it was brought to us [in the city government] – of course we knew that people in the settlements pay; they do not have formal supply. But when the issue of the poverty penalty was brought out, it actually made us think of how selfish it actually was for people in the formal settlement areas to pay much less than what the people in the informal settlements were paying because it was basically penalizing people for being poor. I think this also prompted us to really see how we can start thinking about equity; because this was actually a big issue of inequality, in terms of infrastructure and supply of other services. ”

Marion Rono Deputy Director of Housing and Urban Renewal, Nairobi Metropolitan Services

Personal communication, 29 July 2022.

Maintaining infrastructure and collecting revenues will still present a significant operational challenge for utilities. To confront this challenge, explore alternative service delivery models to strategically and pragmatically overcome last mile service provision challenges. These models can help eliminate predatory informal service practices while at the same time recognizing how informal service providers can contribute their local expertise. This can also support the local economy and maintain livelihood opportunities for small-scale providers.

Where

The insecurity of land tenure and lack of formal service provision that create a poverty penalty will be common in many, if not most, urban informal settlements. Therefore, this method will likely prove relevant and valuable where you work.

National and local laws may or may not require local utilities to keep and publish price data. If data is not available or difficult to procure, it may make price comparisons between informal and formal services more difficult. You can overcome this by surveying residents in formal neighborhoods as well (though this will likely prove costly).

Like other metrics, collecting data and doing analyses citywide will further strengthen your case and support your advocacy efforts.

When

Providing evidence of the existence and magnitude of a poverty penalty is most valuable during the advocacy phase. It can provide potent evidence to persuade local governments to commit to an upgrading initiative. The period before elections can be a particularly fruitful moment to present evidence of a poverty penalty to political candidates and to ask for their commitment to supporting planning and investment in basic services once elected.

How

Procure Data on Household Expenditures Within the Settlement

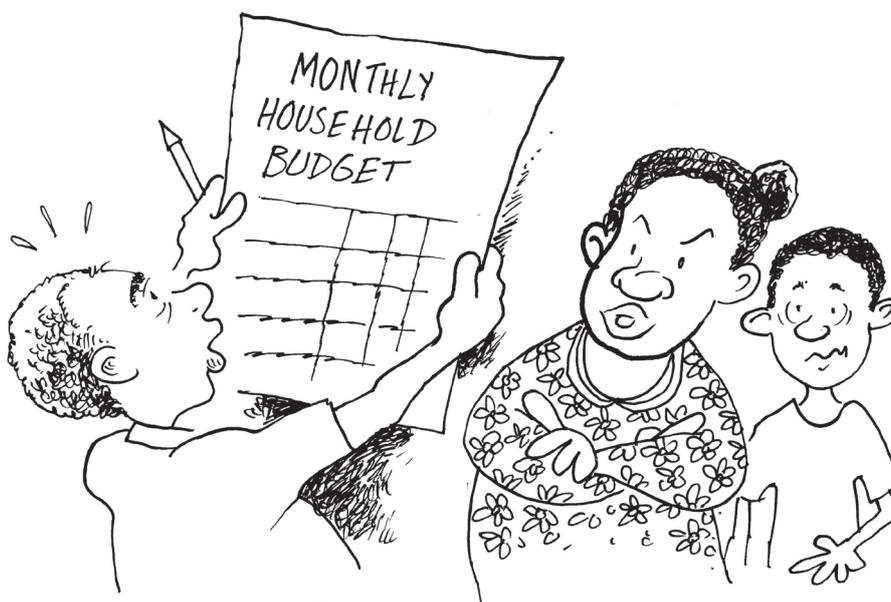
If good data already exists, use that to create a typical monthly household budget for the settlement. This will allow you to estimate:

- the price differences per unit with formal neighborhoods; and
- the overall size of the informal economy for basic services.

It is likely that no good data will already exist. You will therefore have to conduct a survey on household expenditures. In the survey, collect data on the **amount**, **quantity** and **frequency** for each service (for instance, Ksh 20 for a 20-liter jerry can of water bought daily; Ksh 2600 in rent for a 10 square meter room monthly). Each data point is important for calculating costs and comparing them:

- **Amount:** Money spent for the good or service by the household (for a given quantity and frequency).
- **Quantity:** How much of the good or service that the household consumes for the amount spent; this allows you to normalize costs to per unit prices so that you can then compare costs in the settlement to nearby formal neighborhoods.
- **Frequency:** How often the household purchases the good or service. This allows you to create a monthly household budget so that you can estimate the overall size of the informal economy for basic services (as well as compare monthly costs with households in formal neighborhoods).

These data could be collected during [Settlement Profiling, Household Numbering and Enumeration](#), or in a separate effort. See [Example Materials](#) for more.



Procure Data on Prices From Nearby Formal Neighborhoods

Many public utilities and other service providers are required to publish their fees and use data for public use. Source these data however you can, from utilities' websites or by talking to staff. For housing costs, interview reputable real estate agents about typical rent prices.

Determining cost per unit could be as simple as finding the published price. However, keep in mind that some utilities use tiered pricing systems. If possible, you could also analyze any publicly available data on household expenditures to find average prices per unit consumed.

Estimate Average Prices Per Unit

For the formal neighborhoods, you may already have the price per unit. For the informal settlement, you will likely have to estimate this number yourself for each service. To do this simply and accurately,* you need to compare prices for the same/similar quantity of the good or service. To achieve this, you may need to adjust the household expenditures data.

To adjust expenditure numbers:

- 1. Identify atypical instances:** Identify all the households where costs were reported for an atypical quantity (e.g. if a survey respondent reported his rent for a 15 square meter room when the typical room size is 10 square meters).
- 2. Adjust atypical instances:** For each atypical instance, adjust the price by calculating the cost per unit then multiplying the cost per unit by the typical quantity (e.g. the respondent said his rent for a 15 square meter room is Ksh 3400, so divide 3400 by 15 to get 226.66. Then multiply 226.66 by 10 to get Ksh 2266).

* You cannot take an average of averages, so you cannot simply find the average price and the average quantity and then divide the average price by the average quantity (hence the need to adjust atypical expenditure numbers).

Compare Informal vs Formal Prices Per Unit to Estimate Price Penalties

Once you have the average prices per unit for both informal and formal, compare the two. This yields easy-to-understand and often compelling statistics that clearly demonstrate price penalties paid by informal settlement residents for the same or poorer quality services. You can use these numbers in your reports, presentations and conversations for advocacy efforts.

Use These Two Formulas

Percent difference

$$\frac{|a - b|}{(a + b) \div 2} \times 100$$

Where **a** stands for the informal price per unit and **b** for the formal price per unit. Divide the absolute value of **a** minus **b** by half of **a** plus **b**. Then multiply by 100 to get the percent difference.

Alternatively, you can just search the web for “percent difference calculator” and let any of the freely available calculators do the math for you.

Number of times greater

$$a \div b$$

Where **a** is the larger number and **b** the smaller number. Divide **a** by **b** to get the number of times greater.

Examples of Price Penalties for Different Services

Service	Average price per unit		Difference	
	Informal	Formal	Percent	Times greater
Housing	Ksh 26.43 per ft ²	Ksh 21.01 per ft ²	23%	1.26x
Water	Ksh 150 per m ³	Ksh 55 per m ³	93%	2.7x
+ another service				

Substantiate the Poverty Penalty

This method provides information to estimate the price penalty. To substantiate a poverty penalty, you also need to provide evidence of a quality penalty (when a household pays the same price for an inferior good or service). While the inferiority of services might be widely accepted and be self-evident to anyone living in or visiting the settlement, you should still provide examples of the quality penalty to put the price penalty in context. Draw from other research in the settlement about living conditions or work with residents to provide testimonies and photos.

Estimate the Size of the Informal Economy for Services

In addition to the price penalties for services, also try to estimate the total size of the informal economy for services. This figure will help policymakers and formal utility providers see the opportunity to sustainably meet their obligations to provide services while, at the same time, improving public health conditions and expanding their revenue base. Additionally, small-scale informal service



providers represent a vibrant but untaxed economy that could be leveraged to fund short- and mid-term improvements to infrastructure.

The total size of the informal economy is simply the total expenditures for all residents for rent and basic services. You should estimate the size for all services you have data for. Calculate it by multiplying the estimated total number of households in the settlement by the average monthly expenditure for each service. Then, add those numbers together.

Housing	<u>Ksh 2,643 per month</u>	x	101,000 households	=	Ksh 276 million economy per month
Water	Ksh 90 per month				
+ another service					

Considerations

[Does a poverty penalty exist in our city?](#)

Most likely, yes. But, policymakers and formal service providers likely do not know about it and will need to see evidence of it to believe it. They may assume that because informal settlement residents are poor, they pay less (for low-quality services) and that extending formal service provision to them will not be sustainable. Use this method to demonstrate that the opposite is true and that there is a big opportunity for them to provide services, improve public health, and expand their revenue base.

[Will providing evidence of a poverty penalty be sufficient to persuade our local government to upgrade services in our settlement?](#)

It may not. While evidence of a poverty penalty often offers a compelling, clear reason to upgrade services, do not limit your research and advocacy to it alone. Despite being a potent example, the poverty penalty is just one among many challenges that demonstrate the urgent need for upgrading. For example, evidence of disease prevalence (e.g. cholera) and the risk of outbreaks spreading across the city when residents go from their homes to jobs in other areas. While there are many reasons to upgrade an informal settlement, not all of them will capture the same level of attention or will build the political will needed to overcome institutional inertia and entrenched systems of inequality and patronage.

Look for evidence that will:

- demonstrate the interdependence between informal settlements and the rest of the city;
- substantiate the magnitude of need while also demonstrating opportunities to improve conditions to meet institutional obligations and international commitments; and
- play to the political interests of local and even national decision makers.

Challenges

Persuading Policymakers

Don't rely on evidence of the poverty penalty alone. Without access to local government leaders who are positioned to champion an upgrading initiative, the poverty penalty likely won't be enough. Rely on relationships of the research team and other partners to have key conversations with decision makers. Also seek attention on the research findings from local media outlets. This can raise the profile of advocacy efforts and put pressure on local politicians to pay attention and act. Finally, if possible publish your research in academic fora; this can lend the evidence additional legitimacy as well as longevity and therefore greater replicability.

Last Mile Service Provision

Evidence of the poverty penalty alone will not overcome difficult last mile service provision challenges. In many informal settlements, the gap in service provision is filled by small-scale, informal service providers. Extending basic infrastructure like water mains and trunk sewer lines into settlements will not resolve last mile challenges alone. Predatory informal service practices will still prevail and the environment itself will still prove challenging for maintaining infrastructure without local support.

To pragmatically overcome last mile service provision challenges, explore alternative service delivery models. These models can help eliminate predatory informal service practices while at the same time recognizing how informal service providers can contribute their local expertise. This can also support the local economy and maintain livelihood opportunities for small-scale providers.

Examples from the Field

Mukuru, Nairobi (Kenya)

In 2016, building on the momentum for devolution sparked by Kenya's new Constitution and years of community mobilization by the Muungano Alliance, the residents of Mukuru and their university partners presented compelling evidence on a poverty penalty to local government and political leaders, debunking the belief that informal settlement residents were too poor to pay for basic services.

Starting in 2013, an action research team comprised of residents, urban poor federation leaders, local civil society organizations, federation-support NGOs, and local universities conducted research on living conditions and land tenure, among other topics. This included a survey that assessed the provision of, access to, and control over basic services for residents in Mukuru. These data formed the basis for measuring the poverty penalty in Mukuru. For example, they found that water is sold by informal service providers using fragile pipes that break easily, resulting in water

contamination that causes frequent disease outbreaks. Moreover, residents suffered a poverty penalty, paying 170 percent more for lower-quality service than the rest of the city.



“ Action research [supported by IDRC] had revealed significant shelter deficits and predatory informal service provision: Mukuru residents, with no other option, paid far more per unit for lower-quality shelter and services than residents in nearby formal estates – nearly four times more for water, twice as much for electricity and 20 percent more for rent. Despite these high costs, there was a thriving informal economy estimated at 59 million US dollars annually, demonstrating that residents could pay for service delivery, a fact that garnered the attention of policymakers and the media. For public utilities, it demonstrated that they could provide services sustainably and at the same time improve public health conditions in Mukuru. It also captured the interest of local representatives as Mukuru represented a significant political constituency. ”

Jane Weru Executive Director, Akiba Mashinani Trust

Personal communication, 2 August 2022.

Because Mukuru was a significant political constituency, the advocacy team lobbied during the lead up to the elections for the declaration of a Special Planning Area (SPA), seeking a political commitment from the Nairobi city government to intervene in the settlements. They relied on evidence of the poverty penalty paid by Mukuru residents for essential services. These efforts secured crucial buy-in from the city government. Without these political champions, the SPA process would have been severely limited in its scope and impact or never happened at all.

Materials

1. Household expenditures survey (see [Example Materials](#)).
2. Tabular price datasets for rent and services like water, sanitation and electricity.
 - a. In target informal settlement.
 - b. In adjacent formal neighborhoods.
3. Computer with spreadsheet software.

Example Materials

[1] HOUSEHOLD EXPENDITURES SURVEY		Form last updated Sep 2022		
1	Data collector name	<i>Patrick Njoroge</i>		
2	Data collector contact	<i>075600091</i>		
3	Date	<i>13 October 2022</i>		
A. Location Information				
A1	Settlement name	<i>Mukuru Kwa Njenga (MN)</i>		
A2	Area name	<i>Riara (R)</i>		
A3	Block name (if applicable)	<i>Block A (A)</i>		
A4	Structure number	<i>001</i>		
A5	Unit number	<i>A</i>		
A6	Complete unit code	<i>MN/R/A/001-A</i>		
B. Respondent Information				
B1	Respondent name	<i>Eddy Otieno</i>		
B2	Respondent ID number	<i>2790598</i>		
B3	Respondent gender	(a) Female (b) Male (c) Other		
B4	Respondent age	<i>27</i>		
B5	Head of household?	(a) Yes (b) No		
C. Household Expenditures on Services (Ksh)				
	Service	Amount	Quantity	Frequency
C1	Rent	<i>2000</i>	<i>10 square foot room</i>	<i>Monthly</i>
C2	Water	<i>5</i>	<i>20 liter jerry can</i>	<i>Daily</i>
C3	Toilet/Sanitation	<i>30</i>	-	<i>Daily</i>
C4	Electricity	<i>500</i>	-	<i>Monthly</i>
C5	Cooking fuel	<i>100</i>	<i>1 liter of kerosene or bucket of charcoal</i>	<i>Daily</i>
C6	Waste collection	-	-	-
C7	Health services	<i>350</i>	-	<i>Monthly</i>
C8	Medication	<i>300</i>	-	<i>Monthly</i>
C9	Education services	<i>1000</i>	<i>School fees for one student</i>	<i>Monthly</i>

Related Components

Methods

- [Settlement Profiling](#)
- [Household Numbering and Enumeration](#)

Sources

Email correspondence with Mary Mutinda (October 2022)

Mutinda, M., Mwau, B., Makau, J., & Sverdlik, A. (2020). [Rethinking slum upgrading in light of Nairobi's poverty penalty](#). Slum Dwellers International - Kenya.

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Muongano wa Wanavijiji/Akiba Mashinani Trust (2020). [Unlocking the Poverty Penalty and Upscaling the Respect for Rights in Kenya's Informal Settlements](#). International Development Research Centre.

Housing, Infrastructure and Commerce consortium (2022, July 29). [Focus group interview by B. Hicks]. Mukuru SPA documentation 2022, Gracehouse Resort, Nairobi, Kenya.

Weru, J. (2022, August 2). On-camera interview by B. Hicks. Mukuru SPA documentation 2022, Akiba Mashinani Trust office, Nairobi, Kenya.

Additional resources

For more on how the poverty penalty can marginalize the poor in markets for basic goods and services, and different strategies for addressing it, see:

Mendoza, R. U. (2011). [Why do the poor pay more? Exploring the poverty penalty concept](#). *Journal of International Development*, 23(1), 1–28.



COMMUNITY TRAINING

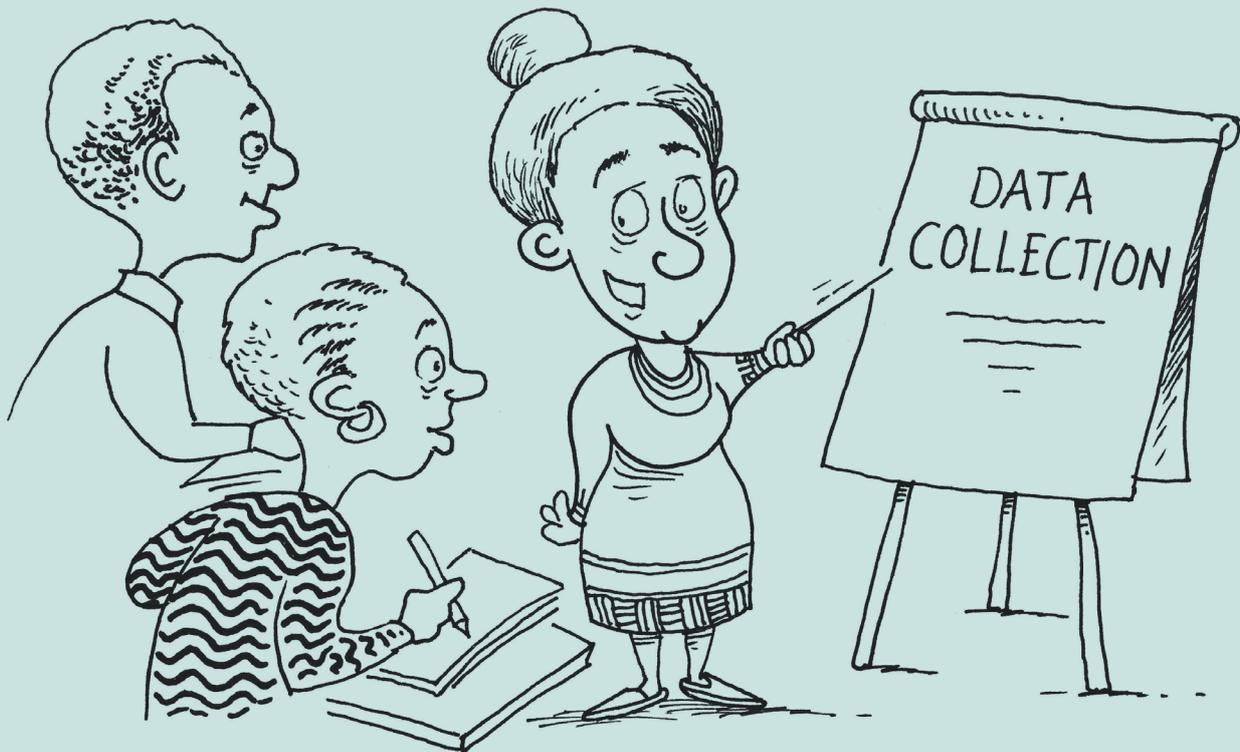
Recruiting and Training Community Mobilizers and
Co-Researchers

75



Recruiting and Training Community Mobilizers and Co-Researchers

Recruiting and training residents to undertake data collection and mobilize other residents is central to a community's capacity to co-plan with local governments. Enduring investments in informal settlements require building more than just infrastructure. Resilience demands investment in local leadership and community capacities and livelihoods. The concepts in this Guide are foundational for the Guides and Methods in [COMMUNITY-LED DATA COLLECTION](#) and [COMMUNITY CO-PLANNING](#).



Who

Most useful for:

- Local Champions
- Residents
- CBOs
- Urban Poor Federations
- Federation-support NGOs

Also useful for:

- NGOs
- Academia
- Local Governments



What

Recruiting residents to be trained and work as co-researchers and community mobilizers is an essential component of locally-led, participatory and inclusive informal settlement upgrading for climate resilience. It supports both advocacy for a local government commitment to an upgrading initiative and subsequent research, planning and even implementation activities.

Co-researchers are residents that are recruited to undertake data collection and other research activities in collaboration with action researchers and planning professionals from local government, NGOs and academia. **Community mobilizers** organize residents to co-plan with local government and other development partners. In practice, these are most often the same people. However, to undertake larger data collection processes like **Household Numbering and Enumeration**, additional data collectors in each area will likely need to be recruited and trained by co-researchers (who may not work as community mobilizers).

Local community leaders will help facilitate entry into the settlement and, in turn, recruit other residents to participate in the training process. Train a core set of co-researchers and community mobilizers who can then recruit and help train additional residents from their areas/neighborhoods (using a ‘training of trainers’ model). Recruit residents from as many areas/neighborhoods as possible so that everyone is invited to participate and so that they can support additional recruitment, training, mobilization and planning activities across the settlement.

Develop training materials according to the level of experience of recruits and the specific challenges the upgrading initiative seeks to address. This should include both technical training (e.g. data collection) and interpersonal skills training (e.g. leadership, communication, facilitation).

Use a process of action–reflection–action: training should be a mix of classroom learning and field tasks for practical learning. As challenges arise during the training, data collection and community mobilization process, discuss them in the classroom and come up with effective strategies for dealing with them together, in particular for approach, communication, group facilitation and conflict resolution. Also include additional training topics as needed as they come up. See **How** for more detail.

While the focus of recruitment and training should be on the core tasks of data collection and community mobilization, organizing small **savings and loans groups** in parallel can complement and expand upgrading activities. However, savings groups should not be the main organizing strategy as not all households will have the willingness or resources to join savings groups. Through savings groups, residents can expand their livelihood opportunities, and



Trainees in class in Mukuru (2018).

improve their living conditions. Through the practice of savings and loans, they can also gain valuable experience that builds a credit history. This is useful to access credit finance from either the government or the private sector. In addition, savings can support access to any low-cost, social housing programs from the government.

“ Our work was to also give information. Because they also say information is power. It was to inform the community that there is SPA coming and it has been gazetted Mukuru as a Special Planning Area. Number two was also to do door-to-door campaigns to sensitize people that this thing is there and it involves us community members. So that was also our work. Number three was also to organize those home cells and educate them that SPA is coming and it will help in this and that in the community. ”

James Musembi Community Mobilizer – Sinai, Mukuru Viwandani (Nairobi, Kenya)

Personal communication, 18 May 2022

Why

Involving residents at scale is essential for fostering shared ownership of the upgrading process. Ownership helps ensure more locally-appropriate plans and better outcomes. There is no formula for a successful upgrading initiative; instead, invest in residents’ capacities so that they can become its champions and work together to steward the process through its many challenges, setbacks and pitfalls.

Not only are outsiders (whether civil society staff or hired consultants) too few and costly to undertake data collection and planning alone, involving residents at scale is crucial because they know their neighborhoods best; will be trusted because their neighbors know them and are distrustful of outsiders; and will benefit from training to build greater capacity and expertise locally. Most importantly, residents can begin to understand their challenges collectively instead of individually, enabling them to speak together during negotiations and work together during planning.

Through training, data collection and mobilization activities, residents can begin to know each other and their settlements better. Residents cannot organize themselves if they do not know each other. Communities can only move themselves if they have internal facilitators to navigate the many internal and external challenges they will face. Practically, this can look like mobilizers learning how to approach local officials (e.g. ward chiefs and administrators) and gain confidence to work with them. Or, it could be mobilizers bringing residents together to ask local political candidates to pledge to support their upgrading initiative if elected.



“ I think if SPA was being led by outsiders, most of the things we have got, we couldn't have got them since outsiders don't know what we are going through. They don't know what we need. ”

Priscila Onyango Tenant – Bins, Mukuru Kwa Reuben (Nairobi, Kenya)

Personal communication, 20 May 2022.

Mobilizers play a pivotal role in ‘leaving no one behind’, a central principle for locally-led planning that seeks to involve all residents – independent of their gender, age, affiliations or status – in every stage of the process. To achieve this, recruit mobilizers from all stakeholder groups, in particular the most marginalized groups (e.g. tenants, women, youth, disabled people) but also groups with vested business interests in the status quo (e.g. resident structure owners, small-scale informal service providers).

There are many reasons beyond improved infrastructure and services to invest in recruiting and training residents to build their technical capacities and interpersonal and leadership skills. Residents of the Mukuru informal settlements in Nairobi, Kenya, who undertook a large-scale participatory planning process called the Special Planning Area (SPA) with the city government, attested to these benefits.

“ SPA has taught us one thing as a community, it has taught us about skills that is communication skills, listening skills and teamwork. Because if you want to succeed in something, you can't succeed alone, you must be in a team and a team that is focused and understands each other. ”

Emily Wanyama Community Mobilizer – Rurie, Mukuru Kwa Reuben (Nairobi, Kenya)

Personal communication, 20 May 2022.



“ Through the SPA we are doing in the community, I have been able to grow. I didn't know how many villages are there in my settlement, I was able to know, I was also able to know the chairmen in those villages, I discovered a lot of things about Mukuru at large. I knew how to mobilize and bring people together, before I didn't have the courage to bring people together, I was not courageous enough to address a committee. But now I can say that it has empowered me because I got a chance to sit with the county government, I have talked to the county officials until they understood that in informal settlements there are women who do not want to be pulled backwards, we need change. ”

Christine Mwelu Community Mobilizer – Lunga-Lunga Centre, Mukuru Viwandani (Nairobi, Kenya)

Personal communication, 18 May 2022.

“ I learned several things and they have helped me now in that I undertake/do several things in the community and one of them is research. Now the information I got from the SPA in regards to the eight consortiums helped me in the work that I do right now. It was empowering because I got knowledge from there, I got to understand how the county government works in several areas. ”

Lijodi Linneah Musimbi Tenant – Riara, Mukuru Kwa Njenga (Nairobi, Kenya)

Personal communication, 15 June 2022.



“ So for us mobilizers, we have benefitted by being teachers of groups, we have been able to be recognized by other NGOs. Because were taught how to collect data, we have been able to take that information to other groups, so no wonder we are doing well. ”

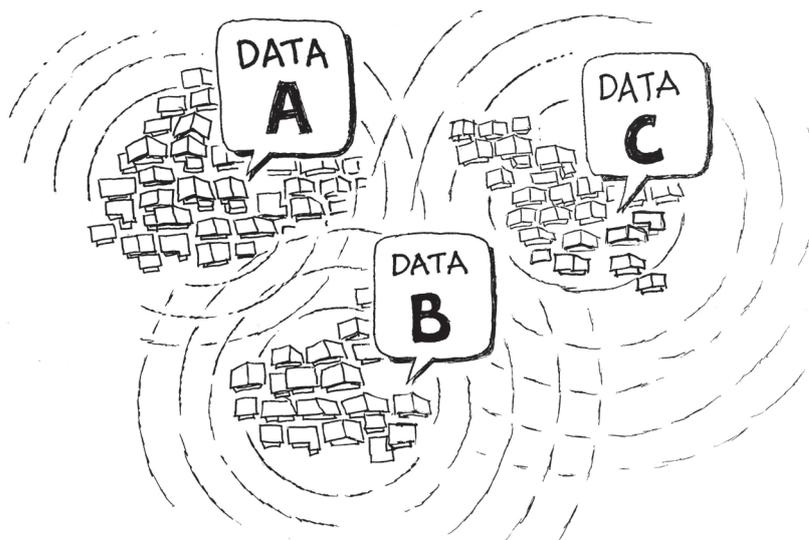
Edith Murage Community Mobilizer – Kingstone, Mukuru Viwandani (Nairobi, Kenya)

Personal communication, 18 May 2022.

Where

Trust is often scarce in informal settlements. Co-researchers and community mobilizers must be locals from each area/neighborhood. Residents will not trust outsiders, including residents from nearby areas in the same settlement, because they do not know them.

Residents are used to being taken advantage of; recruiting locally therefore is essential for building trust.



If not possible to recruit and train residents from all areas/neighborhoods in the settlement, begin where there is greater interest and/or need. Other areas can be included once there is greater understanding of, and confidence in the process.

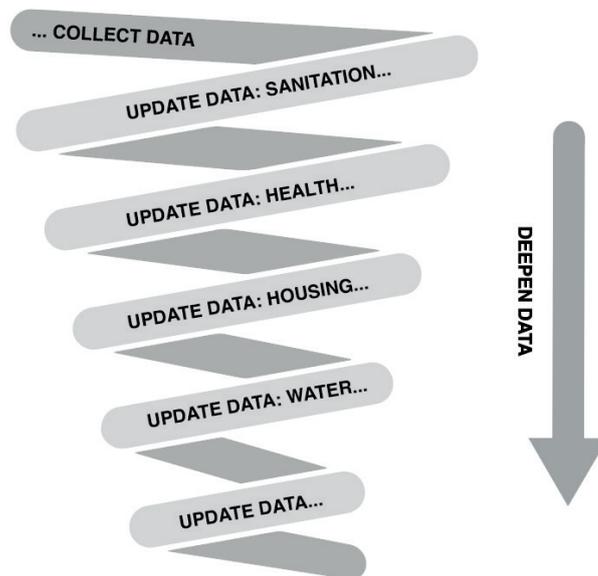
Community methods training and data collection often follow a concentric instead of linear pattern. This is because community mobilizers and co-researchers often start in familiar territory in their own neighborhoods and expand out from there. The data collection processes also typically don't have one beginning or end point, instead happening iteratively. Civil society or CBOs often undertake the initial training of local leaders and other motivated residents (youth can be excellent candidates because they learn quickly and may not be employed). Once this initial class of co-researchers and mobilizers is trained, they can recruit additional candidates in their neighborhoods to be trained as well.

When

Recruitment and training typically happens before the planning phase. It supports advocacy, data collection and mobilization and builds the local systems needed for community co-planning at scale.

The time required for training will depend on the scope of the current upgrading initiative. Only do as much as is required when it is required. You can build on this for ongoing efforts as needed. Training for data collection can take as little as one to two weeks (but to deepen skills for larger-scale initiatives, can take up to three months). Training for community mobilization and organization can take up to three months. Additional training that may be needed as the process progresses might add a few weeks to a month or two.

Community training is not a one-and-done process. In the context of resource-poor informal settlements, data collection, mobilization, and planning activities have significant costs — you should only do as much as is required at the time to further current advocacy and planning efforts. The environments in informal settlements also change rapidly and data will quickly become out-of-date. Therefore, training is a highly iterative process. You will continually return to sectors to update data and fill in gaps where data lacks the depth needed for detailed sector-level planning.



How

Determine Scope

Before you recruit co-researchers and mobilizers, you first need to establish the scope of the upgrading initiative.

- How many households are there in the settlement or target area? This will determine how many co-researchers and mobilizers you should recruit. The number is subject to the needs, opportunities and constraints in your settlement. But, a general rule of thumb is five to ten residents per cluster (of up to 1000 households).
- What are the main challenges the initiative seeks to address? While the data collection and mobilization activities that co-researchers and mobilizers undertake will largely determine challenges and priorities, there are likely some prominent, visible challenges that can help shape the initial set of topics for trainings.

Develop Training Materials

Priority topics for training sessions will depend on the prior experience residents have and the most pressing challenges in the settlement. Below is a list of general topics to include in trainings, divided by technical (hard) skills and interpersonal (soft) skills. Use this list to begin creating an appropriate training curriculum. You do not need to develop — and likely will not have — all the topics before starting trainings. Develop the curriculum and materials for the first set of trainings (likely data collection methods and associated soft skills like communication and contact building and rapport); you can develop other topics as needed as they arise during the training process. Keep in mind that the training process is intended to build the confidence of trainees as much as their technical skills.

Draw from the Guides and Methods in [COMMUNITY-LED DATA COLLECTION](#) and [COMMUNITY CO-PLANNING](#) to begin developing technical training curriculum.

Training Topics

Technical Training

Hard skills

Data collection methods

- Settlement Mapping
- Settlement Profiling
- Household Numbering and Enumeration
- Risk Profiling: Identifying Risks, Assessing Solutions and Determining Community Priorities

Data collection practices

- Key informant interviews
- Focus group discussions
- Filling out data collection forms
- Quality checking data collection
- Compiling data
- Validating data

Community mobilization and organization

- Formation of cells
- Consolidating cells into clusters and segments
- Social investigation
- Meeting minutes/note taking

Planning and implementation

- Issue identification, development, framing and prioritization
- Visioning
- Roles and functions of local government officials and departments
- Community governance systems for operation and maintenance
- Monitoring and evaluation

Documentation

- Minutes and report writing
- Photo and video documentation

Key sectoral challenges (e.g. health and hygiene, disaster management, etc)

Approach/Interpersonal Training

Soft skills

Leadership

Communication

Contact building and rapport

Group and individual dynamics

Meeting facilitation

Meeting presentations

Expectation management

Conflict resolution

Recruit Residents

To begin, recruit an initial class of residents that will form a core team of co-researchers and mobilizers. This team can then continue the recruitment process as more people are needed for subsequent data collection and mobilization activities as the upgrading initiative progresses.

Recruit this initial class from different areas/neighborhoods across the settlement. Engage leaders in each area (e.g. elders, CBO and federation leaders, etc) and ask them to nominate residents (five to ten per cluster of up to 1000 households). It is essential to recruit people locally in each area/neighborhood as residents will not trust people they do not know, even residents from other parts of the settlement. Make sure that different socioeconomic groups (people of different genders, ages, incomes, educational levels, occupations, and disabilities) are represented equally.

To give the training course greater weight, it is a good idea to provide a 'letter of admission' to trainees. You can also include details on the course goals, schedule, topics and outcomes (see [Example Materials](#)).



Organize the Training Schedule

While you should schedule training sessions according to residents' general availability and what makes the most sense, it is a good idea to hold sessions weekly. **For every group, schedule one class for every one to two 'segments'** (segments are groupings of one to three areas/neighborhoods). The number of trainees per group will vary but should not be more than 80 people.

For trainees, this means attending one class per week of about 3 hours each. For trainers, it means leading one class for every group. The number of weeks or months this requires depends on the level of experience of trainees and the data collection and mobilization activities they are to carry out.

A typical schedule might look like this:

3 months	Data collection
3 months	Community mobilization, organization and coordination
1–2 months	Additional topics and skills as needed

For classrooms, use what community spaces are available (e.g. church, social hall, community center, etc). When possible, organize horizontal learning exchanges with other communities in your city (or even other cities or abroad) that have experience in the methods and skills you seek to teach. Learning exchanges are an invaluable practice for community work.

Determine Course Format

The course format will likely evolve during the process to meet the training needs and local traditions.

A typical format might look like this:

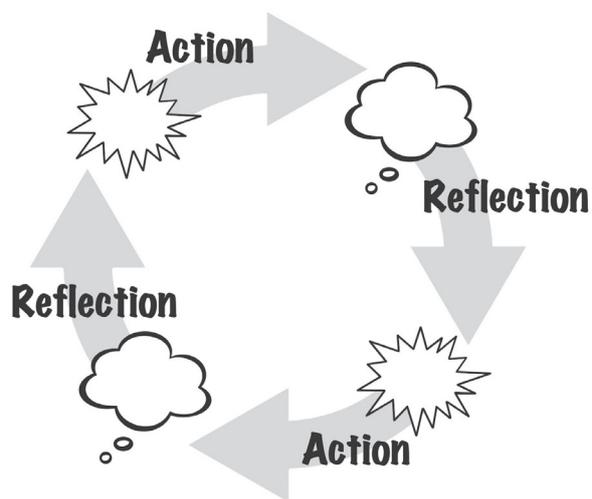
Introduction	Welcome; introduce session’s topic; select someone to take meeting minutes/ notes; sign attendance form; etc.
Review	Note taker from the last session summarizes what was covered for their fellow trainees.
Report, reflect and discuss	As a group, both trainees and trainers discuss and provide feedback as each trainee reports on their field work from the previous week, challenges they encountered as well as lessons, insights, and questions. It is also an opportunity to fix any errors in data collection. <i>This discussion will inform topics and activities for subsequent sessions.</i>
Discuss new topic	Introduce new skill or topic; discuss in-depth; answer trainee questions.
Assign practice	Based on the topic as well as reflection of the previous week, assign field tasks to be completed by each trainee before next class.

Keep in mind that learning about approach and interpersonal skills will most often happen simultaneously with technical skills training, not as separate, standalone training sessions. These soft skills are essential for carrying out the technical tasks for data collection; community mobilization, organization and coordination; and planning and implementation.



Official documents support the training process. These include (also see [Example Materials](#)):

- A course schedule and curriculum (to help trainees navigate the course).
- A certificate at the end of the training for those who complete it (to recognize the work that trainees did).



Train Recruits: Data Collection

Training in **COMMUNITY-LED DATA COLLECTION** methods should be hands-on. Co-researcher trainees will likely struggle to understand and remember how to use the methods without putting the skills into practice. Also, given resource constraints in informal settlements, training should also double as actual data collection.

You will likely start with **Settlement Mapping** and **Settlement Profiling** to support advocacy for a declaration or commitment by local government to undertake an upgrading initiative. Other methods like **Household Numbering and Enumeration** and **Risk Profiling: Identifying Risks, Assessing Solutions and Determining Community Priorities** can be taken up later once they are required.



Photo Credit: Akiba Mashinani Trust

Trainees in class learning about filling out data collection forms in Mukuru (2018).

In each class, discuss and demonstrate how to undertake methods. Then assign trainees field tasks to practice. In the following session, invite each trainee to share their challenges, lessons, insights, and questions. Discuss as a group and ask other trainees to provide feedback.

To demonstrate both challenges and successful approaches, have trainees role play. For example, if a trainee says they struggled to fill out the profiling survey with a household, ask them to reenact the exchange so both trainers and trainees can better understand their challenges and provide feedback. The same can be done for trainees that had few challenges to demonstrate to others what approach they used.

This is also an opportunity to fix any errors in data collection and practice quality checking each other's work. You should also cover how to fill out data collection forms, conduct key informant interviews and focus group discussions, compiling data, and validating data.

These sessions are also opportunities to discuss and learn the essential **interpersonal skills** needed for successful community work. In particular, leadership, communication, contact building and rapport, and individual dynamics. While you may deem it useful to hold individual sessions for these skills, you may find that they are best covered here for their role in facilitating technical work.

Note that some people may struggle initially to participate because of a lack of confidence. Practicing skills, in particular interpersonal skills, in the classroom will be particularly important for them to build confidence.

Train Recruits: Mobilization, Organization, Representation and Coordination

For **COMMUNITY CO-PLANNING**, community mobilizer trainees need training in mobilizing residents, organizing them into location-based groups of neighbors (cells of 10 households and clusters of 10 cells), guiding them to select representatives to enable coordination and communication of planning activities from the household level up to cells, clusters, and segments (groupings of one to three areas/neighborhoods). Learn more about these ideas in **Community Mobilization, Organization, Representation and Coordination Strategy**.

These trainings will take a similar format as data collection, pairing classroom learning with field-based learning. Using maps created during data collection, community mobilizers will identify plots and individual households to group into **cells**. In the classroom, trainees practice talking about what the upgrading initiative is about and what it hopes to achieve for residents (both in terms of services and local capacities). Then have trainees practice their mobilization, communication and leadership skills as they organize residents into cells and help residents select their cell representatives.

Also have them invite cell representatives to a training session. Trainees will explain what the upgrading initiative is, what it hopes to achieve, why it's important, and how work will be done with the cell, cluster and segment representatives. Trainers can support trainees to present and facilitate discussion as needed.

Community mobilizers can then begin to form **clusters** of 10 cells (100 households). At this point, mobilizers should start holding cluster meetings to begin discussing residents' issues and priorities. Mobilizers will go to their cluster meetings together; two can facilitate the meeting, two can take minutes, and other mobilizers can support as needed or simply observe. Introduce the idea of discussing challenges by sector/theme (e.g. water and sanitation, health, education, etc) to give focus to the discussions (and to support subsequent sectoral planning).

Mobilizer trainees should then discuss and reflect in class to learn from each other and get

feedback from trainers. The facilitators can discuss challenges and successes in leading meetings and managing participants; minute/note takers can compare their notes and discuss how to improve them; and other trainees can share their observations.

Starting in class, all trainees should learn **how to take meeting minutes** (day, time, venue, attendee names, and what was discussed throughout the meeting). At the beginning of each class, select one or two trainees to take minutes. They should then report what happened in that class at the beginning of class the following week. They can then practice this skill in the field during cluster meetings. Note that meeting minutes will not be records that are kept to

GATOPÉ CLUSTER	NO. OF STRUCTURES	HOUSEHOLDS FORMS FILLED	CELLS CONTACTS	SUB CLUSTERS OF 100 HS
A	368	2/3 698	33/70	7
B	308	3/3 445	26	
C	156	2/3 414	16	
D	421	1/3 381	18	
RURIE	103	66/52	93/198	54%
A	180	247	15	
D	12	302	126	
E	170	300	162	20
				2
				4423

Photo Credit: Akiba Mashinani Trust
 Trainees in class learning about community mobilization in Mukuru (2018).

be shared with planning consortia. They instead serve to support the process of community organization, coordination and communication, aid mobilizers to convene and facilitate meetings as they go, and help mobilizers reflect on the process and keep track of meetings as the process progresses.

As with data collection, these sessions are also opportunities to discuss and learn the essential **interpersonal skills** needed for successful community work. In particular, leadership, communication, contact building and rapport, and group and individual dynamics, meeting facilitation, meeting presentations, expectation management, and conflict resolution.

Train Recruits: How to Deal With Challenges

Throughout the training process, challenges will arise for trainees. These should come out in the classroom and inform both the content of training sessions and additional training topics to be covered in additional sessions as needed.

In particular, challenges will come up regarding **group dynamics, expectation management** and **conflict resolution**. Plan on discussing strategies for dealing with these challenges throughout training sessions as well as scheduling sessions to cover them in greater depth. Key strategies include recognizing personality differences and inviting stakeholders to think about these differences and set the expectation that others do not need to think like or agree with you; inclusion of all stakeholders regardless of status, affiliations, gender, age, occupation, income, etc; and patient dialogue.



Photo Credit: Akiba Mashinani Trust

Trainees in class learning about conflict resolution in Mukuru (2018).

Train Recruits: Other Topics As Needed

Both through discussion of challenges in the classroom and discussions in cluster meetings, trainees should help assess the need for training in additional topics. Beyond challenges, these could include education about sectoral challenges (e.g. health and hygiene, disaster management, etc). Schedule additional training sessions as needed.

Considerations

Who should co-researchers and community mobilizers be?

They can be any resident – tenant, structure owner, local leader, etc (but should not be outsiders). Women and youth often make good candidates as they may have more time free during the day. In particular, seek out people that demonstrate commitment to community work and data collection processes.

Should we compensate community mobilizers and co-researchers?

Yes, provide some small compensation as possible. Residents' time is precious and few may be able to contribute consistently without some consideration of the cost of their time. However, it should likely be volunteer-based and therefore not remunerated like a job. The funding needed for remuneration could severely limit the scope of community research and mobilization activities.

When and where should training sessions be held?

It is a good idea to hold training sessions weekly during the training period. Do not hold them during the main work hours as they are educational, not a job to be remunerated. However, they should likely be held on a weekday so that when trainees do field tasks, they have the weekend between sessions to engage residents who are not available during the day on weekdays (because they are at work).

Trainings should be held in the area where trainees live so they can easily attend. Use any community centers available, including at churches, mosques, schools and social halls.

Challenges

Data Collection Errors

Errors are inevitable, especially when community co-researchers have little experience in data collection. You can minimize errors by starting small. This way, co-researcher trainees can make mistakes, discuss together and learn so that once they scale up they are better prepared. This approach also saves resources, minimizing work that would need to be redone during quality checks by other co-researchers and during the community validation process.

Residents' Distrust and Misinformation

Residents in informal settlements have faced a long history of land grabs and evictions as well as many development projects that have failed to produce tangible results. There are also inevitably opportunists inside and outside the community that will seek to use upgrading efforts to their own benefit. Residents are therefore often skeptical of upgrading projects and fearful when they see you walking around with a map in your hand. Some residents will resist the process and you may even be threatened. You can overcome this through patient dialogue, inviting trusted local leaders to speak about the project, inviting local government staff to speak to residents, and striving to provide near-term, incremental benefits to build confidence in the process. It is also essential to include community participation from the start as residents will not trust people they don't know. Additional strategies include: training a core team that understands the method and its promise for bringing benefits to the settlement; and involving trusted local leaders, including from the local government administration (e.g. ward chiefs).

“ We were trained, we did mapping, and after mapping we did data collection. During data collection is where we experienced a lot of challenges because here in the slum when someone sees you standing on their door and you are writing things, they want to know what you want to do. So we tried explaining to them that this is not [only] a Muungano project but also the government is involved but it took time. ”

Caroline Aluoch Community Mobilizer – Uchumi, Mukuru Viwandani (Nairobi, Kenya)

Personal communication, 18 May 2022.



“ Mobilizers encountered challenges, when we went on the side of structure, the people who attacked us most were the landlords. They said that we wanted them to lose their houses. [They] would follow us even in our houses, saying that we are contributing to them losing their houses. Same applied with water and also electricity. But because they knew that we are residents of the area and we have brought many developments in the area that is what saved us. We went through a lot of challenges but through explaining to them, we say information is power; when we gave information it saved us. ”

Mary Nyambura Community Mobilizer – Wape Wape, Mukuru Kwa Njenga (Nairobi, Kenya)

Personal communication, 15 June 2022.

Fear of Evictions

“ So as a mobilizer I was convincing my people because I am also a tenant that if it is eviction, the government will carry us with our land where we have been dwelling for more than thirty years. So I was making efforts to convince them that if they will be evicted I will be the first person to be evicted so we held together and said our strength is our unity so nobody should tell us that we are going anywhere. ”

Pastor Elizabeth Mijeni Community Mobilizer – Mukuru Kwa Reuben (Nairobi, Kenya)

Personal communication, 20 May 2022.

Residents Lack of Awareness, Understanding and Confidence

“ At first I did not understand it well and the time I got the trainings bit by bit I completely understood its importance. I was able to get views from my fellow tenants, their views are the most important in improving our area. Saying that their views are important made them happy and were able to contribute in saying what they need and what they do not need because at first they were taking it as negative. Maybe it's the doubts of what people have come to do in their plot. Later on they came to realize that their views are what contribute a lot in improving our area, and from there work became easier and we started collaborating. ”

Dominic Mulinge Tenant – Vietnam, Mukuru Kwa Njenga (Nairobi, Kenya)

Personal communication, 15 June 2022.

“ I think the challenges we got at that time is that the residents didn't have the knowledge; they did not understand what it was and that's why they were bringing chaos in meetings. But when we sat down and explained, it necessitated that we go from door-to-door so we can explain to them the advantage of this thing. They later on came to understand, what was on their minds was that their village was being finished, but they came to understand and we explained to them the benefits of SPA and the life we would live as compared to the life we were having that time and even now we are living, but they later came to understand. It was just lack of knowledge. ”

Veronica Nthenya Structure Owner – Vietnam, Mukuru Kwa Njenga (Nairobi, Kenya)

Personal communication, 15 June 2022.

Fear from Small-Scale Informal Service Providers

“ We were called for the first SPA meeting on matters concerning electricity. Most of us feared because we did not know what we were going to do there, maybe we could go there, you do some research and give us out to the government, so we had fear, but when it was explained to us we understood what SPA matters meant and we accepted and we were in agreement. ”

Joseph Odhiambo Informal Electricity Provider – Wape Wape, Mukuru Kwa Njenga (Nairobi, Kenya)

Personal communication, 15 June 2022.

“ We went through a lot of challenges through cartels. So when they knew there were ongoing meetings, mostly in Riara, there are meetings which did not happen because we were sent away and told there were not going to be such meetings and we started dodging them, changing meeting hours and venue so we can meet in other places because in the normal areas meetings would be disrupted. But they came and realized that we succeeded and no other way so we joined efforts. ”

Joseph Mwenja Community Mobilizer – Riara, Mukuru Kwa Njenga (Nairobi, Kenya)

Personal communication, 15 June 2022.

Examples from the Field

Mukuru, Nairobi (Kenya)

To ensure widespread participation in the Mukuru SPA upgrading initiative and simultaneously build the capacities of new grassroots leaders, the Muungano Alliance – an association comprised of the Kenyan urban poor federation Muungano wa Wanavijiji (MWW), the Akiba Mashinani Trust (AMT) and Slum Dwellers International-Kenya (SDI-K) – recruited and trained over 450 community mobilizers (and even more data collectors) across Mukuru.

About 70 percent were youth and women without prior experience engaging in settlement-level activities (they tended to be available at different times of the day to undertake data collection, especially those without permanent employment). Mobilizers selected data collectors considering residence location, gender, age, ethnicity and proven commitment to process to provide diverse representation. More than anyone, these mobilizers organized the community forums and championed the SPA through patient dialogue and the many negotiations the planning process required with diverse community stakeholders.

A core team of MWW mobilizers provided oversight of the technical planning process by forming part of the consortia planning teams and working closely with partners. See [Forming Interdisciplinary Consortia](#) for more.

Mobilizers also fostered horizontal and vertical accountability throughout the planning process: they mediated community conflicts and misunderstandings and informed local officials of progress. In these roles, mobilizers built new relationships between Mukuru communities and government and gained trust and stature in their communities because of the confidence the training and mobilization processes gave them to speak out and lead. For some, it even led to new opportunities like jobs with NGOs and even potential nominations as political leaders.

The training process was a concentric, not a linear, process. Field staff from AMT and SDI-K held trainings for mobilizers over about three months, requiring six hours per week from trainees. This was done at different periods in different areas of Mukuru. mobilizers in turn trained data collectors to carry out the required data collection activities. Those who completed the trainings received a certificate (some did not finish the training for a variety of reasons, including personal priorities, politics that prolonged the training and lack of funds for compensation).

The trainings covered a broad array of topics and skills. This included data collection methods like enumerations and settlement profiling, the Tujuane Tujengane approach and organization of residents into territorial units (e.g. cells, sub-clusters, etc; see [Community Mobilization, Organization, Representation and Coordination Strategy](#) for more) as well as contact building and rapport; conflict management; group and individual dynamics; leadership; facilitation skills; savings and loans; health and hygiene; disaster management; and minutes and report writing. In addition, 29 young people received training in photo and video documentation.

Compensation for community mobilizers was an important consideration. Mobilizers themselves decided that their work would be on a voluntary basis, with some limited compensation for their time spent in training, collecting data, mobilizing residents and the costs of making phone calls. Therefore, the financial resources required to pay mobilizers, and the distorted incentives that might create, did not interfere with reaching the 100,000 households living in Mukuru. This proved important as well because funding (from Slum Dwellers International and Caritas Switzerland) was exhausted within the first three months.

Along with community savings groups, learning exchanges are a core practice of the Muungano Alliance and their SDI affiliates across the world. These horizontal exchanges played a crucial role for mobilizers in Mukuru who visited different parts of the settlements as well as other informal settlements elsewhere in Nairobi (and even as far as Tanzania) where expertise was shared, including new ideas, information, and skills to empower residents to confront their own problems instead of waiting on professionals. In interviews and focus groups for this project, mobilizers

and other residents expressed their desire for more learning exchanges, armed as they are with the experience and new skills gained through the SPA process.

“ So the teachings were many and SPA has empowered a lot of people within the community. Others were quiet when we started but when we were finishing, they were the best teachers; you find somebody you have given them the idea and they go and teach another person, so in that process we saw the community was educated and at the same time we saw we opened up, like SPA has opened up a lot of people’s lives. Even there are others who did not comprehend what was going on but when we go to explain to them, you find they leave way for the road to pass through, or they reduce the house according to how the road has been put. So it brought the cooperation of the implementers and the structure owners and at the end of the day we saw the roads were opened. And we won’t hesitate to congratulate SPA because, the story of disaster, it was burning every day and every time, when there is fire it burns. But now we see, after the road has been constructed, even if there is fire, we saw the fire extinguishers get to the interior in a short time. SPA will be a good example to be emulated from Mukuru Kwa Reuben and the whole world. ”

Benrodgers Musee Community Mobilizer – Gateway, Mukuru Kwa Reuben

Personal communication, 20 May 20 2022.

Materials

For each training course:

1. Admission invitation letter
2. Course schedule and curriculum
3. Certificate of completion

Example Materials

[1] LETTER OF ADMISSION FOR TRAINING IN
CITIZEN-LED RESEARCH AND DATA COLLECTION

From: {Your organization's name}

To: _____, Trainee

Gender: _____

House address: _____

ID number: _____

Phone number: _____

Dear trainee,

You have been selected to participate in the training course Citizen-led Research and Data Collection. The course will be facilitated by {your organization's name}. It is part of the ongoing informal settlement upgrading program {name of initiative}.

As a trainee, you will gain skills and undertake practical tasks in the field, including:

- Mapping the settlement
- Profiling the settlement
- Creating a settlement-wide address system and undertaking a census of all residents

The training will take place over a period of three months from July 12, 2022 to October 11, 2022.

This includes:

- Weekly classroom sessions of three hours each
- A minimum of four hours per week for each field assignment

The course emphasizes experiential learning; between sessions, you will put what you learn in the classroom into practice each week. Including classroom and field assignments, the course will take a total of 60 hours.

Training fees for this course have been waived by {your organization's name} and therefore NO amount shall be charged to the trainees. In addition, we will provide all the necessary training materials and provide a small stipend of Ksh 3000 per month to cover your communication costs.

Upon completion of the course, you will be awarded a Certificate of Completion.

If you have any questions, please let us know. We wish you the best in the training course.

Yours,

Charity Njuguna

Charity Njuguna, Director

Week	Topic	Class activities	Field assignment	Outcomes
1	Contact building	How many of your neighbors do you know?	Community entry Contact building Mapping Numbering	Community maps Physical address system Resident database
2	Organization	Organizing households into cells and clusters	Form cells and clusters	Households organized into cells and clusters
3	etc			
4				
5				
6				

[3] CERTIFICATE OF PARTICIPATION

Certificate of Participation

This certificate is awarded to

Joseph Mwenja

For completion of the course

Citizen-led Research and Data Collection

October 2022



[org logo]

[trainer signature]

Related Components

Guides

- Determining Roles
- Community Mobilization, Organization, Representation and Coordination Strategy

Methods

- Settlement Mapping
- Settlement Profiling
- Household Numbering and Enumeration
- Risk profiling: Identifying risks, assessing solutions and determining community priorities

Sources

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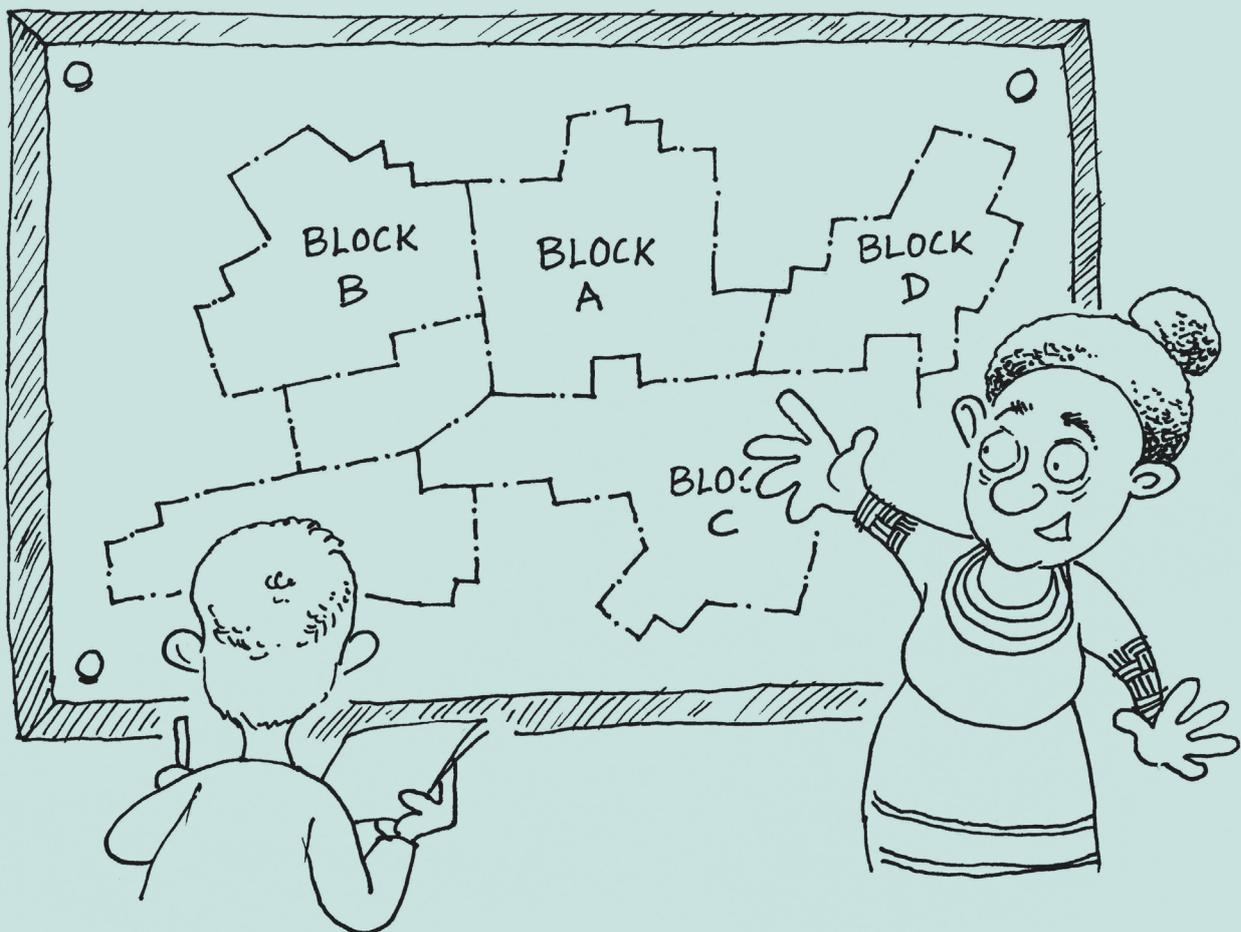
COMMUNITY-LED DATA COLLECTION

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Settlement Mapping

Typically conducted at the same time as [Settlement Profiling](#) and before [Household Numbering and Enumeration](#), settlement mapping is a community-led data collection method. Also known as community mapping, the method is used to map structure footprints and facilities and service location points. Maps provide foundational data for profiling, numbering and enumerations.



Who

Most useful for:

- Local Champions
- Residents
- CBOs
- Urban Poor Federations
- Federation-support NGOs

Also useful for:

- NGOs
- Academia
- Local Governments



What

Settlement mapping (and **Settlement Profiling**) can be undertaken with small teams of residents experienced in data collection. It provides a detailed map of all structures and their land use as well as community facilities and service location points for the entire settlement (or target area).

This typically happens at the same time as profiling activities. Co-researchers walk their area of the settlement, visiting each structure. However, instead of speaking to every household as they do during enumeration, they only speak to one household. For mapping purposes, this household indicates how many units/rooms and households there are within the structure as well as how they access essential services, the distance to service location points (e.g. 500 meters), whether services are functional and who owns them. For profiling, the household representative answers questions about sectoral challenges (e.g. health, water, sanitation).

Data collected during mapping is typically used to advocate for an upgrading project in partnership with the local government. It yields statistics like the total number of structures, number of permanent vs temporary and occupied vs vacant structures, number of units/rooms in each structure, number of households, and number of tenants vs structure owners. It also provides data to assess relative poverty levels and how adequate or overextended existing services are. For residents, mapping also helps them get to know their area better and where they can access different existing services.

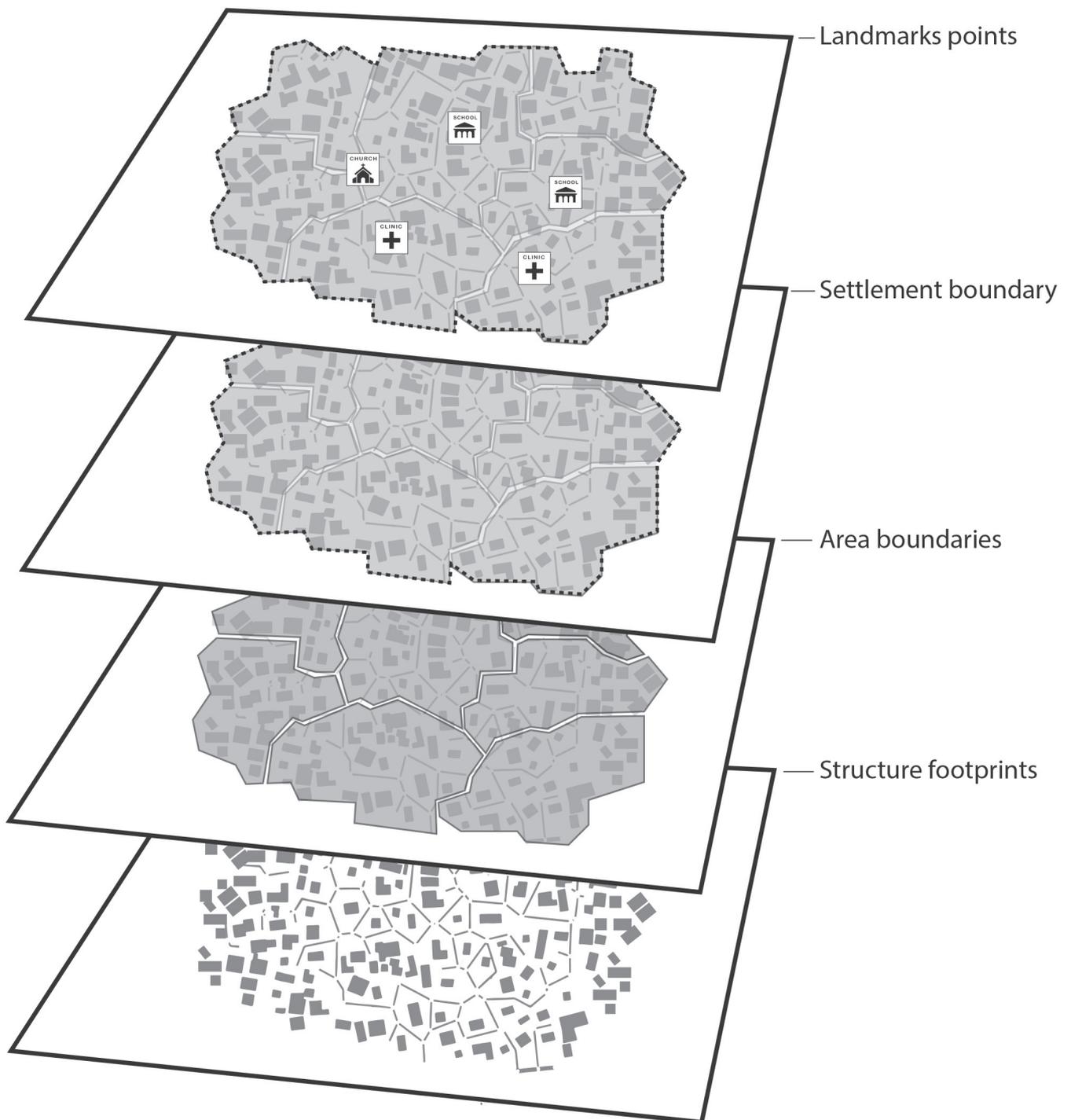


Photo Credit: Akiba Mashinani Trust

Data collection team doing mapping in Mukuru in 2018.

During planning for upgrading projects, it provides the basis for spatial planning. It also serves as a baseline for other data collection efforts like **Settlement Profiling** and **Household Numbering and Enumeration** as well as additional data collection activities once an upgrading project gets underway.

Quality mapping data is crucial for undertaking **Household Numbering and Enumeration**, the process when co-researchers assign every unit (aka room or door) within a structure a number to build a settlement-wide address system for every household.



To undertake mapping, you will need both a technical team with GIS (i.e. computer mapping software) and data skills and community data collection teams. If possible, rely on experienced community co-researchers with training in data collection. Otherwise, train a core set of co-researchers who can then recruit and train additional co-researchers from their areas.

To prepare a map for data collection, you will need to obtain satellite imagery of the settlement and digitize structures. You will also need to identify areas within the settlement (i.e. neighborhoods, villages, etc) and major landmarks. These data will be used to generate unique address codes for every structure.

Once the initial map is prepared, the technical and community teams will work together. They will walk the settlement to ground truth existing data and collect additional data like the locations of services and facilities. Once field work is complete, a team will update databases with both ground truthed and new data. It is essential that residents – not just the technical team – have ownership of the data generated for their own discussions of development priorities and negotiations with local governments. Ownership should be both legal (i.e. agency to use the data however they like) and communal (broad buy-in from residents into the community data collection process). See [How](#) for more detail.

Why

COMMUNITY-LED DATA COLLECTION methods involve processes led by informal settlement residents with support from their civil society partners. Flexible by nature, these methods adapt well to different national and local contexts.

A process by the community for the community, the goal of these methods is for residents to collect their own data about themselves – instead of relying on outsiders to tell them about themselves – and own and use these data to inform both their fellow residents and government authorities about key challenges and priorities. In particular, challenges and priorities related to land tenure, housing, and basic infrastructure and services, key ingredients in building climate resilience in urban areas.

Armed with these data, residents can speak the same language as governments and their development partners. To exist in the eyes of local authorities, residents must first show up on the map. These methods provide the data needed for residents to make their case to local authorities for upgrading of housing, infrastructure and services in their settlements. It can also support organizing activities and campaigns to deter eviction as well as open up ongoing dialogue with local authorities, development partners, civil society and academia.

Community-led data collection does not just provide the currency for residents to negotiate and plan with government. It also engages residents in a process where they begin to see

themselves as part of a larger community with shared problems and learn to work together instead of individually to understand common challenges, determine priorities and act collectively to negotiate among themselves and with government. Data collection activities begin dialogues among residents and demonstrate the crucial role data plays in shaping development priorities. More broadly, it enables urban poor communities to assert their right to the city as well as secure tenure, risk-reducing infrastructure and services, and dignified livelihoods. It can also lead to greater involvement in city policymaking and the delivery of subsidized services. Working with residents to do research is also likely the most resource-efficient option.

See [COMMUNITY-LED DATA COLLECTION](#) for more.



“ Mapping and data collection and I also knew how data defends people. How the data spoke for us in the government. And also I learned how to bring people together and empower people. I also learned how to talk with these people in these big offices, because I come from the slums, I don't have to despise myself, I have to know that I have information that they don't have. And the other thing I learned is I have also the right as a Kenyan person to have good life and the other thing is, every change to take place wherever I am, it is good for me to participate and to give also my ideas. ”

Christine Mwelu Community Mobiliser – Lunga-Lunga Centre, Mukuru Viwandani (Nairobi, Kenya)

Personal communication, 18 May 2022.



Photo Credit: Akiba Mashinani Trust

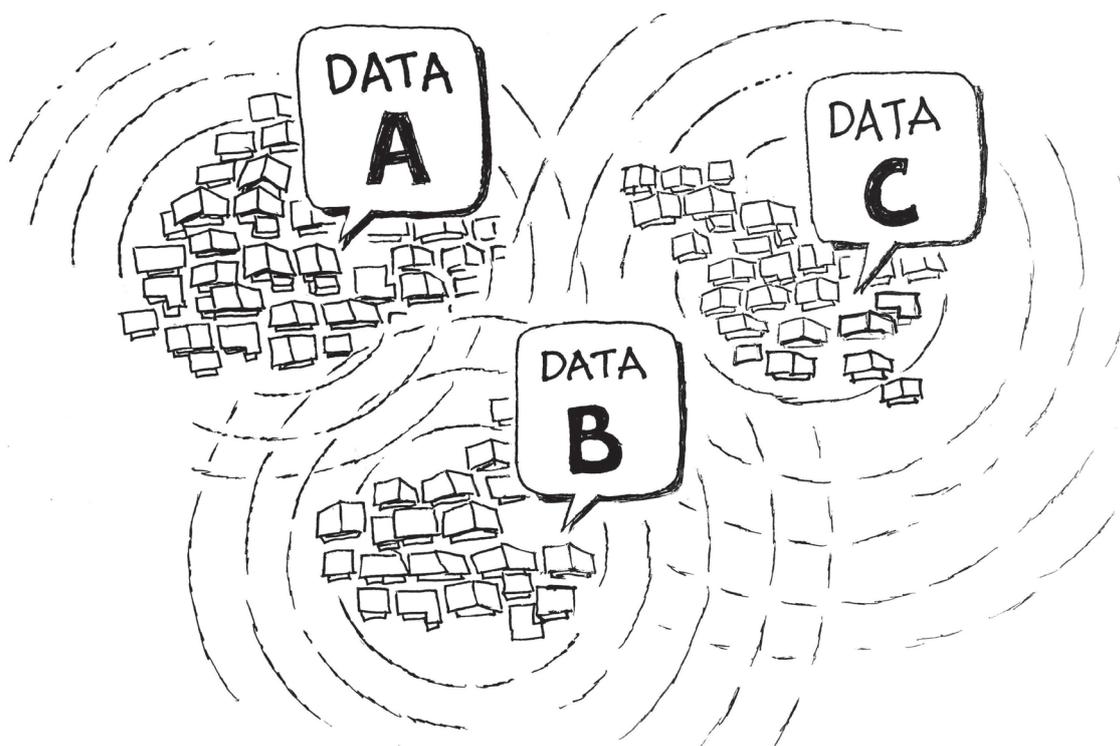
Community mobilizer presenting information from data collection activities in a community meeting in 2018.

Like other community data collection methods, **settlement mapping** provides essential data for residents to speak to, negotiate and plan with local governments. Mapping quantifies the scale of need (e.g. only x toilets for y households). It can also identify areas with the greatest need – even within settlements, some households are more vulnerable than others.

Where

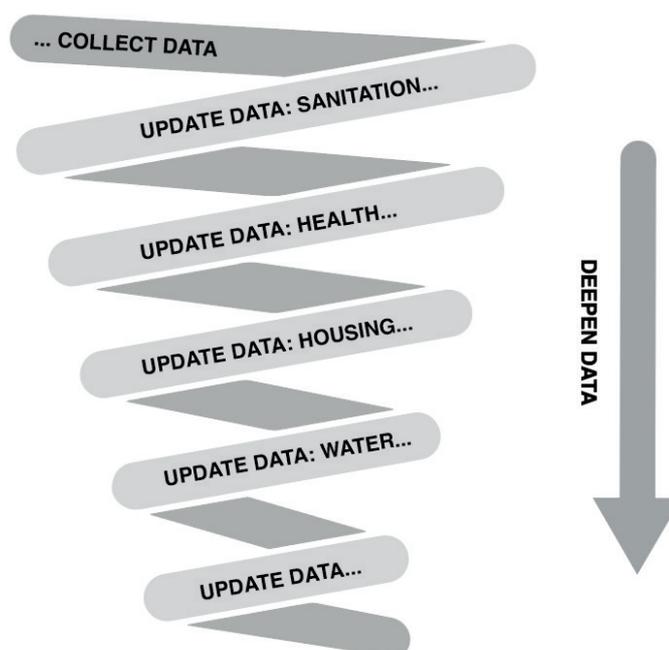
Community methods training and data collection often follow a concentric instead of linear pattern. This is because community mobilizers and co-researchers often start in familiar territory in their own neighborhoods and expand out from there. The data collection processes also typically don't have one beginning or end point, instead happening iteratively. Civil society or CBOs often undertake the initial training of local leaders and other motivated residents (youth can be excellent candidates because they learn quickly and may not be employed). Once this initial class of co-researchers is trained, they can recruit additional candidates in their neighborhoods to be trained as well.

It is beneficial to map the entire settlement so that the scale of need is fully understood. It also contributes to the aggregation of data citywide. Aggregation provides evidence to bargain and plan with local governments, giving urban poor federations a better sense of the size of their political constituency and what they contribute to the city's economy. However, if not feasible to do mapping settlement wide, collecting data where you can will still benefit residents and their advocacy efforts.



When

Unlike [Household Numbering and Enumeration](#), mapping (and [Settlement Profiling](#)) can be undertaken before a specific upgrading project has been slated. Indeed, it is important to undertake mapping to negotiate with the local government to upgrade the settlement. That said, mapping and profiling activities do have a cost and should not be undertaken arbitrarily. They should be strategically aligned to specific goals and advocacy efforts for upgrading initiatives.



While the technical work of preparing the initial settlement map should be undertaken before [Settlement Profiling](#), field work for mapping and profiling are often carried out at the same time. If necessary, however, mapping can also be done after profiling. The timing of these data collection activities will be determined by considerations unique to each settlement.

Starting with mapping and profiling gives residents a chance to learn about upgrading initiatives and organize around certain topics. When activities are not targeted directly at their household, residents will be less afraid and more receptive to learning about projects. And therefore, once numbering and enumeration starts, some residents will already be familiar with the project and have bought into the process.

Given an existing community mobilization network and trained co-researchers, mapping can take place over a few weeks time. This will obviously vary according to the size of the settlement, existence of any adversarial stakeholders, political complexities, or other unforeseen factors. Indeed, strive to carry out mapping within a short period of time because if it is instead drawn out, conditions on the ground will inevitably change and complicate data validation activities.

Community-led data collection is not a one-and-done process. In the context of resource-poor informal settlements, data collection activities have a significant cost – you should only do as much as is required at the time to further current advocacy and planning efforts. The environments in informal settlements also change rapidly and data will quickly become out-of-date. Therefore, data collection is a highly iterative process. You will continually return to sectors to update data and fill in gaps where data lacks the depth needed for detailed sector-level planning.

How

Make a Work Plan

Because mapping requires both technical work in the office and data collection in the field, it is useful to establish a work plan to coordinate the office and field work. Like all community data collection work, this is not a linear process. It will inevitably be staggered for different areas of a settlement, taking place as time and resources permit.

Technical office work like digitizing structures could be done all at once for an entire settlement (but may require updating if there is a big lag between it and field data collection). The rest of the work will likely be done on an area-by-area (i.e. neighborhood) basis. Therefore, the timeline below lays out the work for one area. More than one area can be done at a time given enough resources and big enough teams.

Typical Timeline

Week	Office work	Field work
1	Assemble technical team Begin processing spatial data	
2	Prepare initial map (footprints with structure address codes)	Recruit and train community co-researchers
3		Groundtruth existing structures data and collect additional data on facilities and service location points <i>At the same time, do field work for Settlement Profiling</i>
4		
5	Compile ground truthed and new data (as well as profiling data)	
6		Validate the data (from both mapping and profiling)
7		Analyze and share the data

Assemble a Technical Team

Because parts of the mapping process require GIS expertise, identify a suitable technical team. This is often undertaken by a federation-support NGO like Slum Dwellers International, other local NGOs, or a local university. The technical team will undertake all the computer work in the office; they do not need to be residents of the settlement.

They will likely be involved in the training of community co-researchers as well. And they will help supervise co-researcher teams during field work. Finally, they will ingest the data collected into the GIS database.

Obtain Structures Data for the Entire Settlement

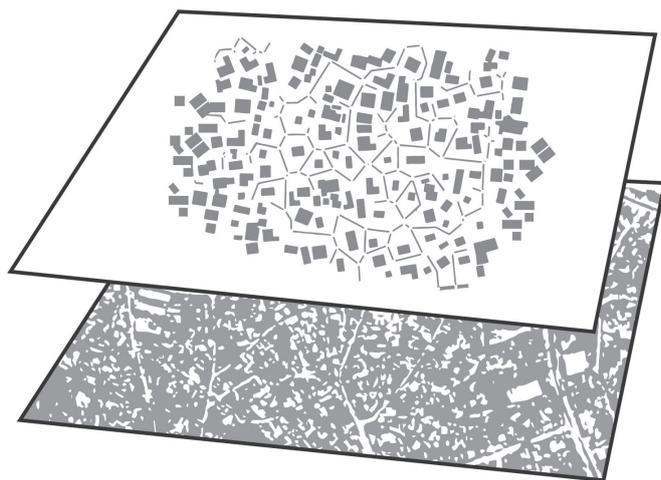
Structure footprints provide the base for settlement mapping (footprints are polygons that represent the two-dimensional shape of a structure as seen from above). To obtain footprints, you have several options. The most common source of free data is satellite imagery from Google Earth (in raster format). In some cases, it may be possible to instead obtain building footprints already in vector format.

If footprints are not already available, download a satellite image for the entire settlement. Then, import it into a GIS software program (e.g. QGIS, ArcGIS). Make sure to georeference the satellite image – a simple way to do this is to get the latitude and longitude coordinates for several easily recognizable locations in Google Earth, and then use those coordinates with a georeferencing tool in your GIS program.

Note that if you can obtain historical satellite imagery, you can use it to demonstrate the growth of the settlement over time (e.g. “growth between 2002 and 2016”).

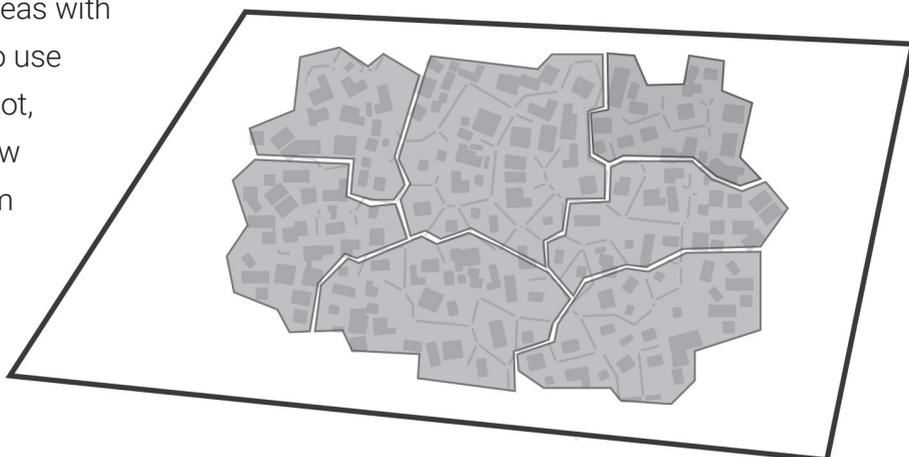
Digitize Structures to Create Polygon Footprints

You can do this manually. Or you can try using a raster-to-vector processing tool in QGIS, ArcGIS or other GIS software (but make sure to quality check the output data for topology errors). Even using an automated tool, you will inevitably still need to manually digitize any missing structures. Once complete, make sure to back up these valuable data.



Identify Areas Within the Settlement

All settlements will have commonly accepted “areas” (i.e. neighborhoods, villages, etc) with names. Identify these areas with residents. You may be able to use already existing GIS data. If not, you will have to manually draw the areas in your GIS program (make sure to validate the data with knowledgeable residents). Finally, overlay the structures layer with the area polygons.

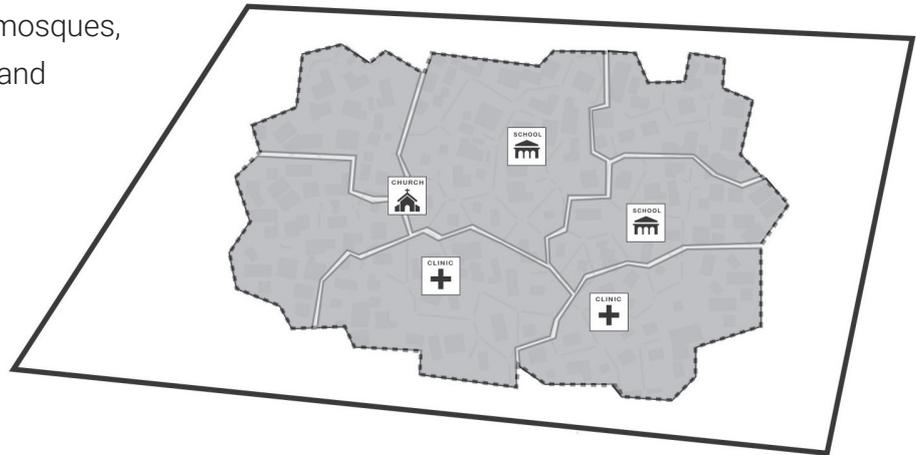


Identify Major Landmarks

Landmarks are crucial for data collection teams during fieldwork, helping them orient themselves while collecting data. They are also often a good starting point for assigning structure numbers in a neighborhood. Common landmarks include schools, churches, mosques, community centers, clinics and groceries.

Work with knowledgeable residents to identify major landmarks. Then, locate each landmark within the structure footprints data on the map.

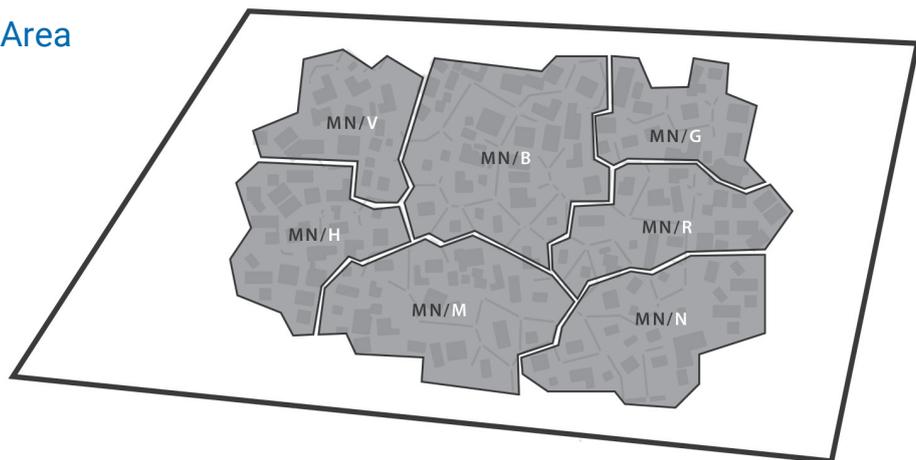
Finally, in the GIS database, tag the corresponding structure footprint with its name.



Assign a Unique Code to the Settlement and to Each Area

Simplify the name of the **settlement** to two or three letters. For example, for Mukuru Kwa Njenga: **MN**.

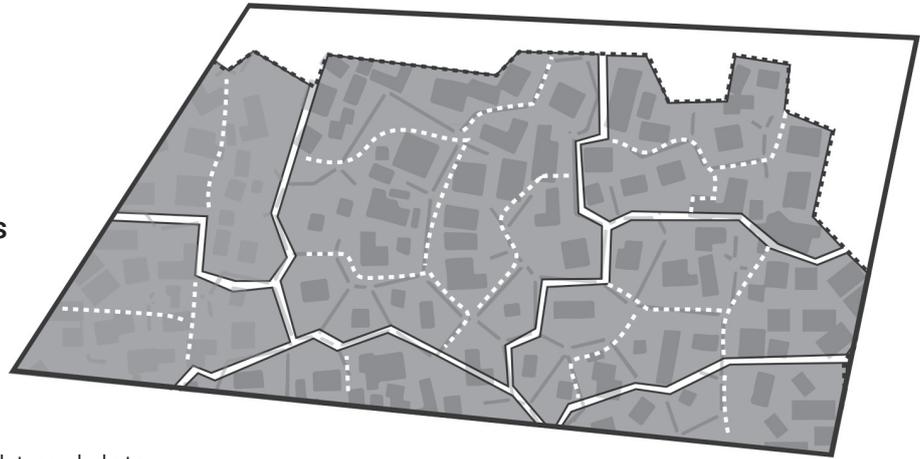
Do the same for the **area** (i.e. neighborhood, village, etc). For example, for Riara: **R**.



	Settlement	Area
□ Input	Mukuru Kwa Njenga	Riara
↓ Simplify	MN	R
■ Area code	MN/R	

Define Structure Blocks

Once you have structure footprints, landmarks, and area polygons on your map, group structures into **blocks** of up to 200 households. Manually draw polygons over these blocks in your GIS program. Defining blocks helps ensure oversight and data accuracy during the community data collection process.

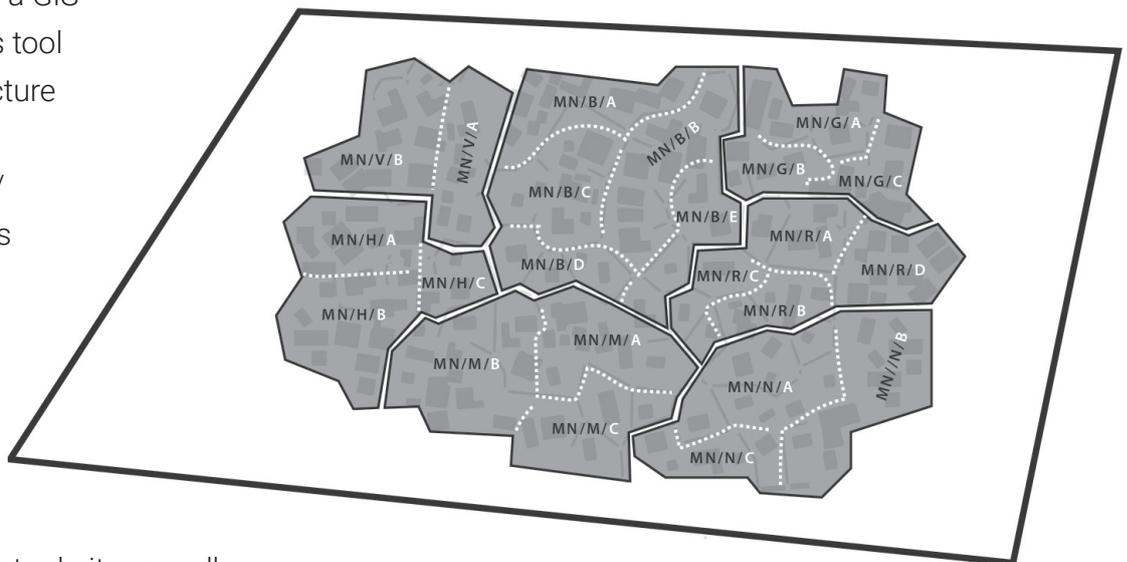


Assign a Unique Code to Every Block

Once you have drawn every block polygon in the settlement, assign it a unique letter from A to Z (see the diagram below).

	Settlement	Area	Block
□ Input	Mukuru Kwa Njenga	Riara	A
↓ Simplify	MN	R	A
■ Block code	MN/R/A		

If possible, it is also a good idea to use a GIS spatial intersects tool to tag each structure footprint with its settlement/area/block code – this will allow you to automatically label each block using basic GIS functions instead of having to do it manually.



Recruit and Train Community Co-Researchers

The technical team will not know the settlement as well as its residents (and the team is also too small to do all the work alone). Recruit a core team of lead co-researchers from different areas/neighborhoods across the settlement (this can be done at the same time as the technical team is processing data to produce the initial map).



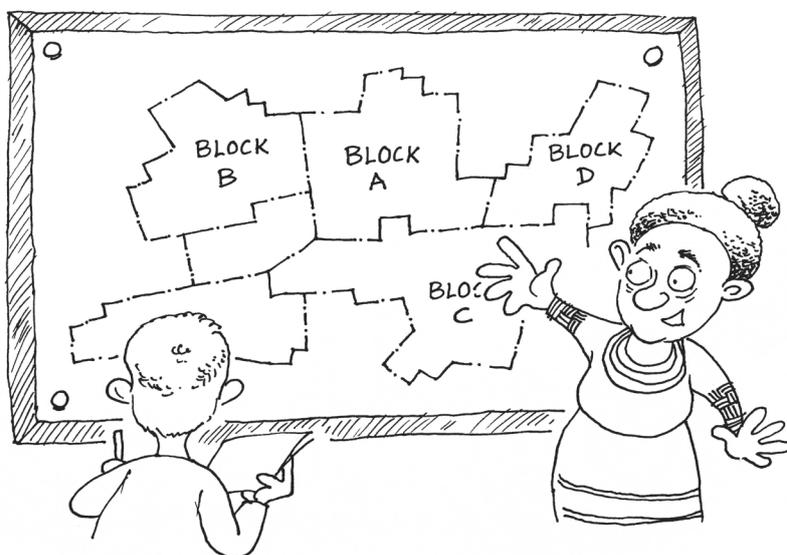
If possible, rely on residents who already have some experience with data collection (i.e. an understanding of the basics of data collection and quality assurance). If few to no residents have experience, you will also need to train them. Local leaders and youth often make good candidates. Each lead co-researcher can then recruit and train residents in their area to form teams for data collection (residents will not trust people they do not know, even residents from other parts of the settlement).

The total number of co-researchers needed is subject to the needs, opportunities and constraints in your settlement. But, a general rule of thumb is five to ten residents per cluster (of up to 1000 households).

See [Recruiting and Training Community Mobilizers and Co-Researchers](#) for more detail.

Assign Blocks to Co-Researchers

Form teams of five or more co-researchers per block. One co-researcher will act as the team lead and liaison with the technical team. A member of the technical team will provide oversight.



Groundtruth Existing Data and Collect Additional Data During Field Work

Provide data collection teams with:

- A printed map with landmarks and every structure labeled with its settlement/area/block code. For example: *MN/R/A/*
- The data collection forms (see [Example Materials](#))
 - *Structures Data Collection Form*
 - *Services Data Collection Form*
 - *Facilities Data Collection Form*
- If possible, a handheld GPS device

As they walk their assigned locations, data collection teams will undertake several activities at the same time. See the following steps:

Field Work: Validate Structure Footprints

Verify that footprints are in the correct location. Also identify any structures that are missing and fill them in on the map.



Field Work: Assign a Unique Address Code to Every Structure

Building on the codes for the settlement, areas and blocks, assign a three-digit number to each structure. For example: **001**.

	Settlement	Area	Block	Structure number
□ Input	Mukuru Kwa Njenga	Riara	A	001
↓ Simplify	MN	R	A	001
■ Structure code	MN/R/A/001			

Write the structure number (e.g. 001) on top of each structure on the map (as well as on the *Structures Data Collection Form*).

Field Work: Collect Additional Structure Data

Footprint data provides no information about:

- How the structure is being used.
- Whether it is temporary or permanent.
- Whether it is occupied or vacant.
- The number of units/rooms.
- Number of households.
- Number of shops.
- Whether the structure owner lives there or not.
- etc



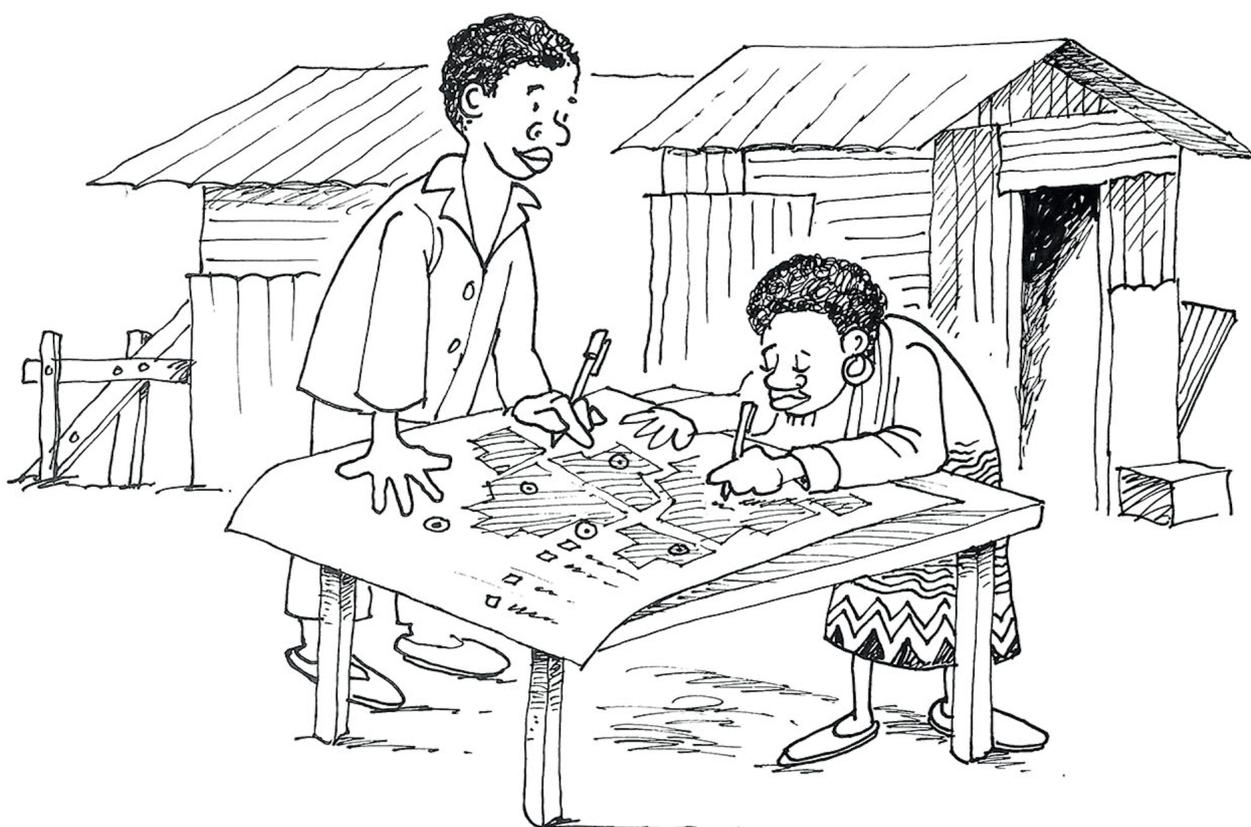
As you validate footprint data and assign each structure an address code on the map, also record this information using the *Structures Data Collection Form* (see [Example Materials](#)). Write down the unique address code for each structure from the map on the *Structures Data Collection Form* and fill in associated details in the table (e.g. “structure use”). At this stage, you only need to talk to one household to fill in the form. They will speak for all the other households in the structure.

Field Work: Collect Data on Facilities and Service Location Points

Service points include toilets, sewer lines, water points, garbage disposal sites, electricity transformers, and streetlights. Facilities include health centers, schools, religious institutions, and community centers.

For service points: If possible, use a handheld GPS device to record latitude/longitude points. Record the GPS coordinate number on the *Services* and *Facilities Data Collection Forms* (see [Example Materials](#)). If GPS is unavailable, draw in the point on the map.

For facilities: Make a note on top of the structure's footprint on the printed map. If possible, also take a GPS data point. Finally, record the structure's details on the *Services* and *Facilities Data Collection Forms*, including its unique address code.



Quality Check Data Collection

Before compiling the data in a database, co-researchers must check each other's work. A lead co-researcher with substantial experience and a strong track record of producing accurate data should spot check about one-third of the data collection forms. This entails randomly selecting forms, visiting the corresponding structure, and talking with the household representative that was previously interviewed to assess the accuracy of data. If the work of any co-researcher contains a substantial number of errors, the team must then re-collect that data.

Compile the Data

Once field work is complete for an area, bring the maps and the three data collection forms back to the office. The technical team will update the GIS database with both ground truthed and new data.

Alternatively, if trained, co-researchers can enter the data into a spreadsheet or database. Data entry by residents ensures continued ownership of the process and deeper understanding of the data.

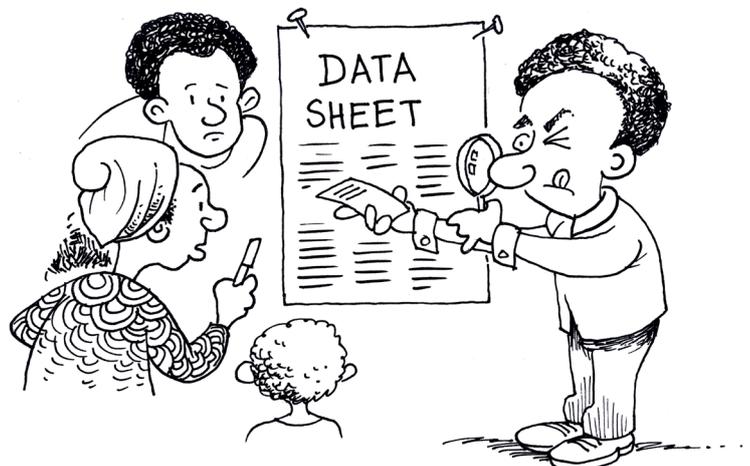


Validate the Data

Errors in data collection are inevitable. Validation is an essential step for producing trustworthy datasets to inform evidence-based advocacy and planning with local governments. Also, structure or household information may have changed between the time data was collected and the time its validated.

Hold focus group meetings in every area (i.e. neighborhood) with residents to validate the data collected during both mapping and profiling. Make sure not to continually engage the same residents; this will ensure greater inclusion in research activities and help combat research fatigue.

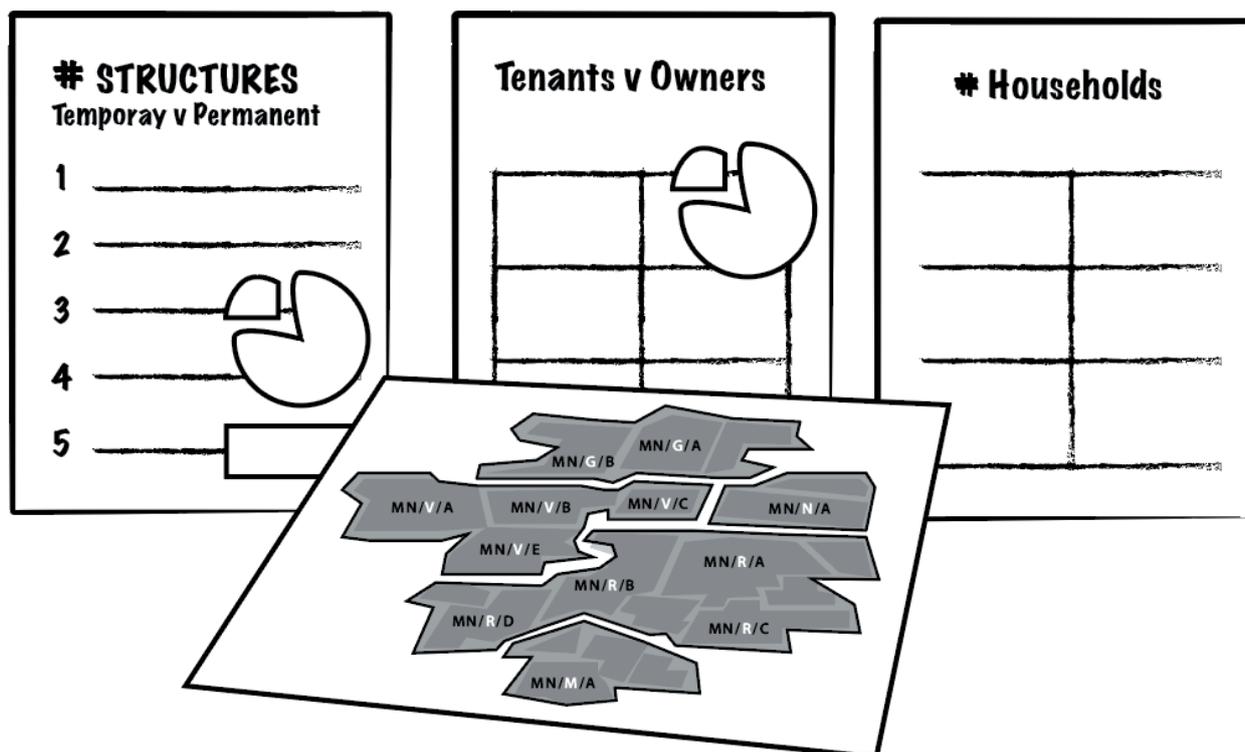
If possible, fix any issues raised by participants in the meeting itself. If needed, return to the field with participants to fix any unresolved issues. You can also continue to validate the mapping data by presenting it in other community meetings and asking residents to locate their homes on the map.



If possible, also work with researchers from local academic institutions to validate the data. Their involvement will lend legitimacy to the findings in the eyes of the local government.

Analyze the Data

Use the data to calculate statistics like the total number of structures, number of permanent vs temporary structures, number of units/rooms, number of households, number of tenants vs structure owners, etc. This can be used during community meetings to inform residents of research findings. It can also be used for advocacy and negotiation with the local government.



Share the Data to Determine Next Steps

Residents must see the results of their work to maintain trust in the process. Sharing the data also helps communities understand what their top priorities may be to formulate a plan of action. Data should not only be shared as findings in community meetings – as it is community-generated and owned, it should be made freely accessible to all residents (though this can prove challenging in practice).



Considerations

How can we ensure that all stakeholders are involved?

Before beginning community data collection activities, it is useful to identify all possible stakeholders in the community and the roles they should play in an upgrading project to ensure everyone is represented. Without a good understanding of who stands to benefit and lose out, the loudest and most powerful residents will inevitably gain while the most vulnerable lose out. This starts during data collection. Some stakeholders will seek to protect their interests and even take advantage for their own gain by influencing the data collection process.

While the profiles of stakeholders may be similar across informal settlements, it is important to identify specific groups to understand the dynamics of local politics, relationships, vested interests, and vulnerabilities in the settlement. To do this, engage residents, especially the quiet ones, to create a detailed stakeholders map.

It is also important to understand the social hierarchies at play in the settlement. In addition to ensuring broad support across stakeholders, it is important to recognize both formal and informal local leaders. This could be a local government official or a religious or community leader. Engaging these leaders helps ensure broader community engagement and participation.

Who should co-researchers be?

They can be any resident — tenant, structure owner, local leader, etc (but should not be outsiders). Women and youth often make good candidates as they may have more time free during the day. In particular, seek out people that demonstrate commitment to community work and data collection processes.

Should we compensate community mobilizers and co-researchers?

Yes, provide some small compensation as possible. Residents' time is precious and few may be able to contribute consistently without some consideration of the cost of their time.

How can we ensure that collected data is accessible to residents?

You can present it in community meetings, distribute it in printed materials, and share it via media like community radio. If possible, you should also strive to make hard copy and digital databases accessible, storing them in local facilities like a community center. However, make sure to never share sensitive personal data like ID numbers, phone numbers, etc.

How do we ensure that our data is accepted as credible, consistent and accurate by government?

The data validation process is essential for ensuring acceptance of community-collected data. The data validation process is essential for ensuring acceptance of community-collected data. This entails two activities: (1) co-researchers quality checking each other's work and (2) conducting

focus group discussions with residents. If possible, also engage local university partners to validate the data as well.

What can we do if we don't have access to GPS devices?

While it is nice to have GPS units for placing service points and facilities in digital GIS maps, they are not necessary. Plotting locations on the paper maps during field work will also work well.

You could also explore using GPS data collection apps for smartphones. They are less accurate than a GPS device but should be good enough.

What if we want to map something other than structures and services?

A similar process can be used for mapping other infrastructure or challenges. For example, you could use a similar approach for mapping the location of climate or other hazards. Central to the process is procuring the right data, processing it into a format useful for field work in settlements, forming teams of both community and professional researchers, and sharing the findings with residents so they can begin discussions and determine priorities.

Challenges

Data Collection Errors

Errors are inevitable, especially when community co-researchers have little experience in data collection. You can minimize errors by starting small. This way, co-researcher trainees can make mistakes, discuss together and learn so that once they scale up they are better prepared. This approach also saves resources, minimizing work that would need to be redone during quality checks by other co-researchers and during the community validation process.

Among the often densely built structures in informal settlements, you may miss a structure or even map it twice. You can overcome this by training co-researchers to look out for this, having team members check each other's work, and validating the data in community meetings. You can also have residents locate their homes on the map in other community meetings to see if any structures are missing or double counted.

Multiple Address Systems Already Exist

Due to multiple development projects happening in the settlement, you may find that several different numbering and address systems already exist. This can be a great source of confusion for residents. If possible, seek to use an existing system instead of inventing your own.

Residents' Distrust, Lack of Awareness, and Misinformation

Residents in informal settlements have faced a long history of land grabs and evictions as well as many development projects that have failed to produce tangible results. There are also inevitably opportunists inside and outside the community that will seek to use upgrading efforts to their own benefit. Residents are therefore often skeptical of upgrading projects and fearful when they see you walking around with a map in your hand. Some residents will resist the process and you may even be threatened. You can overcome this through patient dialogue, inviting trusted local leaders to speak about the project, inviting local government staff to speak to residents, and striving to provide near-term, incremental benefits to build confidence in the process. It is also essential to include community participation from the start as residents will not trust people they don't know. Additional strategies include: training a core team that understands the method and its promise for bringing benefits to the settlement; and involving trusted local leaders, including from the local government administration (e.g. ward chiefs).



“ The structure owners thought that we were selling the settlement because they didn't want to attend meetings, for them to understand what we were telling people. So, it was conflicting for me, for them to say I'm selling their houses, they won't be getting the money they were getting. So, my life was also threatened, and people were confronting me on the roads and saying how bad I am as a woman. I remember when we were doing numbering, someone came and said he will slice us into pieces using a *panga*, we had to leave his house behind and get back to our government and the people we were working with and explain to them the challenges we were facing on the ground, to use chairmen to inform people that the work we were doing is government's, because we personally do not have the title deed for that area. ”

Christine Mwelu Community Mobilizer, Lunga-Lunga Centre, Mukuru Viwandani (Nairobi, Kenya)

Personal communication, 18 May 2022.

Research Fatigue and Disbelief

Again, because so many research initiatives and development projects fail to produce promised results, residents may not want to participate in data collection activities and be skeptical that promised benefits will ever materialize. Residents may not be able to distinguish between research that is a one-and-done extraction and research that supports larger community-building and upgrading processes. Help them understand the difference. But be careful not to over engage residents or overpromise benefits. This is why it is so crucial that work be iterative and incremental. Residents need to see tangible benefits to invest their time. They also need help as soon as possible. Therefore, projects that only think long-term will largely fail in this challenging context.

Examples from the Field

Mukuru, Nairobi (Kenya)

Residents in Mukuru undertook a large-scale data collection process to support a settlement-wide participatory upgrading process that sought to engage over 100,000 households. Information provided by community data collection activities played a crucial role in conversations with the Nairobi city government and supported the declaration of Mukuru as a Special Planning Area (SPA) in 2017.

Community-led data collection and action research with partners was instrumental in making the case to local government. Because of the dire risks and challenges highlighted by residents in these campaigns, an interdisciplinary team of action researchers (from the University of Nairobi, Strathmore University, the Katiba Institute and the University of California, Berkeley), commissioned by Canada's International Development Research Centre (IDRC), in close collaboration with Muungano, undertook a multi-year research project to document living conditions in Mukuru.

Crucial to this research was the practice of settlement profiling pioneered and refined by SDI affiliates for decades, a method used by community researchers to gather data on living conditions in resource and data-poor informal settlements. Profiles enhanced existing research on conditions across Mukuru, providing data on an array of planning, built environment and basic services metrics to inform situational analyses of existing conditions (connectivity, accessibility, health, security, opportunity and livelihoods).

Co-researchers started in their own neighborhoods because it was familiar and they were known there. They then worked outwards to other neighborhoods to better understand the rest of their settlement.

“ It is good first if they start at counting, they do mapping first for knowing how many structure owners do they have in a specific area and also the number of tenants. It is also good they will know what they have in terms of infrastructure, whether they have government facilities, schools, hospitals and the rest. They will be able to identify what they have so they can note what they don't have. Number three, they will be able to bring those people together then they start negotiation including the local government so that it can help the people to come together. ”

Alphonse Masaku Structure Owner – Simbacool, Mukuru Kwa Reuben

Personal communication, 20 May 2022.

Quarry Road West, Durban (South Africa)

Researchers from the School of Built Environment and Development Studies at the University of KwaZulu-Natal (BEDS, UKZN) worked in partnership with community members to co-produce community-based participatory GIS maps, which have led to new pathways for supporting climate adaptation.

Chinhoyi (Zimbabwe)

Inclusive city-wide strategies for sanitation in Chinhoyi have engaged low-income communities in mapping, profiling and GIS to document their sanitation needs and leverage strategic relationships with local government. By engaging in the co-production of this knowledge, local authorities are pushed to recognize the sanitation needs of urban poor communities. The Sanitation and Hygiene Applied Research for Equity (SHARE) program builds on partnerships that have developed incrementally between slum dwellers and local authorities in Zimbabwe. This has emerged, in part, as a result of the severe financial challenges faced by local authorities, along with the advances made by low-income groups using savings and local data collection methods in relation to housing and upgrading in cities across Zimbabwe.

Ngaoundéré (Cameroon)

Open Cities Africa, an initiative of the Global Facility for Disaster Reduction and Recovery (GFDRR), supports the collection of open-source risk information through citizen engagement and the development of data products to support local decision-making. For instance, in Ngaoundéré in Cameroon, this approach allowed the team to map over 300 km² of urban area combining inputs from local residents, with data from the municipality and new drone imagery. Geospatial data collection was done by students from the University of Ngaoundéré. This role strengthened their technical skills and provided them with a hands-on opportunity to contribute to community development efforts. The use of students was especially effective because they spoke the local language, Fulfuldé, and understood the social and cultural norms around approaching households. The initiative was coordinated with the World Bank-financed Cameroon Inclusive and Resilient Cities Project (CIRCP) that is being implemented by the Ministry of Housing and Urban Development.

Materials

For office work:

1. Computer with GIS software installed (e.g. QGIS, ArcGIS)
2. GIS data: structure footprints; settlement boundaries; area (i.e. neighborhood) boundaries; structure block boundaries

For field work:

1. Handheld GPS device (optional)
2. Printed map for each data collection team
3. Structures Data Collection Form (one row in table per structure)
4. Services Data Collection Form (one row in table per service point)
5. Facilities Data Collection Form (one row in table per facility)

Example Materials

See the following two pages for the:

- Structures Data Collection Form
- Services Data Collection Form
- Facilities Data Collection Form



[5] STRUCTURES DATA COLLECTION FORM										Block code	Data collection team	Date
Form last updated Sep 2022										MN/R/A/		
Structure number	Structure use* (see codes below)	Structure type (P) Permanent (T) Temporary	Structure status (OCC) Occupied (VAC) Vacant	Number of...			Resident structure owner (Y) Yes (N) No	Month-ly rent paid (Ksh)	Structure name (if applicable)			
				Units/ Rooms	House holds	Shops				Vacant units		
1	COM	T	OCC	1	0	1	0	2500	Bazu Electronics			
2	RES	T	OCC	6	6	0	0	1500	-			
3	REL	P	OCC	1	-	-	0	-	Al Adha Mosque			
4	RES	T	OCC	8	6	0	2	1250	-			
5	COM	T	VAC	4	0	0	4	-				
6	MIX	T	OCC	7	5	1	1	2500				
7												
8												
9												
10												
11												
12												
13												
14												

*Structure use codes – (RES) Residential (COM) Commercial (MIX) Mixed residential/commercial (IND) Industrial (HLH) Health services (ED) Education services (COM) Community (REL) Religious (INS) Other institutional (PUB-UTL) Public utility (OTH) Other - specify

[6] SERVICES DATA COLLECTION FORM		Block code		Data collection team		Date		GPS code	
Form last updated Sep 2022		MN/R/A/							
Service* (see codes below)	Type (PRV) Individual/Private (SHR) Shared/Yard (PUB) Public (KSK) Kiosk	Status (W) Working (NW) Not working	Operator name	Funded by (PUB) Public (PRV) Private (COM) Community	GPS coordinate number				
1 WAT	SHR	NW	-	PRV	185				
2 TLT	PRV	W	-	PRV	186				
3 WAT	KSK	W	Baba Khan	PRV	187				
4 OTH - Water dam	PUB	W	Nairobi Water	PUB	188				
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
*Service codes -- (TLT) Toilet (WAT) Water (GD) Garbage disposal (ELT) Electricity transformer (STL) Street light (OTH) Other - specify									



[7] FACILITIES DATA COLLECTION FORM		Block code	Data collection team	Date	GPS code
Form last updated Sep 2022		MN/R/A/			
Facility* (see codes below)	Type (funded by) (PRV) Private (PUB) Public (COM) Community	Status (W) Working (NW) Not working	Operator name	GPS coordinate number	
1	SCH	PUB	W	Ministry of Education	189
2	SCH	PRV	W	Educate Partners	190
3	OTH - Community Garden	COM	W	-	191
4	HLH	PUB	NW	Ministry of Health	192
5					
6					
7					
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9					
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12					
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14					
15					
*Facility codes – (SCH) School (REL) Religious institution (HLH) Health center (PLC) Police station (OTH) Other - specify					

Related Components

Guides

- [Community Mobilization, Organization, Representation and Coordination Strategy](#)

Methods

- [Recruiting and Training Community Mobilizers and Co-Researchers](#)
- [Settlement Profiling](#)
- [Household Numbering and Enumeration](#)
- [Risk profiling: Identifying risks, assessing solutions and determining community priorities](#)

Sources

Interviews (2022) with staff from SDI-Kenya and the Akiba Mashinani Trust as well as a review of relevant documents and data collection forms from these same organizations.

Mukuru Kwa Reuben community. (2022, May 20). [Focus group interview by B. Hicks]. Mukuru SPA documentation 2022, Reuben Centre, Mukuru Kwa Reuben, Nairobi, Kenya.

Mukuru Viwandani community. (2022, May 18). [Focus group interview by B. Hicks]. Mukuru SPA documentation 2022, Mukuru Skills Primary School, Mukuru Viwandani, Nairobi, Kenya.

Horn, P., Kimani, J., Makau, J., & Njoroge, P. (2020). [Scaling participation in informal settlement upgrading: A documentation of community mobilisation and consultation processes in the Mukuru Special Planning Area, Nairobi, Kenya.](#)

Mazeka, B. et al (2019). *Community-Based Mapping Methodology for Climate Change Adaptation: A Case Study of Quarry Road West Informal Settlement, Durban, South Africa.*

Banana, E. et al. (2015). Co-producing inclusive city-wide sanitation strategies: Lessons from Chinhoyi, Zimbabwe. *Environment and Urbanization.*

Banana, E. et al. (2015). Sharing reflections on inclusive sanitation. *Environment and Urbanization.*

Additional Resources

For an in-depth discussion of the history, evolution, benefits, challenges, ethics, and legitimacy of settlement mapping, see:

Patel, S., Baptist, C., & D’Cruz, C. (2012). [Knowledge is power – informal communities assert their right to the city through SDI and community-led enumerations.](#) *Environment and Urbanization*, 24(1), 13-26.



Settlement Profiling

Typically conducted at the same time as [Settlement Mapping](#) and before [Household Numbering and Enumeration](#), settlement profiling is a community-led data collection method. It is a survey with a sample of households to collect data on the history and growth of the settlement and the challenges residents face across sectors. Data is used for both advocacy and subsequent planning efforts.



Who

Most useful for:

- Local Champions
- Residents
- CBOs
- Urban Poor Federations
- Federation-support NGOs

Also useful for:

- NGOs
- Academia
- Local Governments



What

Settlement profiling (and [Settlement Mapping](#)) can be undertaken with small teams of residents experienced in data collection. While [Household Numbering and Enumeration](#) is a census of all households in a settlement, profiling is done with a sampling of households.

This typically happens at the same time as mapping activities. Co-researchers walk their area of the settlement, visiting each structure. However, instead of speaking to every household like during enumeration, they only speak to one household. For mapping purposes, this household indicates how many units/rooms and households there are within the structure as well as how they access essential services, the distance to service location points (e.g. 500 meters), whether services are functional and who owns them.

At the same time, co-researchers interview the same household representative using a survey form. Slum Dwellers International (SDI) has assessed profiling practices across its network and created a standardized, comprehensive questionnaire to use during profiling activities (see [Example Materials](#)). Note, however, that you should only use the sections of the questionnaire that are most relevant for your current project as most residents will not have time to complete all questions. Also, if good, up-to-date data already exists for a given sector (e.g. health), you do not need to cover that section during household interviews. This helps avoid duplication of data and research fatigue among residents.

Data collected during profiling is typically used to advocate for an upgrading project in partnership with the local government. It provides a snapshot of the settlement. It does not provide household-level details (which are collected during numbering and enumeration); for example, profiling will not tell you if there are child-headed households in the settlement.

Profiles yield a 'content' map instead of a spatial map of the settlement. Identifying key challenges, it informs any special focus needed for the enumeration questionnaire (beyond its standard set of questions about household size, income, etc). For example, if during profiling many people express concerns about cholera outbreaks, you could include questions about health, water and sanitation on the subsequent enumeration questionnaire. It also gives focus to advocacy efforts and to defining the main goals of an upgrading initiative. Finally, it serves as a baseline for additional data collection efforts once an upgrading project gets underway.

Data That Can Be Collected During Profiling

History and growth of the settlement	e.g. location, year established, size over time, name, landmarks, etc
Demographics	e.g. age, gender, total population, number of tenants, average household size, socioeconomic characteristics (like income levels, income sources, poverty levels)
Access to land	i.e. tenure, evictions, land value, land grabbing, available legal protections
Access to housing	e.g. availability, cost, security, quality
Access to services	e.g. water, markets, healthy food options, sanitation, electricity, cooking fuels, health, education, open space, garbage collection, public transit, banking, law enforcement, emergency response, clothing shops, vehicle repair
Access to social and political networks	e.g. community meetings, community-based organizations, savings groups, forums for engaging local governments
Public health risks	e.g. indoor and outdoor air quality, stagnant water, garbage, disease outbreaks, poor sanitation
Gender-based risks	e.g. lack of infrastructure or services for women's health, lack of secure livelihood opportunities for women
Educational opportunities	e.g. availability of facilities, number of children in school
Livelihood opportunities	e.g. common jobs by gender and age, unemployment
Mobility challenges	e.g. lack of roads, unpaved roads, no infrastructure for disabled people, traffic congestion
Security risks	e.g. crime, violence, riots, evictions, lack of streetlights, lack of roads, lack of law enforcement, police violence
Structure risks	e.g. typical construction materials, typical flooring
Location risks	e.g. water bodies, open drains, sinking soils, degraded and/or eroding soils, lack of vegetation or tree cover, mine dumps, garbage dumps, industrial zones, large roads or highways, railway tracks, under power lines, steep slopes, flood plains
Environmental hazards	e.g. storm surge, heavy precipitation, mines, water pollution, soil pollution, floods, water and vector-borne diseases, landslides, earthquakes, fires, high winds, droughts and water scarcity, poor indoor and outdoor air quality, heat/cold stress, heat/cold waves, cyclones, tornados
Climate change risks	i.e. the increased frequency, intensity and variability (more erratic and unpredictable weather patterns) of environmental hazards and existence or lack of risk-reducing infrastructure and services
Community priorities	i.e. among the challenges discussed, which are the most pressing? Which have the largest impacts on residents' lives?

For more, see the profiling questionnaire in [Example Materials](#).

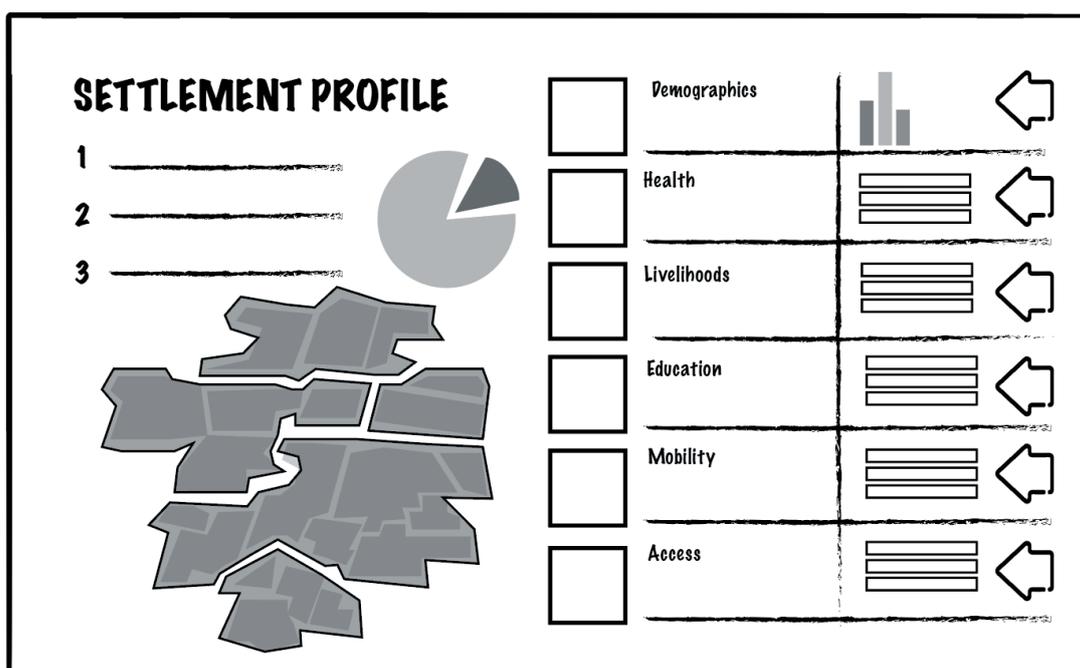


Photo Credit: Akiba Mashinani Trust

Community meeting in Mukuru in 2018.

To undertake profiling, you will need both a technical team with experience in surveys and qualitative research and community data collection teams. If possible, rely on experienced community co-researchers with training in data collection. Otherwise, train a core set of co-researchers who can then recruit and train additional co-researchers from their areas.

Make sure to design the profiling survey with residents so that it is locally-relevant. Finally, conduct data collection and compile, validate, analyze and share the data. It is essential that residents – not just the technical team – have ownership of the data generated for their own discussions of development priorities and negotiations with local governments. See [How](#) for more detail.



Why

COMMUNITY-LED DATA COLLECTION methods involve processes led by informal settlement residents with support from their civil society partners. Flexible by nature, these methods adapt well to different national and local contexts.

A process by the community for the community, the goal of these methods is for residents to collect their own data about themselves – instead of relying on outsiders to tell them about themselves – and own and use these data to inform both their fellow residents and government authorities about key challenges and priorities. In particular, challenges and priorities related to land tenure, housing, and basic infrastructure and services, key ingredients in building climate resilience in urban areas.

Armed with these data, residents can speak the same language as governments and their development partners. To exist in the eyes of local authorities, residents must first show up on the map. These methods provide the data needed for residents to make their case to local authorities for upgrading of housing, infrastructure and services in their settlements. It can also support organizing activities and campaigns to deter eviction as well as open up ongoing dialogue with local authorities, development partners, civil society and academia.



“ Mapping and data collection and I also knew how data defends people. How the data spoke for us in the government. And also I learned how to bring people together and empower people. I also learned how to talk with these people in these big offices, because I come from the slums, I don't have to despise myself, I have to know that I have information that they don't have. And the other thing I learned is I have also the right as a Kenyan person to have good life and the other thing is, every change to take place wherever I am, it is good for me to participate and to give also my ideas. ”

Christine Mwelu Community Mobilizer – Lunga-Lunga Centre, Mukuru Viwandani (Nairobi, Kenya)

Personal communication, 18 May 2022.

Like other community data collection methods, **settlement profiling** provides essential data for residents to speak to, negotiate and plan with local governments. Profiles highlight key challenges for a settlement, giving focus to advocacy efforts and to subsequent project planning.

Community-led data collection does not just provide the currency for residents to negotiate and plan with government – it also engages residents in a process where they begin to see themselves as part of a larger community with shared problems and learn to work together instead of individually to understand common challenges, determine priorities and act collectively to negotiate among themselves and with government. Data collection activities begin dialogues



Photo Credit: Akiba Mashinani Trust

Community mobilizer presenting information from data collection activities in a community meeting in 2018.

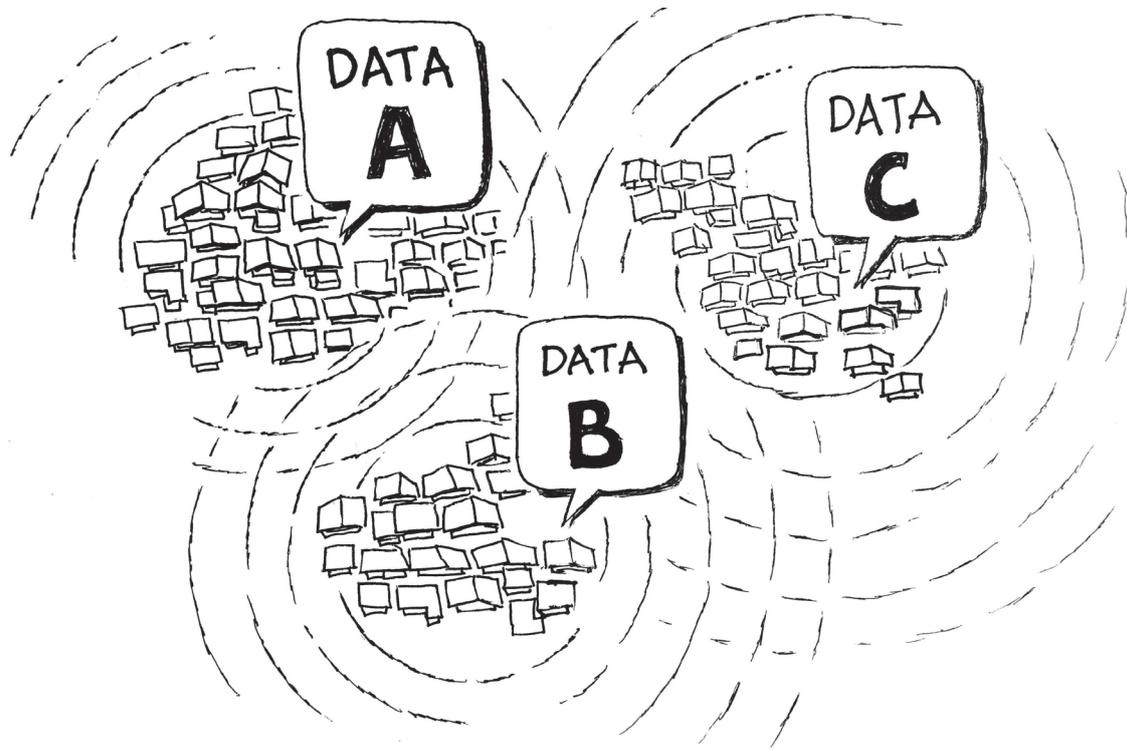
among residents and demonstrate the crucial role data plays in shaping development priorities. More broadly, it enables urban poor communities to assert their right to the city as well as secure tenure, risk-reducing infrastructure and services, and dignified livelihoods. It can also lead to greater involvement in city policymaking and the delivery of subsidized services. Working with residents to do research is also likely the most resource-efficient option.

See [COMMUNITY-LED DATA COLLECTION](#) for more.

Where

Community methods training and data collection often follow a concentric instead of linear pattern. This is because community mobilizers and co-researchers often start in familiar territory in their own neighborhoods and expand out from there. The data collection processes also typically don't have one beginning or end point, instead happening iteratively. Civil society or CBOs often undertake the initial training of local leaders and other motivated residents (youth can be excellent candidates because they learn quickly and may not be employed). Once this initial class of co-researchers is trained, they can recruit additional candidates in their neighborhoods to be trained as well.

It is beneficial to gather data from all areas in the settlement so that the scale of need is fully understood. It also contributes to the aggregation of data citywide. Aggregation provides



evidence to bargain and plan with local governments, giving urban poor federations a better sense of the size of their political constituency and what they contribute to the city's economy. However, if not feasible to do profiling settlement wide, collecting data where you can will still benefit residents and their advocacy efforts.

When

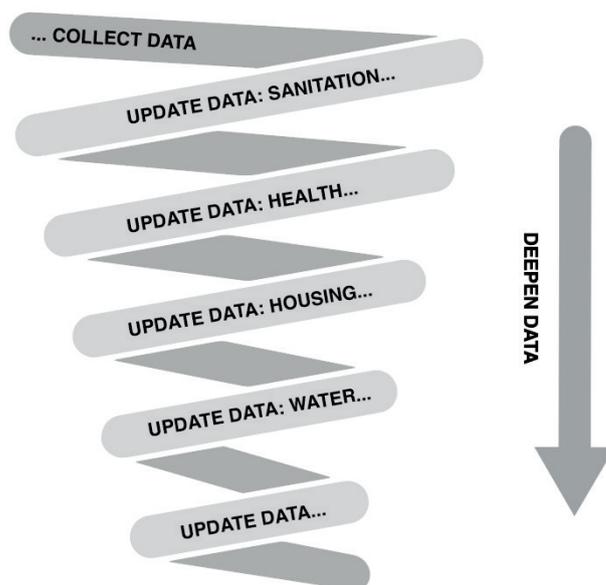
Unlike [Household Numbering and Enumeration](#), profiling (and [Settlement Mapping](#)) can be undertaken before a specific upgrading project has been slated. Indeed, it is important to undertake profiling to negotiate with the local government to upgrade the settlement. That said, mapping and profiling activities do have a cost and should not be undertaken arbitrarily. They should be strategically aligned to specific goals and advocacy efforts for upgrading initiatives.

While undertaking profiling after [Settlement Mapping](#) can be beneficial for profiling activities, they are often carried out at the same time. The timing of these data collection activities will be determined by considerations unique to each settlement.

Starting with mapping and profiling gives residents a chance to learn about upgrading initiatives and organize around certain topics. When activities are not targeted directly at their household, residents will be less afraid and more receptive to learning about projects. And therefore, once numbering and enumeration starts, some residents will already be familiar with the project and have bought into the process.

Given an existing community mobilization network and trained co-researchers, profiling can take place over a few weeks time. This will obviously vary according to the size of the settlement, existence of any adversarial stakeholders, political complexities, or other unforeseen factors. Indeed, strive to carry out mapping within a short period of time because if it is instead drawn out, conditions on the ground will inevitably change and complicate data validation activities.

Community-led data collection is not a one-and-done process. In the context of resource-poor informal settlements, data collection activities have a significant cost – you should only do as much as is required at the time to further current advocacy and planning efforts. The environments in informal settlements also change rapidly and data will quickly become out-of-date. Therefore, data collection is a highly iterative process. You will continually return to sectors to update data and fill in gaps where data lacks the depth needed for detailed sector-level planning.



How

Assemble a Technical Team

Because conducting interviews to fill out the profiling survey and compiling the data require expertise in research design and data management, identify a suitable technical team. This is often undertaken by a federation-support NGO like SDI, other local NGOs, or a local university. They will work with community mobilizers and co-researchers during mobilization and data collection. Finally, they will compile and analyze the collected data.

Design the Profiling Survey With Residents

Co-design ensures that the forms are relevant for the given settlement. While the SDI profiling questionnaire in [Example Materials](#) provides an excellent starting point, it must be customized to the unique context of the settlement. At its simplest, this can be done with experienced mobilizers and co-researchers. At its most robust, it could be done via focus group discussions with a sampling of residents from different areas in the settlement.

First, determine what sectors and topics are most pressing in your settlement. Pull what you can directly from the questionnaire, update questions as needed to be locally-relevant, and add additional questions as you see fit.

Strive to keep the questionnaire as short as possible – many residents will not have time to complete the entire SDI questionnaire. Also, if good, up-to-date data already exists for a given sector (e.g. health), you do not need to cover that section during household interviews. This helps avoid duplication of data and research fatigue among residents.

To select questions and phrase them so that they are clearly understood by interview participants, engage local leaders and residents with experience in data collection and community engagement. Speak with CBOs and other locally-active organizations to get their feedback on topics and questions.

Finally, keep in mind that while it may seem like extra work to design the survey with local input, this upfront investment will pay greatly during interviews and while compiling and analyzing the data. In other words, skipping this step will create confusion and extra work during and after interviews. It may even compromise the data if it is unclear how well participants understood certain questions or if there were significantly different understandings of the questions asked among participants.



Recruit and Train Community Co-Researchers

The technical team will not know the settlement as well as its residents (and the team is also too small to do all the work alone). Recruit a core team of lead co-researchers from different areas/ neighborhoods across the settlement (this can be done at the same time as the technical team is processing data to produce the initial map).

If possible, rely on residents who already have some experience with data collection (i.e. an understanding of the basics of data collection and quality assurance). If few to no residents have experience, you will also need to train them. Local leaders and youth often make good candidates. Each lead co-researcher can then recruit and train residents in their area to form teams for data collection (residents will not trust people they do not know, even residents from other parts of the settlement).

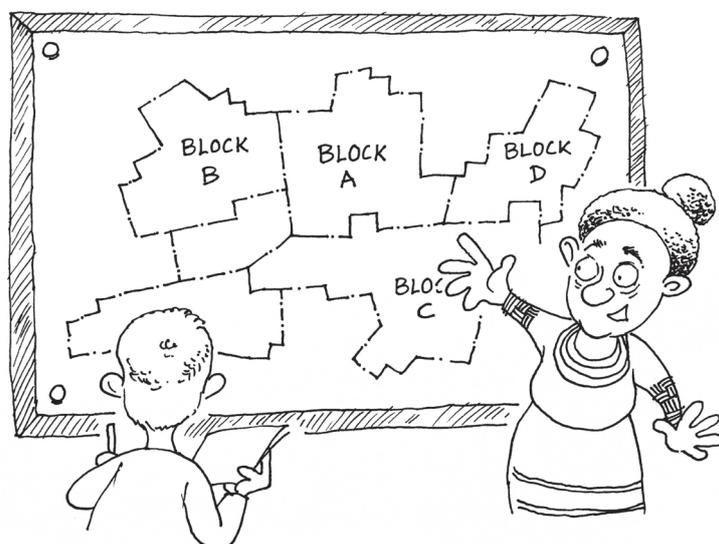
The total number of co-researchers needed is subject to the needs, opportunities and constraints in your settlement. But, a general rule of thumb is five to ten residents per cluster (of up to 1000 households).

See [Recruiting and Training Community Mobilizers and Co-Researchers](#) for more detail.



Assign Blocks to Co-Researchers

Form teams of five or more co-researchers per block. One co-researcher will act as the team lead and liaison with the technical team. A member of the technical team will provide oversight.



Conduct Profiling Interviews

Each co-researcher will walk the area assigned to them, visiting every structure. Co-researchers will select a representative from one household that lives and/or works within the structure (this representative will speak for all the households within the structure). They will then interview the representative to fill out the profiling questionnaire (as well as the *Structures Data Collection Form* for [Settlement Mapping](#)).

Strive to talk to a cross-section of sociodemographic groups to capture a variety of views to ensure a representative sample. This means talking to a roughly equal number of people of different *genders, ages, incomes, educational levels, occupations, and (dis)abilities*. Do not just talk to the head of household as this may skew data significantly.



Quality Check Data Collection

Before compiling the data in a database, co-researchers must check each other's work. A lead co-researcher with substantial experience and a strong track record of producing accurate data should spot check about one-third of the data collection forms. This entails randomly selecting forms, visiting the corresponding structure, and talking with the household representative that was previously interviewed to assess the accuracy of data. If the work of any co-researcher contains a substantial number of errors, the team must then re-collect that data.

Compile the Data

If possible, create a digital version of the survey linked to a spreadsheet or database. Co-researchers, technical team members or interns can then record each survey as if they were filling in the survey themselves. This will minimize human error. If not possible, they can simply enter data directly into the spreadsheet or database. Ideally, co-researchers from the settlement will enter data. Data entry by residents ensures continued ownership of the process and deeper understanding of the data.



Validate the Data

Errors in data collection are inevitable. Validation is an essential step for producing trustworthy datasets to inform evidence-based advocacy and planning with local governments. Also, structure or household information may have changed between the time data was collected and the time its validated.

Hold focus group meetings in every area (i.e. neighborhood) with residents to validate the data collected during both mapping and profiling. Make sure not to continually engage the same residents; this will ensure greater inclusion in research activities and help combat research fatigue.

If possible, fix any issues raised by participants in the meeting itself. If needed, return to the field with participants to fix any unresolved issues.

If possible, also work with researchers from local academic institutions to validate the data. Their involvement will lend legitimacy to the findings in the eyes of the local government.



Analyze the Data

Use the data to create a profile of the settlement with relevant statistics for each of the sectors of focus. It can be used during community meetings to inform residents of research findings. It can also be used for advocacy and negotiation with the local government.

Share the Data to Determine Next Steps

Residents must see the results of their work to maintain trust in the process. Sharing the data also helps communities understand what their top priorities may be to formulate a plan of action. Data should not only be shared as findings in community meetings — as it is community-generated and owned, it should be made freely accessible to all residents (though this can prove challenging in practice).



Considerations

How can we ensure that all stakeholders are involved?

Before beginning community data collection activities, it is useful to identify all possible stakeholders in the community and the roles they should play in an upgrading project to ensure everyone is represented. Without a good understanding of who stands to benefit and lose out, the loudest and most powerful residents will inevitably gain while the most vulnerable lose out. This starts during data collection. Some stakeholders will seek to protect their interests and even take advantage for their own gain by influencing the data collection process.

While the profiles of stakeholders may be similar across informal settlements, it is important to identify specific groups to understand the dynamics of local politics, relationships, vested interests, and vulnerabilities in the settlement. To do this, engage residents, especially the quiet ones, to create a detailed stakeholders map.

It is also important to understand the social hierarchies at play in the settlement. In addition to ensuring broad support across stakeholders, it is important to recognize both formal and informal local leaders. This could be a local government official or a religious or community leader. Engaging these leaders helps ensure broader community engagement and participation.

How can we ensure we've developed the right profiling questionnaire?

If possible, it's a great idea to pilot test your resident-designed questionnaire with a small number of households prior to conducting the full enumeration across the settlement. You can use what you learn from this pilot to adjust and refine the questionnaire. However, be wary of the potential for research fatigue (people can get tired of answering questions). And don't let perfect be the enemy of good — questionnaires can always be improved but even imperfect ones will provide invaluable data.

How long should the profiling questionnaire be?

You want to take advantage of the time invested to conduct interviews and collect as much data as possible. That said, both residents and co-researchers will have limited time. The questionnaire therefore should be short but strategic, focusing on the main goals of the advocacy efforts.

Who should co-researchers be?

They can be any resident — tenant, structure owner, local leader, etc (but should not be outsiders). Women and youth often make good candidates as they may have more time free during the day. In particular, seek out people that demonstrate commitment to community work and data collection processes.

Should we compensate community mobilizers and co-researchers?

Yes, provide some small compensation as possible. Residents' time is precious and few may be able to contribute consistently without some consideration of the cost of their time.

How can we ensure that collected data is accessible to residents?

You can present it in community meetings, distribute it in printed materials, and share it via media like community radio. If possible, you should also strive to make hard copy and digital databases accessible, storing them in local facilities like a community center. However, make sure to never share sensitive personal data like ID numbers, phone numbers, etc.

How do we ensure that our data is accepted as credible, consistent and accurate by government?

The data validation process is essential for ensuring acceptance of community-collected data. The data validation process is essential for ensuring acceptance of community-collected data. This entails two activities: (1) co-researchers quality checking each other's work and (2) conducting focus group discussions with residents. If possible, also engage local university partners to validate the data as well.

What is the main language or languages spoken by settlement residents?

Make sure your questionnaire reflects this. If multiple languages are spoken and there is no one common language, your questionnaire should be translated to each of these languages. This can be side-by-side on one version of the questionnaire or you can make multiple versions, whichever you think will work best in your area.

Challenges

Data Collection Errors

Errors are inevitable, especially when community co-researchers have little experience in data collection. You can minimize errors by starting small. This way, co-researcher trainees can make mistakes, discuss together and learn so that once they scale up they are better prepared. This approach also saves resources, minimizing work that would need to be redone during quality checks by other co-researchers and during the community validation process.

Residents' Distrust, Lack of Awareness, and Misinformation

Residents in informal settlements have faced a long history of land grabs and evictions as well as many development projects that have failed to produce tangible results. There are also inevitably opportunists inside and outside the community that will seek to use upgrading efforts to their own benefit. Residents are therefore often skeptical of upgrading projects and fearful when they see you walking around with a map in your hand. Some residents will resist the process and you may even be threatened. You can overcome this through patient dialogue, inviting trusted local leaders to speak about the project, inviting local government staff to speak to residents, and striving to provide near-term, incremental benefits to build confidence in the process. It is also essential to include community participation from the start as residents will not trust people they don't know. Additional strategies include: training a core team that understands the method and its promise for bringing benefits to the settlement; and involving trusted local leaders, including from the local government administration (e.g. ward chiefs).



“ The structure owners thought that we were selling the settlement because they didn't want to attend meetings, for them to understand what we were telling people. So, it was conflicting for me, for them to say I'm selling their houses, they won't be getting the money they were getting. So, my life was also threatened, and people were confronting me on the roads and saying how bad I am as a woman. I remember when we were doing numbering, someone came and said he will slice us into pieces using a panga, we had to leave his house behind and get back to our government and the people we were working with and explain to them the challenges we were facing on the ground, to use chairmen to inform people that the work we were doing is government's, because we personally do not have the title deed for that area. ”

Christine Mwelu Community Mobilizer – Lunga-Lunga Centre, Mukuru Viwandani (Nairobi, Kenya)

Personal communication, 18 May 2022.

Research Fatigue and Disbelief

Again, because so many research initiatives and development projects fail to produce promised results, residents may not want to participate in data collection activities and be skeptical that promised benefits will ever materialize. Residents may not be able to distinguish between research that is a one-and-done extraction and research that supports larger community-building and upgrading processes. Help them understand the difference. But be careful not to over engage residents or overpromise benefits. This is why it is so crucial that work be iterative and incremental. Residents need to see tangible benefits to invest their time. They also need help as soon as possible. Therefore, projects that only think long-term will largely fail in this challenging context.

Examples from the Field

Mukuru, Nairobi (Kenya)

Residents in Mukuru undertook a large-scale data collection process to support a settlement-wide participatory upgrading process that sought to engage over 100,000 households. Information provided by community data collection activities played a crucial role in conversations with the Nairobi city government and supported the declaration of Mukuru as a Special Planning Area (SPA) in 2017.

Community-led data collection and action research with partners was instrumental in making the case to local government. Because of the dire risks and challenges highlighted by residents in these campaigns, an interdisciplinary team of action researchers (from the University of Nairobi, Strathmore University, the Katiba Institute and the University of California, Berkeley), commissioned by Canada's International Development Research Centre (IDRC), in close collaboration with Muungano, undertook a multi-year research project to document living conditions in Mukuru.

Crucial to this research was the practice of settlement profiling pioneered and refined by SDI affiliates for decades, a method used by community researchers to gather data on living conditions in resource and data-poor informal settlements. Profiles enhanced existing research on conditions across Mukuru, providing data on an array of planning, built environment and basic services metrics to inform situational analyses of existing conditions (connectivity, accessibility, health, security, opportunity and livelihoods).

Co-researchers started in their own neighborhoods because it was familiar and they were known there. They then worked outwards to other neighborhoods to better understand the rest of their settlement.

Materials

1. SDI's standardized profiling questionnaire

Example Materials

See the [SDI questionnaire](#) attached at the end of this document.

Related Components

Guides

- [Community Mobilization, Organization, Representation and Coordination Strategy](#)

Methods

- [Recruiting and Training Community Mobilizers and Co-Researchers](#)
- [Settlement Profiling](#)
- [Household Numbering and Enumeration](#)
- [Risk profiling: Identifying risks, assessing solutions and determining community priorities](#)

Sources

Interviews (2022) with staff from SDI-Kenya and the Akiba Mashinani Trust as well as a review of relevant documents and data collection forms from these same organizations.

Mukuru Viwandani community. (2022, May 18). [Focus group interview by B. Hicks]. Mukuru SPA documentation 2022, Mukuru Skills Primary School, Mukuru Viwandani, Nairobi, Kenya.

The standardized profiling form from Slum/Shack Dwellers International (2021)

Horn, P., Kimani, J., Makau, J., & Njoroge, P. (2020). [Scaling participation in informal settlement upgrading: A documentation of community mobilisation and consultation processes in the Mukuru Special Planning Area, Nairobi, Kenya.](#)

Additional Resources

For an in-depth discussion of the history, evolution, benefits, challenges, ethics, and legitimacy of settlement mapping, see: Patel, S., Baptist, C., & D'Cruz, C. (2012). [Knowledge is power – informal communities assert their right to the city through SDI and community-led enumerations.](#) *Environment and Urbanization*, 24(1), 13–26.

C. LOCATION PROBLEMS							
C1	INTERVIEWERS PLEASE NOTE Please look around the slum and cross all boxes which indicate a feature that poses a risk to the settlement. You will need to walk around to observe or look for any of the features listed below. Once you have IDENTIFIED all features found please check with community members if you have missed anything.						
	<input type="checkbox"/> Canal	<input type="checkbox"/> Slope	<input type="checkbox"/> Area that floods	<input type="checkbox"/> Garbage Dump			
	<input type="checkbox"/> Road Side	<input type="checkbox"/> Open Drains	<input type="checkbox"/> Water Body	<input type="checkbox"/> Railway Track			
	<input type="checkbox"/> Mine Dump	<input type="checkbox"/> Sinking Soil	<input type="checkbox"/> Industrial Hazards	<input type="checkbox"/> Under Power Lines			
	<input type="checkbox"/> Other – please list →	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
C2	Is this location considered dangerous?	<input type="checkbox"/> YES <input type="checkbox"/> NO	C3	If yes, why?			
C4	Have you experienced any natural disasters like, flooding, strong winds, forest fire, and earthquakes for example? If yes – what were they and when did they occur? Fill in year or date next to the box checked.						
	<input type="checkbox"/> Fires	<input type="checkbox"/> Floods	<input type="checkbox"/> Strong Winds	<input type="checkbox"/> Earthquakes			
	<input type="checkbox"/> Other – please list →	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
C5	What are the social problems you have experienced in your community?						
	<input type="checkbox"/> Evictions	<input type="checkbox"/> Riots	<input type="checkbox"/> Crime	<input type="checkbox"/> Community Violence			
	<input type="checkbox"/> Other – please list →	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
C6	Please describe what are the most common types of crime experienced in this settlement?						
C. LOCATION PROBLEMS - EVICTIONS							
C7	Has this settlement ever faced eviction threats?	<input type="checkbox"/> YES <input type="checkbox"/> NO	C8	If YES how many times have you faced eviction?			
C9	Are you currently under threat of eviction from the owner of the land?	<input type="checkbox"/> YES <input type="checkbox"/> NO	C10	How serious is this threat of eviction? Tick ONE	<input type="checkbox"/> High	<input type="checkbox"/> Low	<input type="checkbox"/> None
C11	If you were under threat of eviction, what did you do to stop it? What are you currently doing to stop it? Any other comments on eviction threats						
D. DEMOGRAPHIC AND STRUCTURE DETAILS							
D1	How many STRUCTURES in the settlement are used to live in (residential)?						
D2	How many STRUCTURES in the settlement are used to live in AND for businesses (residential cum business)?						
D3	How many STRUCTURES in the settlement are for business purposes only?						
D4	How many OTHER structures apart from those in D1-D3 are in the settlement? (e.g. Schools, community halls, religious, animal stalls, incomplete structures, health facilities etc.)						
D5	How many FAMILIES live in this settlement?		D6	What is the average size of a FAMILY in this settlement? Please provide an estimate			
D7	What is the total number of people who live in this settlement?						
D8	When it comes to renting structures, please check ONE box that best describes the settlement	<input type="checkbox"/> Most People Rent	<input type="checkbox"/> About half the people rent	<input type="checkbox"/> Less than half the people rent	<input type="checkbox"/> Very few people Rent	<input type="checkbox"/> No people rent	

E. SOURCES OF WATER

What are the main sources of water for the settlement? Check all applicable options	Who supplies the water? Check ONE	How many of each selected source in the settlement?	Quality of the water Check ONE for each option	Who manages the water source?			
E1	<input type="checkbox"/> Individual Taps	<input type="checkbox"/> Municipality <input type="checkbox"/> Private	<input type="checkbox"/> Safe for drinking <input type="checkbox"/> Not safe				
E2	<input type="checkbox"/> Community Taps	<input type="checkbox"/> Municipality <input type="checkbox"/> Private	<input type="checkbox"/> Safe for drinking <input type="checkbox"/> Not safe				
E3	<input type="checkbox"/> Boreholes/Wells	<input type="checkbox"/> Municipality <input type="checkbox"/> Private	<input type="checkbox"/> Safe for drinking <input type="checkbox"/> Not safe				
E4	<input type="checkbox"/> Dams	<input type="checkbox"/> Municipality <input type="checkbox"/> Private	<input type="checkbox"/> Safe for drinking <input type="checkbox"/> Not safe				
E5	<input type="checkbox"/> Springs		<input type="checkbox"/> Safe for drinking <input type="checkbox"/> Not safe				
E6	<input type="checkbox"/> Rivers		<input type="checkbox"/> Safe for drinking <input type="checkbox"/> Not safe				
E7	<input type="checkbox"/> Water Tankers	How many times per week does the tanker visit the settlement?					
E8	<input type="checkbox"/> Neighboring community	How far is it to this community?	Minutes(walking)	Kilometers			
E9	What is the average amount of money charged per tin of water?						
E10	What is the average number of tins of water used by households per day?						
E11	On average what do households spend on water per month?						
E12	On average how long does it take a household to collect water? check ONE	<input type="checkbox"/> 5 mins	<input type="checkbox"/> 10 mins	<input type="checkbox"/> 15 mins	<input type="checkbox"/> 30 mins	<input type="checkbox"/> 30+ mins	Hours
E13	How do most households fetch water? check ONE	<input type="checkbox"/> Walk	<input type="checkbox"/> Bicycle	<input type="checkbox"/> Wheel barrow	<input type="checkbox"/> Motorized transport	<input type="checkbox"/> Other	
E14	On average how many hours per day is water available?	hrs	E15	Is your settlement connected to the main water line?	<input type="checkbox"/> YES <input type="checkbox"/> NO		
E16	General comments regarding water: Please use the space provided to record the communities comments on water – try to probe about the situation of water, its impacts on women, who controls it, major issues, concerns or problems						

F. SANITATION

F1	Is there a sewer line passing through or near to the settlement?	<input type="checkbox"/> YES <input type="checkbox"/> NO	F2	Is the settlement connected to the main sewer line?	<input type="checkbox"/> YES <input type="checkbox"/> NO					
F3	Do people pay to use the toilets?	<input type="checkbox"/> YES <input type="checkbox"/> NO	F4	How much do you pay for use of the toilet?						
	Please check all applicable boxes	Blocks / Clusters	Cubicles	Number of toilets working	Who manages the toilet facility Check ONE for each option	What types of toilets are these? Please mark boxes with an X. You may choose more than one option per line				
F7	<input type="checkbox"/> Individual Toilets				<input type="checkbox"/> Private <input type="checkbox"/> Other	Flush	Ecosan	VIP	Pit Latrine	
F8	<input type="checkbox"/> Shared Toilets				<input type="checkbox"/> Municipality <input type="checkbox"/> Private <input type="checkbox"/> Other	Flush	Ecosan	VIP	Pit Latrine	
F9	<input type="checkbox"/> Communal Toilets				<input type="checkbox"/> Municipality <input type="checkbox"/> Private <input type="checkbox"/> Other	Flush	Ecosan	VIP	Pit Latrine	
F10	<input type="checkbox"/> Public Toilets				<input type="checkbox"/> Municipality <input type="checkbox"/> Private <input type="checkbox"/> Other	Flush	Ecosan	VIP	Pit Latrine	
F11	On average, how long does a person have to wait to use the toilet in this settlement? (in minutes)							minutes		
F12	General comments regarding sanitation issues in the settlement. Are there any other major concerns community members have about sanitation in their settlement									



G. GARBAGE REMOVAL					
G1	Where is most of the settlement garbage deposited? Check 1	<input type="checkbox"/> Common area (inside the settlement)		<input type="checkbox"/> Common area (outside the settlement)	
		<input type="checkbox"/> Thrown anyhow within the settlement (disorganized methods)		<input type="checkbox"/> People own Individual Bins	
G2	How many formal garbage collection points does the settlement have?	G3		Who collects garbage from these collection points?	<input type="checkbox"/> Municipality <input type="checkbox"/> Not collected <input type="checkbox"/> Others.....
G4	Is garbage collection paid for?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	G5	If yes, how much
G6	How many times per week is garbage collected from the settlement?				
G7	General comments regarding waste disposal in the settlement. Is the settlement kept clean? How is stormwater/grey water/waste water handled in the settlement?				

H. ELECTRICITY					
H1	Is there electricity in this settlement?	<input type="checkbox"/> YES <input type="checkbox"/> NO		H2	If yes, indicate whether legal or illegal connection
				<input type="checkbox"/> Legal connection <input type="checkbox"/> Illegal connection	
H3	How many households have legal electricity connections?				
H4	Does the settlement have street lights?	<input type="checkbox"/> YES <input type="checkbox"/> NO		H5	If yes, how many street lights
H6	What is the average number of hours that the settlement receives electricity per day?				
H7	What does a household spend on average per month on electricity in this settlement? (estimate)				
H8	If no electricity is used in the settlement, what are the reasons for this?				
H9	General comments regarding electricity. Is electricity expensive? Why is this the case? What do houses who do not have electricity do to meet their energy needs?				

I. LIVELIHOOD / WORK LIFE	
I1	What are the common jobs men have from this settlement?
I2	What are the common jobs women have from this settlement?
I3	If children do work, what jobs do they do

J. TRANSPORT					
J1	What are the main modes of transport used by residents of the settlement? (please check at most THREE boxes only)	<input type="checkbox"/> Train <input type="checkbox"/> Bus <input type="checkbox"/> Private Automobile		<input type="checkbox"/> Taxi <input type="checkbox"/> Motorcycles <input type="checkbox"/> Bicycles	
		<input type="checkbox"/> Walking <input type="checkbox"/> Other <input type="checkbox"/>			
How long does it take to WALK from the settlement to the nearest (in minutes)		Railway Station		Bus Stop	
		J2	mins	J3	mins
				J4	mins
For each of the THREE main modes of transport selected above, please indicate the cost per day one way to travel to town					

J5	Mode of transport 1 – cost per day travel to town 1 way	
J6	Mode of transport 2 – cost per day travel to town 1 way	
J7	Mode of transport 3 – cost per day travel to town 1 way	
J8	Interviewer observe: How do people in the settlement access their homes? Check 1	<input type="checkbox"/> Tarred Roads <input type="checkbox"/> Dirt paths <input type="checkbox"/> Gravel Roads
J9	What is the nature of roads within this settlement? (Observation)	

K. CLIMATE CHANGE AWARENESS, IMPACTS AND RESPONSES.

K1	Have you heard of “CLIMATE CHANGE”?	<input type="checkbox"/> YES <input type="checkbox"/> NO
K2	Where have you heard about climate change? Tick as many as you feel apply.	
	<input type="checkbox"/> Television/Radio	<input type="checkbox"/> School/College/University
	<input type="checkbox"/> Internet	<input type="checkbox"/> Environmental Groups e.g. (NEMA)
	<input type="checkbox"/> Newspaper	<input type="checkbox"/> Energy Suppliers
	<input type="checkbox"/> Local Council	<input type="checkbox"/> Public Libraries
		<input type="checkbox"/> Government agencies/ information
		<input type="checkbox"/> Specialist publications/academic journals
		<input type="checkbox"/> Friends/Family
		<input type="checkbox"/> Other (Specify)
K3	Which of the following list of environmental issues is mostly experienced in your community?	
	<input type="checkbox"/> Air Pollution	<input type="checkbox"/> Traffic Congestion
	<input type="checkbox"/> Drought	<input type="checkbox"/> Poor solid waste management
	<input type="checkbox"/> Heat Wave	<input type="checkbox"/> Poor liquid waste management
	<input type="checkbox"/> Flooding	<input type="checkbox"/> Rise in sea/lake level
		<input type="checkbox"/> Change in distribution of rainfall
		<input type="checkbox"/> Pollution of rivers and lakes
		<input type="checkbox"/> Over-exploitation of natural resources
		<input type="checkbox"/> Natural hazards (e.g. Storms, landslides etc)
K4	What change in weather have you noticed in this area over the last 2 years ?	
	Weather Factor	Change (Increase/Shift or Decrease or No shift)
	Seasons	
	Rainfall Pattern	
	Temperature	
	Wind	
K5	How has the change in weather patterns affected your community?	
K6	What have you done to minimize the adverse effects in change in weather patterns?	
K7	What do you think should be done to mitigate the changes in weather patterns?	



K8	Who do you think should have the main responsibility for tackling climate change?		
<input type="checkbox"/> International Organizations eg. UN	<input type="checkbox"/> Non-Governmental Organizations	<input type="checkbox"/> Environmental Organizations/lobby groups e.g. NEMA	
<input type="checkbox"/> The National Government	<input type="checkbox"/> Community Based Organizations	<input type="checkbox"/> Business Industries	
<input type="checkbox"/> County/Local Government	<input type="checkbox"/> Faith Based Organizations	<input type="checkbox"/> Individuals	

L. SERVICES

Do residents of the slum have ACCESS to the following health services? By access we mean do they go to any of the facilities or services				
L1	Health Clinic	<input type="checkbox"/> YES <input type="checkbox"/> NO	Is this facility inside the settlement?	<input type="checkbox"/> YES <input type="checkbox"/> NO
L2	Aids Clinic	<input type="checkbox"/> YES <input type="checkbox"/> NO	Is this facility inside the settlement?	<input type="checkbox"/> YES <input type="checkbox"/> NO
L3	Hospital	<input type="checkbox"/> YES <input type="checkbox"/> NO	Is this facility inside the settlement?	<input type="checkbox"/> YES <input type="checkbox"/> NO
L4	Do residents of the settlement have to pay for health care?	<input type="checkbox"/> YES <input type="checkbox"/> NO	If YES , how much	
L5	Do residents of the settlement have access to any other health services?	<input type="checkbox"/> YES <input type="checkbox"/> NO	If YES , please list services	<input type="checkbox"/> <input type="checkbox"/>
L6	How long does the ambulance take to respond to an emergency?	mins		
L7	Is the ambulance able to enter the settlement?	<input type="checkbox"/> YES <input type="checkbox"/> NO		
L8	What are the most common diseases for this settlement? Please list the top FOUR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
L9	General comments for health services: Main health concerns, levels of service, do women have any particular health concerns or needs in the settlement, etc.?			

M. EDUCATION

M1	How many children in the settlement go to school?	<input type="checkbox"/> Most	<input type="checkbox"/> Some	<input type="checkbox"/> Few	<input type="checkbox"/> None			
Do children in the settlement go to the following educational facilities?								
M2	Public schools	<input type="checkbox"/> YES <input type="checkbox"/> NO	Give names of the schools.	<input type="checkbox"/>	Is this facility inside the settlement?	<input type="checkbox"/> YES <input type="checkbox"/> NO	How much do they charge per month?	
M3	Private schools	<input type="checkbox"/> YES <input type="checkbox"/> NO	Give names of the schools.	<input type="checkbox"/>	Is this facility inside the settlement?	<input type="checkbox"/> YES <input type="checkbox"/> NO	How much do they charge per month	
M5	General comments relating to education facilities and quality of education							

N. OTHER SERVICES, FACILITIES & COMMERCIAL ESTABLISHMENTS

Do the residents of the slum make use of any of the following services or facilities?								
N1	Playground	<input type="checkbox"/> YES <input type="checkbox"/> NO	Is this facility inside the settlement?	<input type="checkbox"/> YES <input type="checkbox"/> NO	How far is the facility in km	km	How far is the facility in minutes if you had to walk	mins
N2	Financial Institutions.	<input type="checkbox"/> YES <input type="checkbox"/> NO	Is this facility inside the settlement?	<input type="checkbox"/> YES <input type="checkbox"/> NO	How far is the facility in km	km	How far is the facility in minutes if you had to walk	mins

N3	Informal markets	<input type="checkbox"/> YES <input type="checkbox"/> NO	Is this facility inside the settlement?	<input type="checkbox"/> YES <input type="checkbox"/> NO	How far is the facility in km	km	How far is the facility in minutes if you had to walk	mins
N4	Fire stations	<input type="checkbox"/> YES <input type="checkbox"/> NO	Is this facility inside the settlement?	<input type="checkbox"/> YES <input type="checkbox"/> NO	How far is the facility in km	km	How far is the facility in minutes if you had to walk	mins
N5	Mosques	<input type="checkbox"/> YES <input type="checkbox"/> NO	Is this facility inside the settlement?	<input type="checkbox"/> YES <input type="checkbox"/> NO	How far is the facility in km	km	How far is the facility in minutes if you had to walk	mins
N6	Churches	<input type="checkbox"/> YES <input type="checkbox"/> NO	Is this facility inside the settlement?	<input type="checkbox"/> YES <input type="checkbox"/> NO	How far is the facility in km	km	How far is the facility in minutes if you had to walk	mins
N7	Police stations	<input type="checkbox"/> YES <input type="checkbox"/> NO	Is this facility inside the settlement?	<input type="checkbox"/> YES <input type="checkbox"/> NO	How far is the facility in km	km	How far is the facility in minutes if you had to walk	mins
N8	Do residents have access to any other services or facilities not mentioned above?			<input type="checkbox"/> YES <input type="checkbox"/> NO	If yes, please list additional services	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	

O. COMMERCIAL ESTABLISHMENTS INSIDE SETTLEMENT

Do residents of the settlement have access to the following **commercial establishments** **INSIDE** the settlement?

O1	General Shops	<input type="checkbox"/> YES <input type="checkbox"/> NO	If YES , how many inside the settlement?		If NO , how far to the nearest establishment?	km	mins
O2	Food shops	<input type="checkbox"/> YES <input type="checkbox"/> NO	If YES , how many inside the settlement?		If NO , how far to the nearest establishment?	km	mins
O3	Clothing shops	<input type="checkbox"/> YES <input type="checkbox"/> NO	If YES , how many inside the settlement?		If NO , how far to the nearest establishment?	km	mins
O4	Communications	<input type="checkbox"/> YES <input type="checkbox"/> NO	If YES , how many inside the settlement?		If NO , how far to the nearest establishment?	km	mins
O5	Car Repair	<input type="checkbox"/> YES <input type="checkbox"/> NO	If YES , how many inside the settlement?		If NO , how far to the nearest establishment?	km	mins
O6	Furniture shops	<input type="checkbox"/> YES <input type="checkbox"/> NO	If YES , how many inside the settlement?		If NO , how far to the nearest establishment?	km	mins

P. ORGANISATIONS AND LEADERSHIP

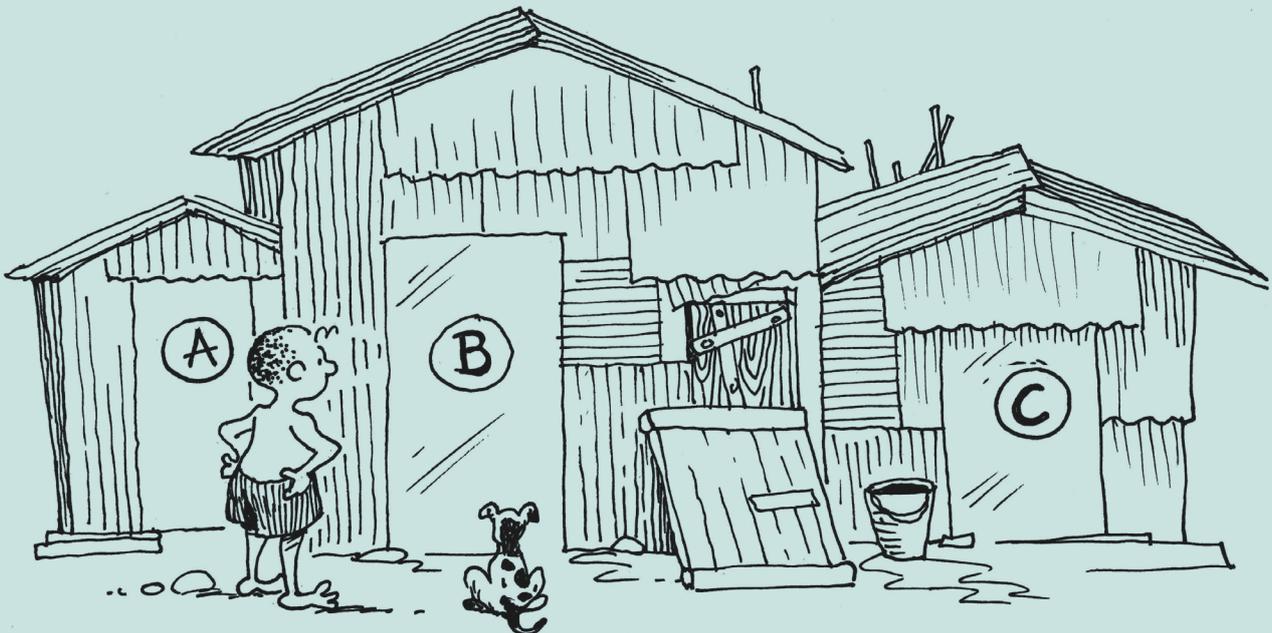
P1	Does the settlement have community leadership?	<input type="checkbox"/> YES <input type="checkbox"/> NO						
P2	Please provide the names of the community leaders							
P3	What do the leaders do for the community as leaders? Check MANY	<input type="checkbox"/> Talk to city	<input type="checkbox"/> Conflict resolution	<input type="checkbox"/> Govern the settlement	<input type="checkbox"/> Other			
P4	How often does the settlement meet as a community? Check 1	<input type="checkbox"/> Once a week	<input type="checkbox"/> Once a month	<input type="checkbox"/> Once a year	<input type="checkbox"/> Never	<input type="checkbox"/> Other		
P5	How often do you meet with the City? Check 1	<input type="checkbox"/> Once a week	<input type="checkbox"/> Once a month	<input type="checkbox"/> Once a year	<input type="checkbox"/> Never	<input type="checkbox"/> Other		
P6	What are the meetings with the city about?							
P7	Who do you meet with in the city?							
P8	What kind of relationship do you have with the city? Check ONE	<input type="checkbox"/> Good	<input type="checkbox"/> Average	<input type="checkbox"/> Bad	<input type="checkbox"/> No relationship			
Do the residents of the settlement have access to the following organisations INSIDE the settlement?								
P9	Youth Clubs	<input type="checkbox"/> YES <input type="checkbox"/> NO	If YES , how many?		P10	Savings groups/women's groups	<input type="checkbox"/> YES <input type="checkbox"/> NO	If YES , how many?
P11	Religious Groups	<input type="checkbox"/> YES <input type="checkbox"/> NO	If YES , how many?		P12	CBO's / NGO's	<input type="checkbox"/> YES <input type="checkbox"/> NO	If YES , how many?
P13	Local Committees	<input type="checkbox"/> YES <input type="checkbox"/> NO	If YES , how many?		P14	Political Party Offices	<input type="checkbox"/> YES <input type="checkbox"/> NO	If YES , how many?





Household Numbering and Enumeration

Typically conducted after [Settlement Mapping](#) and [Settlement Profiling](#), enumeration is a community-led data collection method. It is a household-level census to collect demographic and socioeconomic data as well as any other key data important to the focus of a given advocacy effort or upgrading project (or as a response to imminent displacement to document structures and households for advocacy and compensation efforts after demolitions occur).



Who

Most useful for:

- Local Champions
- Residents
- CBOs
- Urban Poor Federations
- Federation-support NGOs

Also useful for:

- NGOs
- Academia
- Local Governments



What

Numbering and enumeration activities require a significant investment. Unlike settlement mapping and settlement profiling which can be undertaken with small teams of residents experienced in data collection and with a sampling of households, numbering and enumeration is undertaken with all households in a settlement and therefore requires more time and larger teams of co-researchers. Numbering and enumeration is typically only undertaken when there is demand for more granular data triggered by planning for a specific upgrading project. The topics covered in the enumeration survey are also more limited than for settlement profiling because it takes too much time to ask all those questions to every household.

Enumeration data is typically used to advocate for upgrading basic infrastructure – like water, sanitation, energy, and roads and services like health centers and schools – showing government demographic statistics like percent female, percent youth, etc. It can also highlight the density of development in the settlement and establish the magnitude of common diseases and other prominent challenges.

It serves as a baseline for subsequent data collection activities once an upgrading project gets underway. Each unit/household number corresponds to an intended allocation in the upgrading project and is therefore crucial. It also provides the basis for calculating the number of additional services needed to adequately serve residents. This, in turn, can support analyses for establishing alternative planning standards. For example, under conventional standards,



Photo Credit: Akiba Mashinani Trust (2018)

Community data collector filling out the enumeration questionnaire with a household representative in Mukuru (Nairobi, Kenya).

the number of schools needed to serve school-age children could require large tracts of land not available without displacing many households, providing evidence for the importance of formulating alternatives to conventional, formal development standards.

Building on the data collected during settlement mapping and settlement profiling, numbering and enumeration includes three main activities (in this order):

1. Mapping all households (using structure maps created during settlement mapping).
2. Numbering every unit (i.e. room/door within a structure) to assign it an address.
3. Conducting the enumeration survey with every household in the settlement.

Prior to filling out the enumeration questionnaire (see the [Example Materials](#) section below for an example questionnaire), co-researchers will assign the unit (room or door) a number to build a settlement-wide address system.

Residents trained as co-researchers will visit every household in the settlement with a detailed questionnaire to collect data on the structure and unit location; respondent information; structure information; structure owner information and land tenure status; household information and demographics; access to basic services; and any other information deemed pertinent by residents and their partners (e.g. health; sanitation).

Co-design of the survey questions (for the enumeration questionnaire) prior to conducting door-to-door visits is crucial to the efficacy of this method. In turn, residents must have ownership of the data generated from the survey for their own discussions of development priorities and negotiations with local governments. See [How](#) for more detail.

Why

COMMUNITY-LED DATA COLLECTION methods involve processes led by informal settlement residents with support from their civil society partners. Flexible by nature, these methods adapt well to different national and local contexts.

A process by the community for the community, the goal of these methods is for residents to collect their own data about themselves – instead of relying on outsiders to tell them about themselves – and own and use these data to inform both their fellow residents and government authorities about key challenges and priorities. In particular, challenges and priorities related to land tenure, housing, and basic infrastructure and services, key ingredients in building climate resilience in urban areas.

Armed with these data, residents can speak the same language as governments and their development partners. To exist in the eyes of local authorities, residents must first show up

on the map. These methods provide the data needed for residents to make their case to local authorities for upgrading of housing, infrastructure and services in their settlements. It can also support organizing activities and campaigns to deter eviction as well as open up ongoing dialogue with local authorities, development partners, civil society and academia.

Community-led data collection does not just provide the currency for residents to negotiate and plan with government — it also engages residents in a process where they begin to see themselves as part of a larger community with shared problems and learn to work together instead of individually to understand common challenges, determine priorities and act collectively to negotiate among themselves and with government. Data collection activities begin dialogues among residents and demonstrate the crucial role data plays in shaping development priorities. More broadly, it enables urban poor communities to assert their right to the city as well as secure tenure, risk-reducing infrastructure and services, and dignified livelihoods. It can also lead to greater involvement in city policymaking and the delivery of subsidized services. Working with residents to do research is also likely the most resource-efficient option.

See [COMMUNITY-LED DATA COLLECTION](#) for more.



“ Mapping and data collection and I also knew how data defends people. How the data spoke for us in the government. And also I learned how to bring people together and empower people. I also learned how to talk with these people in these big offices, because I come from the slums, I don't have to despise myself, I have to know that I have information that they don't have. And the other thing I learned is I have also the right as a Kenyan person to have good life and the other thing is, every change to take place wherever I am, it is good for me to participate and to give also my ideas. ”

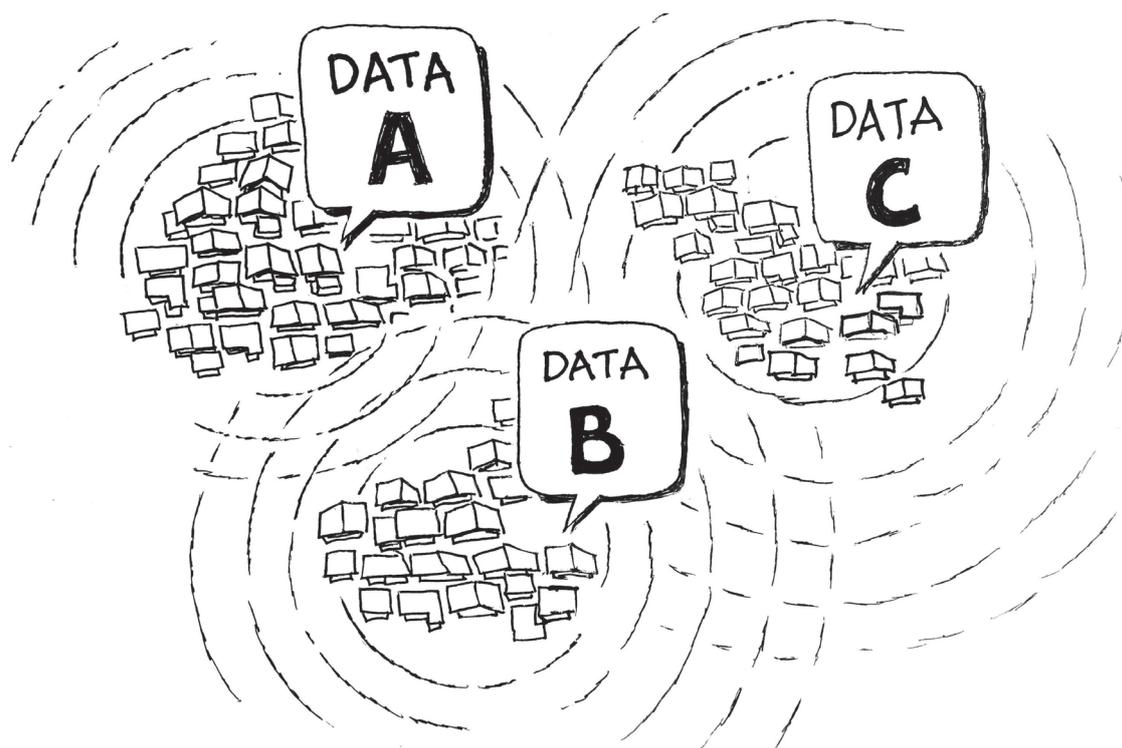
Christine Mwelu Community Mobilizer – Lunga-Lunga Centre, Mukuru Viwandani

Mukuru Viwandani Community, Personal Communication 18 May 2022.

Like other community data collection methods, household numbering and enumeration provides essential data for residents to speak to, negotiate and plan with local governments. Enumerations go one level beyond mapping and profiling, however, to quantify the size of the political constituency that residents of informal settlements represent, providing them bargaining power with local politicians. It also serves to create awareness of upcoming upgrading projects and build trust in community mobilizers and the upgrading process itself.

Where

Community methods training and data collection often follow a concentric instead of linear pattern. This is because community mobilizers and co-researchers often start in familiar territory in their own neighborhoods and expand out from there. The data collection processes also typically don't have one beginning or end point, instead happening iteratively. Civil society organizations often undertake the initial training of local leaders and other motivated residents (youth can be excellent candidates because they learn quickly and may not be employed). Once this initial class of co-researchers is trained, they can recruit additional candidates in their neighborhoods to be trained as well.



When

Numbering and enumeration is typically done after the higher-level data collection activities of mapping and profiling not only because it's a more costly process but also because it can be political. Residents, wary of evictions and other threats, may distrust people showing up unannounced to paint numbers on their door. Starting with mapping and profiling gives residents a chance to learn about upgrading initiatives and organize around certain topics. When activities are not targeted directly at their household, residents will be less afraid and more receptive to learning about projects. Therefore, once numbering and enumeration starts, some residents will already be familiar with the project and have bought into the process.

Given an existing community mobilization network and trained co-researchers, enumerations can take place over a few weeks time. This will obviously vary according to the size of

the settlement, existence of any adversarial stakeholders, political complexities, or other unforeseen factors. Indeed, strive to carry out enumerations within a short period of time because if it is instead drawn out, conditions on the ground will inevitably change and complicate data validation activities.

The months leading up to elections can be an opportune moment to undertake enumerations and numbering. Residents may be motivated to organize to demand improvements from their local candidates and the time prior to elections can prove a fruitful period to bargain.

How

Design the Numbering and Enumeration Forms With Residents

Co-design ensures that the forms are relevant for the given settlement. The data collection tools in the [Example Materials](#) section provide a good starting place but must be customized to the unique context of the settlement. At its simplest, this can be done with experienced mobilizers and co-researchers. At its most robust, it could be done via focus group discussions with a sampling of residents from different areas in the settlement.



Recruit and Train Community Co-Researchers

At this stage, a core team of co-researchers who live in the settlement will have undertaken mapping and profiling. However, to visit every household, these leaders will likely need to recruit and train additional co-researchers from their area of the settlement to help them carry out numbering and enumeration.

See [Recruiting and Training Community Mobilizers and Co-researchers](#) for more detail.

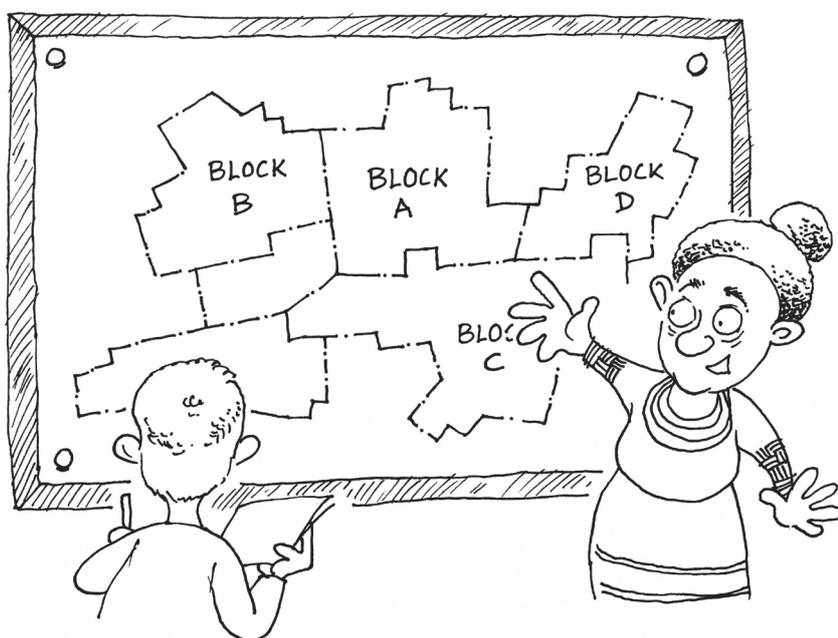


Test Interviews Before Scaling

To ensure that the data collection tools make sense to residents, first have co-researchers test them out with a few people before conducting the rest of the interviews. This also gives them a chance to try out their approach to talking with residents. After they have performed this test, hold a meeting where they can share their experiences with each other and provide input on any updates needed for the interview form.

Assign Areas to Co-Researchers

Using a map of the settlement with relevant areas (neighborhoods, villages, etc), blocks and structures already assigned codes (see [Settlement Mapping](#)), assign each team of co-researchers a block (up to 200 households) to cover (e.g. Block A).



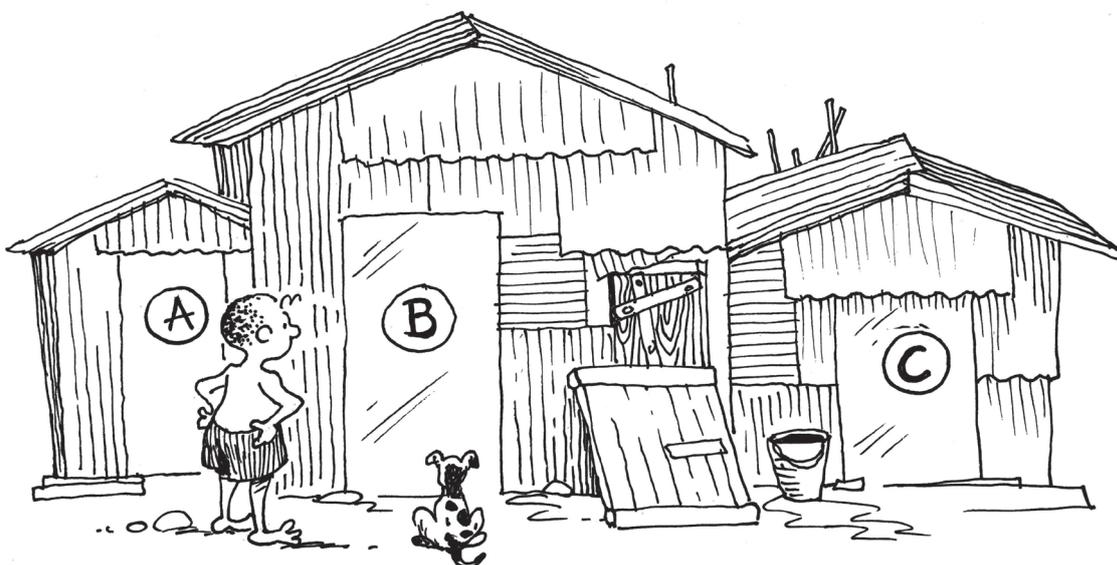
Assign a Unique Address to Each Housing Unit

Again using the settlement map, co-researchers assign a unique number to each unit (aka room or door). See example below.

	<i>Previously assigned during settlement mapping</i>				<i>To assign</i>
	Settlement	Area	Block	Structure number	Unit number
□ Input	Mukuru Kwa Njenga	Riara	A	001	A
↓ Simplify	MN	R	A	001	A
■ Unit code	<i>MN/R/A/001-A</i>				

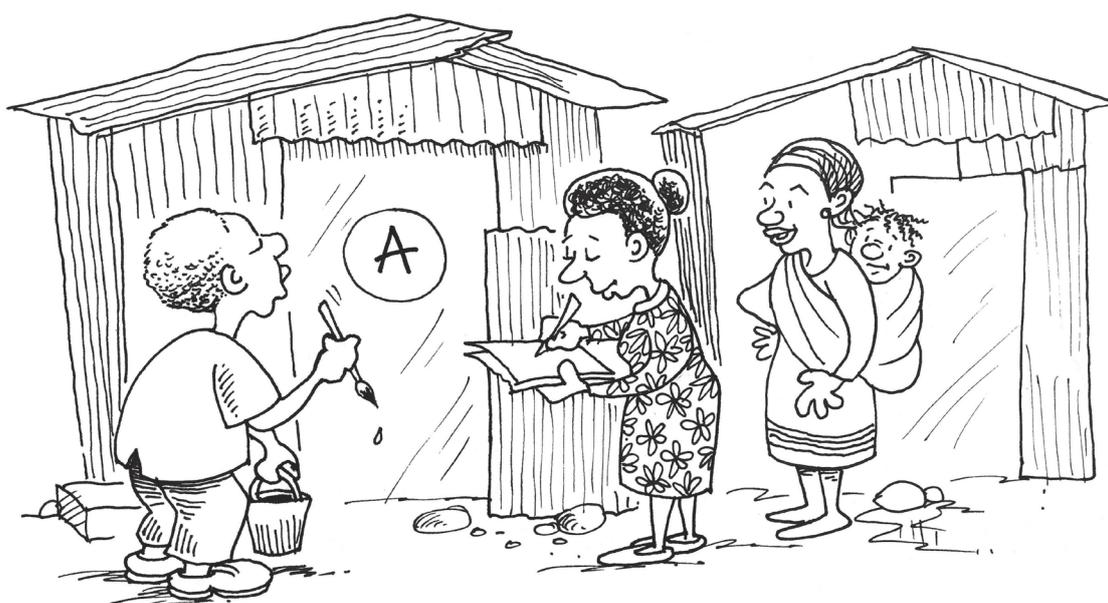
Mark Each Structure With Address Code and the Door of Each Unit With a Number

Prior to the enumeration, a team will mark each structure and door with its corresponding code. Using paint or another similar method, mark each structure with its address code. For example: *MN/R/A/001*. Then mark each door with its unit number. For example: *A*.



Fill Out the Numbering Tracking Form

As the numbering team marks structures and units with their address codes, they track their progress on the numbering tracking form. This allows them to share their work and to inform the enumerations team how many copies of the questionnaire they will need (not having enough copies will waste their time and making too many could be expensive).



Collect Household-Level Sociodemographic Data

Following the numbering team and using the settlement map, co-researchers visit each structure in their assigned block and fill out the enumeration questionnaire with every household in the structure (see example questionnaire in the [Example Materials](#) section below). More than a simple survey, this step also serves to engage residents in dialogue about their challenges and upcoming upgrading projects.

It is essential to record the complete address code on the enumeration questionnaire, including the unit number (e.g. *MN/R/A/001-A*).



Fill Out the Enumeration Tracking Form

As they work, co-researchers track their progress in the enumeration tracking form.



Compile the Data

If possible, create a digital version of the survey linked to a spreadsheet or database.

Co-researchers, technical team members or interns can then record each survey as if they were filling in the survey themselves.

This will minimize human error. If not possible, they can simply enter data directly into the spreadsheet

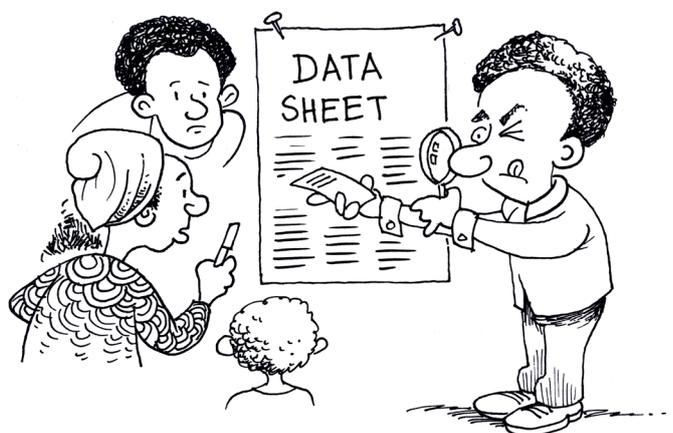
or database. Ideally, co-researchers from the settlement will enter data. Data entry by residents ensures continued ownership of the process and deeper understanding of the data.



Validate the Data

Errors in data collection are inevitable.

Validation is an essential step for producing trustworthy datasets to inform evidence-based advocacy and planning with local governments. Also, structure or household information may have changed between the time data was collected and the time its validated.



Hold focus group meetings in every area

(i.e. neighborhood) with residents to validate the data. Make sure not to continually engage the same residents; this will ensure greater inclusion in research activities and help combat research fatigue.

If possible, fix any issues raised by participants in the meeting itself. If needed, return to the field with participants to fix any unresolved issues.

If possible, also work with researchers from local academic institutions to validate the data. Their involvement will lend legitimacy to the findings in the eyes of the local government.

Analyze the Data

Use the data to calculate statistics like the total number of households, average income, average rent, average daily expenditure, number of residents by age and gender, etc. This can be used during community meetings to inform residents of research findings. It can also be used for advocacy and negotiation with the local government.

Share the Data to Determine Next Steps

Residents must see the results of their work to maintain trust in the process. Sharing the data also helps communities understand what their top priorities may be to formulate a plan of action. Data should not only be shared as findings in community meetings – as it is community-generated and owned, it should be made freely accessible to all residents (though this can prove challenging in practice).



Considerations

How can we ensure that all stakeholders are involved?

Before beginning community data collection activities, it is useful to identify all possible stakeholders in the community and the roles they should play in an upgrading project to ensure everyone is represented. Without a good understanding of who stands to benefit and lose out, the loudest and most powerful residents will inevitably gain while the most vulnerable lose out. This starts during data collection. Some stakeholders will seek to protect their interests and even take advantage for their own gain by influencing the data collection process.

While the profiles of stakeholders may be similar across informal settlements, it is important to identify specific groups to understand the dynamics of local politics, relationships, vested interests, and vulnerabilities in the settlement. To do this, engage residents, especially the quiet ones, to create a detailed stakeholders map.

It is also important to understand the social hierarchies at play in the settlement. In addition to ensuring broad support across stakeholders, it is important to recognize both formal and informal local leaders. This could be a local government official or a religious or community leader. Engaging these leaders helps ensure broader community engagement and participation.

How can we ensure we've developed the right enumeration questionnaire?

If possible, it's a great idea to pilot test your resident-designed questionnaire with a small number of households prior to conducting the full enumeration across the settlement. You can use what you learn from this pilot to adjust and refine the questionnaire. However, be wary of the potential for research fatigue (people can get tired of answering questions). And don't let perfect be the enemy of good – questionnaires can always be improved but even imperfect ones will provide invaluable data.

How long should the enumeration questionnaire be?

You want to take advantage of the time invested to go door-to-door and collect as much data as possible. However, the time it takes both co-researchers and respondents is a key limiting factor. Residents have limited time to dedicate to the process. The questionnaire therefore should be short but strategic, focusing on the main goals of the current upgrading initiative. It should take no more than 15 to 20 minutes to fill out per household.

Who should co-researchers be?

They can be any resident — tenant, structure owner, local leader, etc (but should not be outsiders). The most likely candidates are community leaders and community mobilizers that already have experience organizing and talking to their fellow residents. Women and youth often make good candidates as they may have more time free during the day. In particular, seek out people that demonstrate commitment to community work and data collection processes.

Should we compensate community mobilizers and co-researchers?

Yes, provide some small compensation as possible. Residents' time is precious and few may be able to contribute consistently without some consideration of the cost of their time.

What are the most important household characteristics in your location beyond basic sociodemographics?

These will be determined during settlement profiling activities where key challenges are identified and prioritized.

What should the criteria for eligibility in the upgrading program be?

Determining who should be included and excluded is the domain of each community. That is why community mobilization throughout the process is so important — in the absence of an organized community, local politicians and vested interests will set the terms for inclusion.

How can we ensure that collected data is accessible to residents?

You can present it in community meetings, distribute it in printed materials, and share it via media like community radio. If possible, you should also strive to make hard copy and digital databases accessible, storing them in local facilities like a community center. However, make sure to never share sensitive personal data like ID numbers, phone numbers, etc.

How do we ensure that our data is accepted as credible, consistent and accurate by government?

The data validation process is essential for ensuring acceptance of community-collected data. The data validation process is essential for ensuring acceptance of community-collected data. This entails two activities: co-researchers quality checking each other's work; and conducting focus group discussions with residents. If possible, also engage local university partners to validate the data as well.

If feasible, you may also want to attach a photograph of every household to the enumeration questionnaire and issue a household identification card with the structure number and unit code.

Should we collect personal information like ID and phone numbers?

If possible, phone numbers are valuable for mobilizing and communicating with residents. They can be used in a phone tree or by individual mobilizers and representatives to convene residents for meetings and other activities as well as communicating updates throughout the process. That said, residents may be distrustful and refuse to share phone numbers or provide fake numbers. That is ok, it should not impede the process too much. It is likely residents will be distrustful of sharing ID numbers.

What is the main language or languages spoken by settlement residents?

Make sure your questionnaire reflects this. If multiple languages are spoken and there is no one common language, your questionnaire should be translated to each of these languages. This can be side-by-side on one version of the questionnaire or you can make multiple versions, whichever you think will work best in your area.

Challenges

Data Collection Errors

Errors are inevitable, especially when community co-researchers have little experience in data collection. You can minimize errors by starting small. This way, co-researcher trainees can make mistakes, discuss together and learn so that once they scale up they are better prepared. This approach also saves resources, minimizing work that would need to be redone during quality checks by other co-researchers and during the community validation process.

Multiple Address Systems Already Exist

Due to multiple development projects happening in the settlement, you may find that several different numbering and address systems already exist. This can be a great source of confusion for residents. If possible, seek to use an existing system instead of inventing your own.

Residents' Distrust, Lack of Awareness, and Misinformation

Residents in informal settlements have faced a long history of land grabs and evictions as well as many development projects that have failed to produce tangible results. There are also inevitably opportunists inside and outside the community that will seek to use upgrading efforts to their own benefit. Residents are therefore often skeptical of upgrading projects and fearful when they see you walking around with a map in your hand. Some residents will resist the process and you may even be threatened. You can overcome this through patient dialogue, inviting trusted local leaders to speak about the project, inviting local government staff to speak to residents, and striving to provide near-term, incremental benefits to build confidence in the process. It is also

essential to include community participation from the start as residents will not trust people they don't know. Additional strategies include: training a core team that understands the method and its promise for bringing benefits to the settlement; and involving trusted local leaders, including from the local government administration (e.g. ward chiefs).



“ The structure owners thought that we were selling the settlement because they didn't want to attend meetings, for them to understand what we were telling people. So, it was conflicting for me, for them to say I'm selling their houses, they won't be getting the money they were getting. So, my life was also threatened, and people were confronting me on the roads and saying how bad I am as a woman. I remember when we were doing numbering, someone came and said he will slice us into pieces using a panga, we had to leave his house behind and get back to our government and the people we were working with and explain to them the challenges we were facing on the ground, to use chairmen to inform people that the work we were doing is government's, because we personally do not have the title deed for that area. ”

Christine Mwelu Community Mobilizer – Lunga-Lunga Centre, Mukuru Viwandani

Focus group interview on 18 May 2022.

“ At first I did not understand it well and the time I got the trainings bit by bit I completely understood its importance. I was able to get views from [...] my fellow tenants. [...] their views are the most important in improving our area. Saying that their views are important made them happy and were able to contribute in saying what they need and what they do not need because at first they were taking it as negative. Maybe it's the doubts of what people have come to do in their plot. Later on they came to realize that their views are what contribute a lot in improving our area, and from there work became easier and we started collaborating. ”

Caroline Aluoch Community Mobilizer – Uchumi, Mukuru Viwandani (Nairobi, Kenya)

Personal Communication, 18 May 2022.

Research Fatigue and Disbelief

Again, because so many research initiatives and development projects fail to produce promised results, residents may not want to participate in data collection activities and be skeptical that promised benefits will ever materialize. Residents may not be able to distinguish between research that is a one-and-done extraction and research that supports larger community-building and upgrading processes. Help them understand the difference. But be careful not to over engage residents or overpromise benefits. This is why it is so crucial that work be iterative and incremental. Residents need to see tangible benefits to invest their time. They also need help as soon as possible. Therefore, projects that only think long-term will largely fail in this challenging context.

Examples from the Field

Mukuru, Nairobi (Kenya)

Residents in Mukuru undertook a large-scale numbering and enumerations process to support a settlement-wide participatory upgrading process that sought to engage over 100,000 households. Because Mukuru sits on valuable land near Nairobi's Commercial Business District, fears of evictions and land grabs were challenges for the data collection process. Residents were distrustful of people marking numbers on their doors and asking them questions. However, the process was successful because it followed years of community organizing and action research by the urban poor federation Muungano wa Wanavijiji and their civil society and university partners. It was also within the context of a project given legitimacy by the local government's declaration of a Special Planning Area (SPA) that promised to bring tangible benefits to residents.

Co-researchers started in their own neighborhoods because it was familiar and they were known there. They then worked outwards to other neighborhoods to better understand the rest of their settlement. Enumerations also served to spread awareness of the SPA and build trust with other residents. Despite the trust this process generated, attempts to collect phone numbers to support the community mobilization process were largely unsuccessful due to residents' fear that they could be used by local chiefs or outsiders to exert pressure on them.



“ We were trained, then after training we did mapping, then we did data collection where our slogan was leave no one behind. Meaning we were going door-to-door, marking and giving them addresses [...] my address is KVS that is Kingstone, Viwandani, address 146/B. ”

Edith Murage Community Mobilizer – Kingstone, Mukuru Viwandani

Personal communication, 18 May 2022.

Materials

Numbering

1. Household numbering form (one row in table per household)
2. Numbering progress tracking form (one row in table per household)

Enumeration

3. Household enumeration questionnaire (one form per household)
4. Household details subform (one form per household)
5. Enumeration progress tracking form (one row in table per household)

Example Materials

[1] HOUSEHOLD NUMBERING FORM									
Data collector: Name _____			Contact _____			Date _____			
Form last updated Sep 2022									
Structure no.	Unit no.	Unit use	Building/Business/ Institution name	Construction materials			Unit dimensions (m)		Notes
				Floor	Walls	Roof	Length	Width	
1	MN/R/A/001	Residential	-	Dirt	Iron sheet	Iron sheet	3	3	
2	MN/R/A/001	Residential	-	Dirt	Iron sheet	Iron sheet	3	3	
3	MN/R/A/002	Commercial	Big Star Market	Cement	Iron sheet	Iron sheet	5	4	
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									



1	Data collector name	<i>Patrick Njoroge</i>
2	Data collector contact	<i>075600091</i>
3	Date	<i>13 October 2022</i>
Mandatory Sections		
A. Location Information		
A1	Settlement name	<i>Mukuru Kwa Njenga (MN)</i>
A2	Area name	<i>Riara (R)</i>
A3	Block name (if applicable)	<i>Block A (A)</i>
A4	Structure number	<i>001</i>
A5	Unit number	<i>A</i>
A6	Complete unit code	<i>MN/R/A/001-A</i>
B. Respondent Information		
B1	Respondent name	<i>Eddy Otieno</i>
B2	Respondent ID number	<i>2790598</i>
B3	Respondent gender	(a) Female (b) Male (c) Other
B4	Respondent age	<i>27</i>
B5	Head of household?	(a) Yes (b) No
C. Structure Owner Information		
C1	Owner name	<i>Charity Miguna</i>
C2	Owner ID number	<i>2668524</i>
C3	Owner gender	(a) Female (b) Male (c) Other
C4	Owner age	<i>45</i>
C5	Land ownership status (circle one option only)	(a) Title deed (b) Certificate (c) Sublessee (d) No documentation (e) Other _____
C6	Owner residence location (circle one option only)	(a) This structure (b) This plot (c) This block (d) This area (e) This settlement (f) This town (g) This county (h) Unknown
D. Structure Information		
D1	Number of units in structure	<i>7</i>
D2	Structure use (circle one option only)	(a) Residential (b) Commercial (c) Mixed residential/ commercial (e) Industrial (f) Health services (g) Education services (h) Community (i) Religious (j) Other institutional (k) Public utility (l) Other _____

D3	Structure type (e.g. residence, grocery, church, mosque, school, bar, clinic, daycare center, etc)	<i>Residence</i>
D4	Structure name (if applicable - e.g. Big Star Supermarket)	-
E. Household Information (if structure use is residential)		
E1	Household's relationship with structure owner (circle one option only)	(a) Structure owner (b) Relative of structure owner (c) Tenant (d) Subtenant (e) Other _____
E2	Head of household name	<i>Eddy Otieno</i>
E3	Spouse name (if applicable)	<i>Jacinta Mumbi</i>
E4	Children's names (if applicable)	<i>Dennis Otieno</i>
E5	Number of people in household	3
E6	Relatives' names (if applicable)	
E7	Neighbors' names	
F. Household Financial Information		
F1	Monthly rent (if a tenant) (circle one option only)	(a) Ksh 500 or less (b) Ksh 501 – 1000 (c) Ksh 1001 – 1500 (d) Ksh 1501 – 2000 (e) Ksh 2001 – 2500 (f) Ksh 2500 or more
F2	Total daily household expenditure (circle one option only)	(a) Ksh 300 or less (b) Ksh 301 – 600 (c) Ksh 601 – 900 (d) Ksh 901 – 1200 (e) Ksh 1201 – 1500 (f) Ksh 1500 or more
G. Household Origin Information		
G1	Type of residence prior to here (circle one option only)	(a) Urban informal settlement (b) Urban formal estate (c) Rural area
G2	Location of residence prior to here (circle one option only)	(a) Born in this settlement (b) This town but different area (c) This county (d) This province (e) This country (f) Other _____
G3	Motivation for moving here (check all that apply)	<input type="checkbox"/> (a) Affordable rent <input type="checkbox"/> (b) Employment <input type="checkbox"/> (c) Marriage <input type="checkbox"/> (d) Eviction <input type="checkbox"/> (e) Other _____
Optional Sections (depending on the focus of the upgrading project)		
H. Basic Services		
H1	Water source location	(a) Individual in unit (b) Shared tap in plot (c) Shared tap outside plot (d) Door-to-door vendor (e) Vendor kiosk (f) ATM
H2	Water source type	(a) Piped (b) Borehole/Well (c) Tanker (d) Dam (e) Spring (f) Waterway

H3	Toilet location	(a) Individual in unit (b) Shared in plot (c) Shared outside plot
H4	Toilet type	(a) Connected to public sewer (b) Pit latrine (c) VIP latrine (d) Ecosan (e) No facility (f) In the open (g) Other _____
H5	Electricity connection type	(a) No connection (b) Informal connection (c) Formal connection
H6	Individual electricity meter	(a) Yes (b) No
I. Household Expenditures on Services (Ksh)		
I1	Daily expenditure on food	250
I2	Daily expenditure on water	3
I3	Daily expenditure on sanitation	xyz
I4	Weekly expenditure on cooking fuel	150
I5	Monthly expenditure on electricity	400
I6	Monthly expenditure on health services & medications	750
I7	Monthly expenditure on education	450
J. Health		
J1	List most common diseases	(1) <i>Cholera</i> (3) <i>Diabetes</i> (2) <i>Malaria</i> (4) <i>High blood pressure</i>
	etc...	
K. etc...*		
K1		
FOR THE MONITORING AND QUALITY CHECK TEAM ONLY		
	Checked by	Cross-checked by
Name	_____	_____
Signature	_____	_____
Date	_____	_____

Related Components

Guides

- [Community Mobilization, Organization, Representation and Coordination Strategy](#)

Methods

- [Recruiting and Training Community Mobilizers and Co-researchers](#)
- [Settlement Mapping](#)
- [Settlement Profiling](#)
- [Risk profiling: Identifying risks, assessing solutions and determining community priorities](#)

Sources

Interviews (2022) with staff from SDI-Kenya and the Akiba Mashinani Trust as well as a review of relevant documents and data collection forms from these same organizations.

Mukuru Viwandani community. (2022, May 18). [Focus group interview by B. Hicks]. Mukuru SPA documentation 2022, Mukuru Skills Primary School, Mukuru Viwandani, Nairobi, Kenya.

Horn, P., Kimani, J., Makau, J., & Njoroge, P. (2020). Scaling participation in informal settlement upgrading: A documentation of community mobilisation and consultation processes in the Mukuru Special Planning Area, Nairobi, Kenya.

Additional resources

For an in-depth discussion of the history, evolution, benefits, challenges, ethics, and legitimacy of enumerations, see:

Patel, S., Baptist, C., & D’Cruz, C. (2012). [Knowledge is power – informal communities assert their right to the city through SDI and community-led enumerations](#). *Environment and Urbanization*, 24(1), 13–26.



Risk Profiling: Identifying Risks, Assessing Solutions and Determining Community Priorities

Climate risk profiling captures residents' perception of everyday **risks** in their community and ranking of those risks; diagnoses the **impacts** of identified risks; evaluates their current strategies and ideas for potential **solutions** to address those impacts; and assesses **barriers** to taking action to implement their proposed solutions. This process helps determine **community priorities** for addressing local risks. Profiles support **CO-PLANNING** between communities and local governments as well as local, community-led initiatives to provide immediate and short-term benefits during upgrading processes.



Who

Most useful for:

- Local Champions
- Residents
- CBOs
- Urban Poor Federations
- Federation-support NGOs
- NGOs

Also useful for:

- Academia
- Local Governments

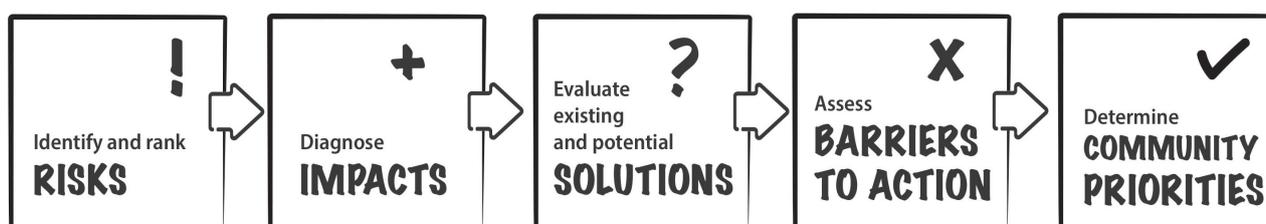


What

Like complementary **COMMUNITY-LED DATA COLLECTION** methods, **community-led climate risk profiling** helps develop a common understanding of challenges and captures community aspirations before the drafting of upgrading plans for building climate resilience in informal settlements. Crucially, it also provides actionable information on a community's priorities for addressing its most pressing risks. This can support complementary initiatives by residents, community-based organizations (CBOs) and civil society partners to provide short-term benefits and build confidence in the upgrading process. Local action to reduce risks in the near-term can include activities like organizing garbage cleanup teams and even coordinating garbage removal with local authorities.

Through individual interviews and group discussions, this method focuses on everyday risks. Like climate resilience, these risks are not just environmental (e.g. floods) but also economic (e.g. price fluctuations), political (e.g. exclusion from decision-making) and social (e.g. violence). It is also a participatory process, recruiting and training co-researchers locally to build capacities and support community ownership of research and planning activities. And it is action-oriented, assessing community priorities and what can be done to confront issues both immediately within the community and through planning with the local government, informing what is a priority in the short, medium, and long terms. Finally, it seeks to meet people where they are, asking questions using language and examples drawn from people's experiences.

The method uses the following **framework** for identifying, assessing and prioritizing risks and solutions:



Local **risks** (i.e. threats, hazards) can be environmental, economic, social or political; and large or small and past, present or future. **Impacts** are the consequences of risks for individuals, households and communities. **Solutions** are actions that residents, government, civil society and development partners can take to address the impacts of risks. They may be solutions already in use by residents or potential solutions. **Barriers** to action are the underlying causes of or vulnerabilities to risks. Residents may view barriers as beyond their control and limiting their capacity to take action. **Community priorities** are the most pressing *risks*, *impacts* and *solutions* as determined through interviews and focus group discussions with residents.

This method focuses on capturing individuals' views through one-on-one interviews to generate a preliminary risk profile of the settlement. This profile is then used to generate discussions of risks, impacts and solutions during focus groups. These discussions determine community priorities and action plans. See [How](#) for more detail.

Note that this method focuses on current climate risks and addressing existing gaps in services. **Future risk** is beyond the current scope of this method but is important to consider. In the context of rapidly urbanizing African cities and the growing frequency and intensity of climate hazards, assessing and anticipating future risks is increasingly important. To date, there are little to no Participatory Vulnerability and Risk Assessments (PVRA) methodologies that focus on future risks. This is likely due to current deficits being so great but also perhaps because climate change and associated future risks are abstract for many, and engaging in assessments that produce tangible results is a big challenge.

Several avenues to explore include:

- Using **scenarios** to make future climate risks more tangible to residents during PVRA activities (for instance, 'what if floods happened every x months and caused y amounts of damage – how would that affect your living situation, ability to earn, and access to crucial services? What would be your top priorities for confronting these challenges?').
- Developing **community data collection methods** to assess climatic changes over time to generate time series data to better anticipate future changes and associated risks (e.g. the highest watermark for water bodies like rivers within the settlement over the past ten years).
- Inventorying **existing local opportunities for community-based networks** for:
 - **anticipating** climate hazard events (e.g. community early warning systems).
 - **responding** during and immediately after events (e.g. community and local plans for emergency aid).
 - **recovering** during the aftermath (e.g. housing and assisting affected people; addressing damage; assessing redevelopment or relocation plans).

Why

When planning for climate resilience in urban informal settlements, it is important to go beyond methods like [Settlement Mapping](#), [Settlement Profiling](#), and [Household Numbering and Enumeration](#) to gain a deeper understanding of residents' perception of risks, their priorities as a community, and what they think should be done about them. Risk profiling provides opportunities for immediate and short-term action and enables communities to partner with local government and civil society partners to strengthen local capacities and leadership to build resilience to climate risks. It also provides data that communities can use to inform and influence local,

national and international development institutions on policy and practice that impact their resilience to climate change.

It is important to engage residents by speaking to their urgent needs. They may have little capacity for, or interest in, participating otherwise. Providing short-term benefits is crucial for building trust in the upgrading process. It is also an important strategy for building community capacities and enhancing their relationship with local government authorities. Because upgrading projects often require several years, it is important that residents see short-term benefits to build their confidence in the process. These small, complementary initiatives can also stimulate additional partnerships with the local government and at the same time demonstrate the value of community ownership. Additionally, working with residents to do research is also likely the most resource-efficient option.

To address existing gaps in services that leave residents vulnerable to climate and other hazards, you must first assess current risks. Several tools and methodologies for measuring or profiling urban resilience exist and have proven useful for filling data gaps and providing the basis for consultations with local governments and other stakeholders. However, most do not acknowledge the crucial role of locally-led (i.e. community- and local-government-led) upgrading to reduce climate risks in informal settlements. They offer limited support for generating the data needed for upgrading and limited influence to informal settlement residents.

In contrast to these existing tools, this method strives to place communities at the center of planning. It is an adapted version of the [Views from the Frontline](#) methodology developed by the Global Network of Civil Society Organisations for Disaster Reduction. It is largely drawn from the version adapted by Mukuru residents and civil society partners during the SPA planning process. As the case studies in [Examples from the Field](#) demonstrate, it is useful to start with existing methodologies and to adapt them to your local context and project needs.

Where

While this method is broadly applicable, the focus here is on its role in locally-led, inclusive and multisectoral upgrading processes for climate resilience in urban informal settlements. It works equally well in one neighborhood for small-scale interventions or settlement wide for larger-scale planning initiatives. And like other community data collection processes, it can provide great value when aggregated citywide by providing evidence to bargain with local governments.

Community methods training and data collection often follow a concentric instead of linear pattern. This is because community mobilizers and co-researchers often start in familiar territory in their own neighborhoods and expand out from there. The data collection processes

also typically don't have one beginning or end point, instead happening iteratively. Civil society or CBOs often undertake the initial training of local leaders and other motivated residents (youth can be excellent candidates because they learn quickly and may not be employed). Once this initial class of co-researchers is trained, they can recruit additional candidates in their neighborhoods to be trained as well.

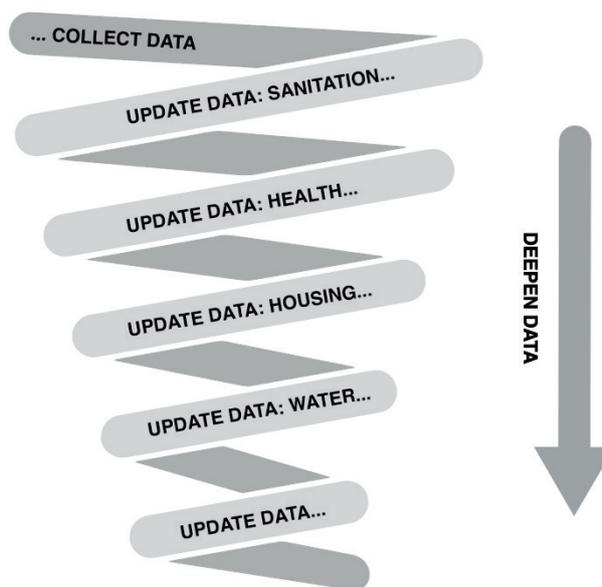
When

This method can build on [Settlement Mapping](#), [Settlement Profiling](#), and [Household Numbering and Enumeration](#). If none of these have been carried out and little data is available on existing conditions in the settlement, you should include additional questions in the survey (see *Risk Profile Interview Form* in [Example Materials](#)) that will provide important context for risk profiling.

While risk profiling could be undertaken to support negotiations with the local government, its greatest value is during the planning phase of an upgrading project. The data collected and discussions about community priorities among residents and their partners can inform decision-making and provide important inputs for upgrading plans.

Given an existing community mobilization network and trained co-researchers, risk profiling can take place over a few weeks. This will obviously vary according to the size of the settlement, existence of any adversarial stakeholders, political complexities, or other unforeseen factors.

Community-led data collection is not a one-and-done process. In the context of resource-poor informal settlements, data collection activities have a significant cost – you should only do as much as is required at the time to further current advocacy and planning efforts. The environments in informal settlements also change rapidly and data will quickly become out-of-date. Therefore, data collection is a highly iterative process. You will continually return to sectors to update data and fill in gaps where data lacks the depth needed for detailed sector-level planning.



How

Recruit and Train Community Co-Researchers

Recruit local residents to work as co-researchers. If possible, rely on residents who already have experience with data collection. If few to no residents have experience, you will also need to train them in data collection practices. Local leaders and youth often make good candidates. Recruit residents locally in each area within the settlement; this is essential as residents will distrust people they don't know from other parts of the settlement. Make sure to recruit people of different groups including women, men, youth, the elderly and disabled.

See [Recruiting and Training Community Mobilizers and Co-researchers](#) for more detail.

Even for experienced co-researchers, you will need to provide specialized training in this method. Walk them through:

1. The purpose and approach of the method (covered in [What](#) , [Why](#) , [Where](#) and [When](#)).
2. The steps in the data collection and analysis process (covered here in [How](#)).
3. How to fill out the data collection forms (see [Materials](#)).



Test Interviews Before Scaling

To ensure that the data collection tools make sense to residents, first have co-researchers test them out with a few people before conducting the rest of the interviews. This also gives them a chance to try out their approach to talking with residents. After they have performed this test, hold a meeting where they can share their experiences with each other and provide input on any updates needed for the interview form.

Select Interview Participants

Strive to select a representative sample of residents. This includes:

- **Sociodemographic groups:** A roughly equal number of people of different genders, ages, incomes, educational levels, occupations, and (dis)abilities.
- **Location:** Households from different areas of the settlement.

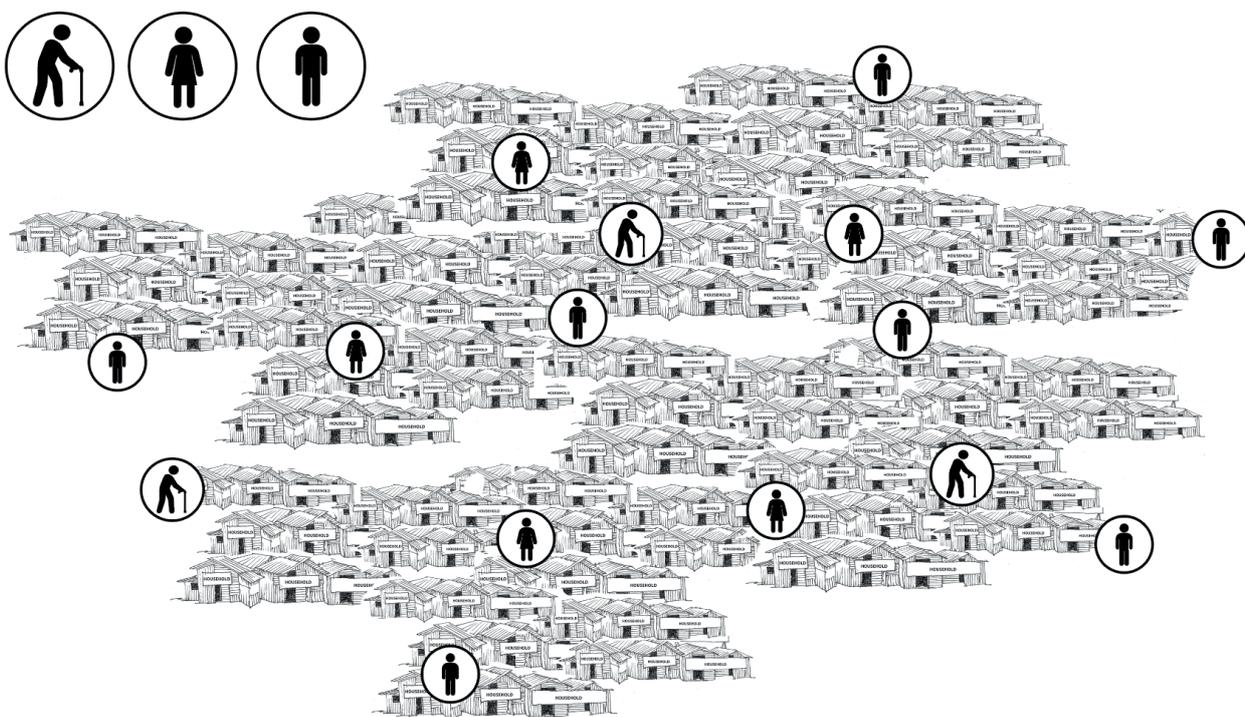
Once you have established who is in different sociodemographic groups and locations, randomly select participants. You can do this by:

1. First, assigning residents a number (this could be their address code assigned during [Household Numbering and Enumeration](#)).
2. Then, use a 'random number generator' (freely available on the internet) to select participants.

Numbers returned by the random number generator will provide your randomly selected sample of residents to participate in interviews.

Make sure to **interview at least 100 people per area** (i.e. neighborhood). While the general rule of thumb for a representative sample is 10 percent of the population (for instance, if there are about 1000 people, you should interview 100 people), talking to that number of people may prove infeasible.

If useful, you could also interview local government and civil society stakeholders using the same interview form.



Conduct Individual Interviews

Co-researchers will visit participants in their homes to conduct interviews (or a location near their home like a community center). Be conscientious of each participant's time. The interview will be in two parts (see *Risk Profile Interview Form* in [Example Materials](#)):

1. Survey: Fill in the survey questions to create a profile for each participant, including:

- Respondent's basic information (e.g. age, gender).
- General profile (e.g. education level).
- Socioeconomic profile (e.g. income).
- Community profile (e.g. effects of disasters).

2. Discussion: Capture the respondent's perceptions of and views on risks. Questions include:

- *What risks do you, your household and your community face?* Identify the 5 biggest risks that affect you. Write them down in order from most impact (1) to least impact (5).
- For each of the 5 risks identified, answer the following questions:
 - **Impacts:** *What effect does the risk have on you, your household and your community?* List up to 5 impacts for each risk.
 - **Solutions:** *What actions can you or your community take (or have already taken) to reduce the impact of this risk?*
 - **Barriers:** *What barriers exist to taking action to reduce the impact of this risk? These can be in or outside the community.*



Create Risk Profiles: Identify Impacts, Solutions and Barriers to Action

Co-researchers can use simple tables (like in [Example Materials](#)) to compile interview data and do the following analyses:

1. Identify the highest ranked risks

- a. **List risks:** In a table, list each risk identified in the interviews.

Respondents will inevitably use different words to describe the same risk; make sure to consolidate these into one risk so that only unique instances of each risk appear in the list. For example, '*water in house*' and '*river floods*' would be simply 'Flooding'.



- b. **Assign points:** Once you have a list of all unique instances of risks, assign each the following number of points based on how each respondent ranked the risk during the interview:

1. Highest ranked	5 points
2. Second highest ranked	4 points
3. Mid-ranked	3 points
4. Second lowest ranked	2 points
5. Lowest ranked	1 point

- c. **Tally points:** Once each unique instance of a risk has all its points assigned, add up the points to identify the highest priority risks in the community.

- d. **Sort risks:** Finally, sort the table so that the highest priority risk appears at the top of the list and the lowest priority risk at the bottom.

You now have the data you need to create materials to present to the community in focus group discussions. These data not only show priority but also the range of risks present in the community.

See *Analysis: Identify and Rank Risks* in [Example Materials](#) for an example table.

2. Identify most frequent impacts

- a. **List impacts:** In a table, list each impact identified in the interviews.

Respondents will inevitably use different words to describe the same impact; make sure to consolidate these into one impact so that only unique instances of each impact appear in the list. For example, '*house damaged*' and '*roof fell in*' would be 'Structure damage'.



- b. **Tally impacts:** Count each mention of an impact and add up the total number of mentions.

- c. **Sort impacts:** Finally, sort the table so that the most mentioned impact appears at the top of the list and the least mentioned impact at the bottom.

See *Analysis: Identify and Rank Impacts* in [Example Materials](#) for an example table.

3. Identify existing and potential solutions

- List solutions:** In a table, list each solution identified in the interviews. Respondents will inevitably use different words to describe the same solution; make sure to consolidate these into one solution so that only unique instances of each solution appear in the list. For example, 'build drainages' and 'dig canals' would be 'Construct storm drains'.
- Tally solutions:** Count each mention of a solution and add up the total number of mentions.
- Sort solutions:** Finally, sort the table so that the most mentioned solution appears at the top of the list and the least mentioned solution at the bottom.



See *Analysis: Identify and Rank Solutions* in [Example Materials](#) for an example table.

4. Identify barriers to action

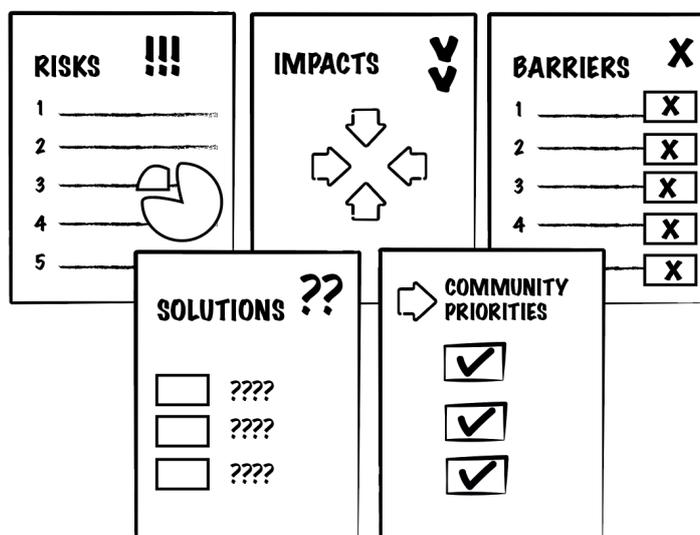
- List barriers:** In a table, list each barrier identified in the interviews. Respondents will inevitably use different words to describe the same barrier; make sure to consolidate these into one barrier so that only unique instances of each barrier appear in the list. For example, 'difficult to engage government' and 'local government disinterested' would be simply 'Local government shows little interest'.
- Tally barriers:** Count each mention of a barrier and add up the total number of mentions.
- Sort barriers:** Finally, sort the table so that the most mentioned barrier appears at the top of the list and the least mentioned barrier at the bottom.



See *Analysis: Identify and Rank Barriers to Action* in [Example Materials](#) for an example table.

Risk Profiles: Create Visual Materials to Present Results in Focus Groups

From the data generated during analysis for the risk profile, charts, infographics and diagrams to visually communicate findings.



Select Focus Group Participants

Co-researchers will mobilize residents in their area to participate (as they will not trust people they don't know). Like for interviews, strive to select a representative sample of residents for focus groups. This includes:

- **Sociodemographic groups:** A roughly equal number of people of different genders, ages, incomes, educational levels, occupations, and disabilities.
- **Location:** Households from different areas of the settlement.

Hold **one focus group in each cluster** (of about 100 households) with **12-15 people** each.

Ideally, you will hold multiple focus groups in each area. Multiple focus groups are important so that you can have one for women, one for men, one for youth, one for disabled people, etc. This ensures that there is space for less vocal residents to share their views.

Conduct Focus Group Discussions

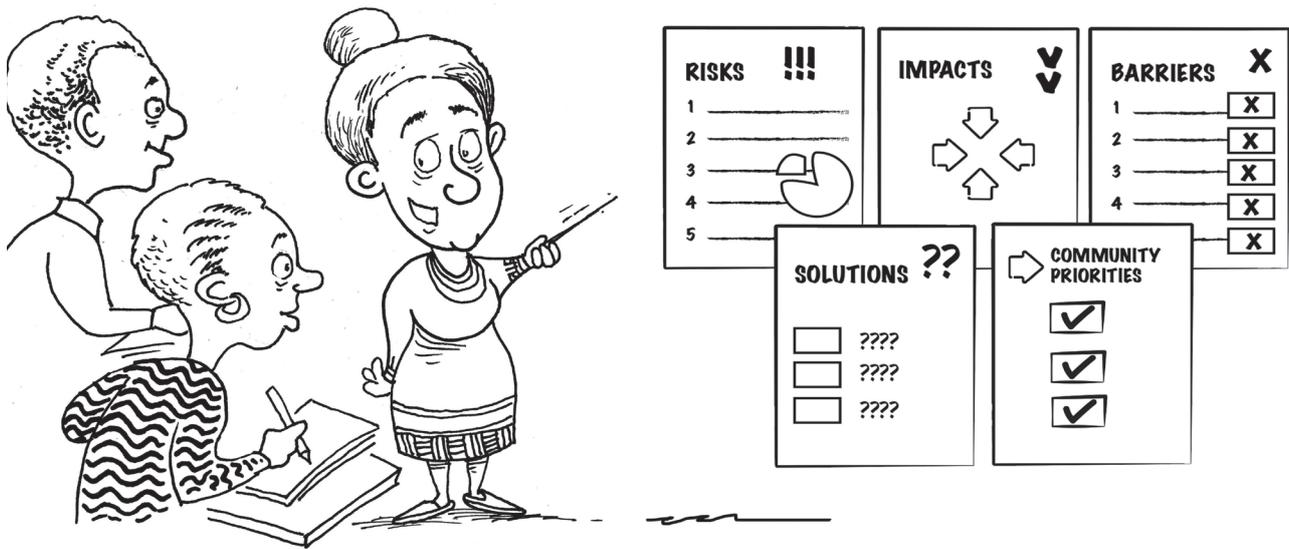
You should assign at least one facilitator and one note taker (ideally from the community) for each focus group. The facilitator will likely be a staff member of a federation-support NGO or other local NGO.

A typical program for a focus group is:

1. **Introduce risk profiling:** Explain the purpose of the meeting and discuss the rules of engagement for group discussions.
2. **Explain framework:** Describe the interviews and analyses of interview data. Explain the framework used:
 - a. Identifying and ranking risks
 - b. Diagnosing associated impacts of those risks
 - c. Evaluating existing and potential solutions
 - e. Assessing barriers to action for those solutions
 - f. Determining community priorities
3. **Present findings:** Using the charts, infographics and diagrams created from analyses, show participants the results from the risk profiling interviews.
4. **Discuss:** As a group, discuss these findings. Try to reach consensus. Questions could include:
 - a. *Do you agree that these are the highest priority risks? Impacts? Solutions? Barriers?*
 - b. *Do you have a different view? If so, why?*

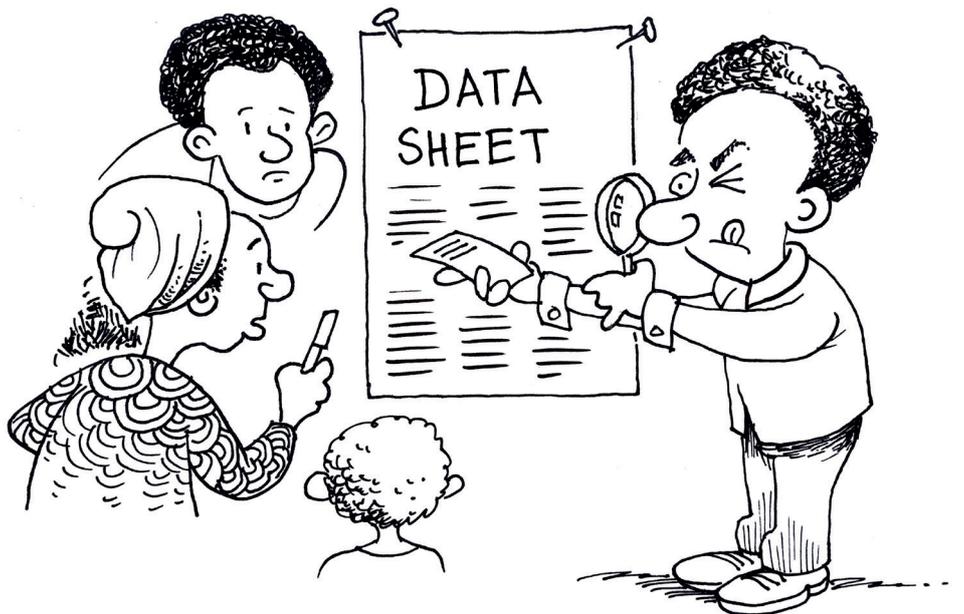
c. How would you prioritize risks, impacts, solutions and/or barriers differently?

d. Are there any other existing or potential solutions? Other barriers to action?



Identify Community Priorities

Analyze the data from the focus group discussions to formulate a final risk profile and set of community priorities. This analysis will support co-planning with local government as well as other local action to build resilience.



Plan Actions to Be Taken

Beyond supporting co-planning with government, the risk profile can be used for complementary local action by residents, CBOs and civil society partners. It is important to engage residents by speaking to their urgent needs. They may have little capacity for, or interest in, participating otherwise. Providing short-term benefits is crucial for building trust in the upgrading process. Local actions could include organizing garbage cleanup teams and even coordinating garbage removal with local authorities.

You Can Plan Using This Framework of Activities and Actions to Be Taken by Different Stakeholders

Activity	Action			Person responsible	Deadline
	Community	Local government	Civil society		
Short-term					
Medium-term					
Long-term					

Considerations

How can we ensure that the method will work in our location?

The method should never be taken as is. Work with co-researchers and other knowledgeable residents and local leaders to customize it for your context. Pilot test interview questions with a few residents to find the right language and approach. Hold reflection sessions with co-researchers to discuss how they can be improved. Most of all, reflect on what your top goals are for the research and adapt the data collection tools and research process as needed.

How can we ensure participants understand key concepts in risk profiling?

Make sure to discuss key concepts (e.g. risks, impacts, solutions, barriers) with local leaders and knowledgeable professionals who work in the settlement to determine what words will be most meaningful to communicate them to residents. Also look for relevant local examples to provide context for concepts. This will enable participants to draw on their own experiences and ensure a greater depth of engagement during risk profiling activities.

You can also train co-researchers to respond to frequently asked questions, providing a set of clear answers for them to rehearse and build on as they go.

Should we compensate community mobilizers and co-researchers?

Yes, provide some small compensation as possible. Residents' time is precious and few may be able to contribute consistently without some consideration of the cost of their time.

Challenges

Formal Language Used in Questions

Co-researchers and residents alike may struggle with formal language used on forms. To overcome this, discuss during co-researcher training sessions and have them take the forms home overnight to familiarize themselves with them and rehearse. Then discuss approaches and wording as a group so that co-researchers are prepared for interviews.

Residents' Distrust, Lack of Awareness, and Misinformation

Residents in informal settlements have faced a long history of land grabs and evictions as well as many development projects that have failed to produce tangible results. There are also inevitably opportunists inside and outside the community that will seek to use upgrading efforts to their own benefit. Residents are therefore often skeptical of upgrading projects and fearful when they see you walking around with a map in your hand. You can overcome this through patient dialogue, inviting trusted local leaders to speak about the project, inviting local government staff to speak to residents, and striving to provide near-term, incremental benefits to build confidence in the process. It is also essential to include community participation from the start as residents will not trust people they don't know. Additional strategies include: training a core team that understands the method and its promise for bringing benefits to the settlement; and involving trusted local leaders, including from the local government administration (e.g. ward chiefs).

For interviews, pair co-researchers with residents then can best speak to (e.g. youth with youth, elderly with elderly, women with women, disabled with disabled). In particular, if you can recruit structure owners and informal service providers as co-researchers to speak to other structure owners and service providers, this will go a long way to building trust with these groups.

Research Fatigue and Disbelief

Again, because so many research initiatives and development projects fail to produce promised results, residents may not want to participate in data collection activities and be skeptical that promised benefits will ever materialize. Residents may not be able to distinguish between research that is a one-and-done extraction and research that supports larger community-building and upgrading processes. Help them understand the difference. But be careful not to over engage residents or overpromise benefits. This is why it is so crucial that work be iterative and incremental. Residents need to see tangible benefits to invest their time. They also need help as soon as possible. Therefore, projects that only think long-term will largely fail in this challenging context.

Participants Asking for Compensation

Residents who participate in the interviews and focus groups may feel like they should be compensated for their time and the information they share. Providing payments, however, may prove cost prohibitive. Explain to them that this research is a community good and that they will receive benefits indirectly through investments in new infrastructure and services.

Examples from the Field

Mukuru, Nairobi (Kenya)

Facilitators in community planning forums in 2018 used an adapted version of the risk profiling tool called Views from the Frontline (VFL) to inform residents about local priorities in Mukuru. As part of the process, community mobilizers trained during the SPA process introduced other residents, in particular youth and women, to the methodology. These residents went on to collect data on risks in areas across all three settlements in Mukuru. It also proved useful as an engagement strategy in villages (i.e. neighborhoods) where residents were skeptical and resistant to the SPA process.

Participants in the VFL forums identified risks like fire, insecurity, diseases, contaminated water, poor sanitation and eviction as priorities. Community mobilizers also worked with professionals in the SPA consortia whose sectoral planning work sought to address risks identified during risk profiling activities.

One short-term outcome of these planning fora were weekly community clean-ups by volunteers. Garbage had been identified as an important cause of risks like fire, contaminated water and poor sanitation. Mobilizers also collaborated directly with the Nairobi city government to schedule free monthly waste collection. Risk profiling activities encouraged community action for local solutions and stronger ties with external stakeholders. Short-term benefits like this built confidence in the SPA process and supported continued partnerships with government by demonstrating the value of community-led contributions.

Dar es Salaam (Tanzania)

Residents and their partners also used an adapted version of the VFL methodology but with an explicit focus on profiling community climate and health risks. This proceeded work to create community action plans based on community-identified priorities and subsequent ranking of scaled-down interventions that residents can afford to collectively implement on their own. The process emphasizes the lived experiences of residents to climate change impacts. Equally exposed but unevenly impacted, this exercise allowed communities to deliberate and share their adaptation strategies collectively.

Lilongwe, Blantyre and Mzuzu (Malawi)

The Malawi Alliance, a Slum Dwellers International (SDI) affiliate, undertook risk profiling in seven informal settlements in the cities of Lilongwe, Blantyre and Mzuzu between 2018 and 2020. It has since been scaled up to an additional 22 wards across the three cities. The Alliance used an approach developed by SDI based on their experience in several countries across Africa and Asia. Called Community Data for Change (CDfC), the approach empowers communities to generate data about their communities through community-led profiling, mapping, and enumeration.

Under the CfDC approach, poor communities are mobilized and organized to collect and validate data about their vulnerabilities, risks and needs. This information does not usually exist for informal settlements, making the planning of interventions difficult. Peer-to-peer exchange and stakeholder engagements follow, to map findings, and develop Community Resilience Plans or Risk Management Frameworks.

In Lilongwe, for instance, community mobilization efforts centered on raising awareness about climate-induced disasters and their impacts on the lives of people, aimed at building a critical mass of organized urban poor to influence authorities and service providers.

After mobilization, young people and community leaders were trained in community-led data collection and analysis, including through the use of technologies such as Global Positioning System (GPS) to map and identify areas of high risk, and Kobo Toolbox, an open-source software to collect and analyze data in real time.

The process of data collection, dissemination, and analysis that followed was grounded in the participation of communities. Fifty community members from each settlement were then involved, along with the Lilongwe City Council (LCC) and other key stakeholders, in co-producing knowledge to understand and map climate risks and vulnerabilities in each settlement and produce Community Resilience Plans and Risk Management Frameworks.

An adaptive cycle of action and critical reflection was employed, to build capacity and understanding over time. Community meetings took place regularly. Existing community governance structures were the entry point into the community. For example, existing Ward Civil Protection Committees served as a key point of contact between the community and the government. Community members gained skills and knowledge to lead on climate adaptation and disaster risk reduction efforts, through training workshops. In addition to technical information, local knowledge was reflected during the process of data verification and analysis by communities.

The participatory analysis process provided key insights into the local drivers of climate vulnerability. For instance, it highlighted the extreme vulnerability of individuals living in houses made from flimsy building materials; and the importance of solid waste management in managing flooding to reduce the vulnerability of residents during storms. In Mtandire, for instance, the data

collection and analysis process revealed that the majority of the houses (65%) affected during the extreme events of 2019 and 2002 used temporary building material, 28% used semi-permanent building materials, and 7% used permanent building materials like cement and baked bricks. The damage to most of the houses built with temporary material was non-repairable.

Findings such as these have helped communities understand their collective risks to hazards, and at the same time identified individuals and households that are the most exposed and vulnerable. Collective understanding has helped overcome denial and apathy, infusing a new energy to solve problems as a community and creating buy-in and support for solutions. It has helped anchor community dialogues on resilience-building, and support conversations with local authorities and external agencies. In Lilongwe, for instance, multiple actors, including LCC, the Department of Disaster Management Affairs (DoDMA), the Lilongwe Water Board, civil society organizations and others, have come together to form partnerships to support the communities in managing climate risks and in sourcing finance. Community resilience plans drawn up through the data collection and analysis process became blueprints for community-led processes to enhance resilience, and important tools to negotiate support from funders.

The outputs of the data collection, analysis and resilience planning processes are invaluable for local governments. While city councils are mandated to involve communities in disaster risk reduction plans, they face several challenges such as inadequate funding and lack of capacity. The project helped overcome these challenges and promoted genuine relationships between communities and government, where each helped the other to overcome gaps, while enhancing government accountability and sustainability.

Lack of employment, and resulting poverty, was identified as a key driver of climate vulnerability in most of the settlements. Strengthening livelihoods was therefore recognized as a key strategy to address the root causes of vulnerability. “We cannot talk about building climate resilience if people’s livelihoods are frail,” says Modester Kaphala, National Leader of the Federation of the Rural and Urban Poor (a member of the Malawi Alliance). Skills development opportunities such as tailoring and designing, shoe making, tie and dye, mushroom farming, and peanut butter production are provided for community members, with a focus on women. Climate resilience of livelihoods was emphasized, for example, through the creation of a business cooperative LCC distributing food to people affected by floods in Kawale. Community Data for Change in Malawi’s Urban Informal Settlements called Zamanja Network (Zamanja is a Chichewa term for “handwork”) in Lilongwe. Similar cooperatives are being set up in other cities.

The project has so far supported seven informal settlements in Malawi to develop Community Resilience and/ or Risk Management Frameworks, and to set up local committees to implement them. For instance, committees have been established for waste management; water and sanitation; floods response; housing and infrastructure; and security. These committees include a minimum of 20 community members, 60 percent of them women.

Materials

1. Risk Profile Interview Form
2. Analysis: Identify and Rank Risks
3. Analysis: Identify and Rank Impacts
4. Analysis: Identify and Rank Solutions
5. Analysis: Identify and Rank Barriers to Action
6. Audio or video recording device for focus groups (optional but highly recommended)

Example Materials

[1] Risk Profile Interview Form		Form last updated Oct 2022
1	Data collector name	<i>Patrick Njoroge</i>
2	Data collector contact	<i>075600091</i>
3	Date	<i>13 October 2022</i>
(1) Survey: About the respondent		
A. Basic Information		
A1	Affiliation	(a) Community (b) Civil society (c) Local government
A2	Gender	(a) Female (b) Male (c) Other
A3	Age	(a) Less than 11 (b) 12 – 17 (c) 18 – 25 (d) 26 – 60 (e) More than 60
A5	Settlement name	<i>Mukuru Kwa Njenga (MN)</i>
A6	Area name	<i>Riara (R)</i>
A7	Block name (if applicable)	<i>A</i>
B. General Profile		
B1	Do you know how to read and write?	(a) Yes (b) No
B2	Do you have any disabilities?	(a) Yes (b) No
B3	Are you part of an indigenous/ traditional group?	(a) Yes (b) No
B4	What is the highest level of education you have completed?	(a) Some primary (b) Primary (c) Some secondary (d) Secondary (e) Vocational training (f) Some tertiary (g) Tertiary
C. Socioeconomic Profile		

C1	Do you have a steady income?	(a) Yes (b) No
C2	Do you own your residence?	(a) Yes (b) No
C3	Is your residence in a good state?	(a) Yes (b) No
C4	How many years have you lived in this community?	(a) 0 – 3 (b) 4 – 6 (c) 7 – 10 (d) 11 – 20 (e) More than 21
C5	What is your socioeconomic status relative to the rest of your community?	(a) Much worse off (b) Worse off (c) Equal (d) Better off (e) Much better off
C6	What is your socioeconomic status relative to the rest of your country?	(a) Much worse off (b) Worse off (c) Equal (d) Better off (e) Much better off
D. Community Profile		
D1	What scale of risk most affects your everyday life?	(a) Small-scale, local risks (b) Large scale risks
D2	What change in loss and damage has occurred in your community since the year 2005?	(a) Substantial increase (b) Some increase (c) No change (e) Some reduction (f) Substantial reduction
D3	How many people have been KILLED by disasters in your community?	Over the last year (a) 0 (b) 1 (c) 2 – 5 (d) 6 – 10 (e) 11 – 50 (f) 50+ Over the last five years (a) 0 (b) 1 (c) 2 – 5 (d) 6 – 10 (e) 11 – 50 (f) 50+
D4	How many people have been INJURED by disasters in your community?	Over the last year (a) 0 (b) 1 (c) 2 – 5 (d) 6 – 10 (e) 11 – 20 (f) 21 – 50 (g) 51 – 100 (h) 101 – 500 (i) 500+ Over the last five years (a) 0 (b) 1 (c) 2 – 5 (d) 6 – 10 (e) 11 – 20 (f) 21 – 50 (g) 51 – 100 (h) 101 – 500 (i) 500+
D5	How many people have been AFFECTED by disasters in your community?	Over the last year (a) 0 (b) 1 – 10 (c) 11 – 50 (d) 51 – 100 (e) 101 – 200 (f) 201 – 500 (g) 500+ Over the last five years (a) 0 (b) 1 – 10 (c) 11 – 50 (d) 51 – 100 (e) 101 – 200 (f) 201 – 500 (g) 500+
(2) Discussion: About risks		
E. Identify and prioritize risks		

E1 **What risks do you, your household and your community face?**

Identify the 5 biggest risks that affect you. Write them down in order from most impact (1) to least impact (5).

1.	<i>Floods</i>
2.	<i>Theft</i>
3.	<i>Diseases/Poor health</i>
4.	<i>Hunger/Lack of food/Food insecurity</i>
5.	<i>Lack of safe drinking water</i>

F. Assess each risk's impacts and solutions

F1 **For each of the 5 risks identified, answer the following questions:**

1. **Impacts** – What effect does the risk have on you, your household and your community? *List up to 5 impacts for each risk.*
2. **Solutions** – What actions can you or your community take (or have already taken) to reduce the impact of this risk?
3. **Barriers** – What barriers exist to taking action to reduce the impact of this risk? These can be in or outside the community.

Risk No. 1 <i>Floods</i>		
Impact	Solution(s)	Barrier(s)
a <i>House damage</i>	<i>Dig canals</i>	<i>Lack of interest/funding from city government</i>
b <i>Diseases</i>	<i>Build a health center</i>	<i>Lack of interest/funding from city government</i>
c <i>Loss of time to work</i>	<i>Government assistance during disasters</i>	<i>Lack of interest/funding from city government</i>

Risk No. 2 <i>Theft</i>		
Impact	Solution(s)	Barrier(s)
a <i>Loss of property</i>	<i>Community patrols</i>	<i>Lack of time/organization/ resources in community</i>
b <i>Lack of sleep</i>	<i>Street lights</i>	<i>Lack of interest/funding from city government</i>
c <i>Increase in money borrowing</i>	<i>Low-interest loans</i>	<i>No formal banking institutions in settlement</i>



Risk No. 3 *Diseases/Poor health*

Impact	Solution(s)	Barrier(s)
a <i>Disease outbreaks</i>	<i>Build drainage</i>	<i>No funds</i>
b <i>High medical costs</i>	<i>Build a health center</i>	<i>Lack of interest/funding from city government</i>
c <i>High infant mortality</i>	<i>Build an infant and maternal health center</i>	<i>Lack of awareness</i>
d <i>Loss of time to work</i>	<i>Additional income-generating opportunities near house</i>	<i>Lack of funds to start personal business</i>
e <i>Lack of sleep</i>	<i>Low-cost medication</i>	<i>No government health center</i>

Risk No. 4 *Hunger/Lack of food/Food insecurity*

Impact	Solution(s)	Barrier(s)
a <i>Malnutrition</i>	<i>Better quality, low-cost food vendor options</i>	<i>High cost of food; unreliable supply; poor conditions for storing food</i>
b <i>Loss of time to work</i>	<i>Build a marketplace</i>	<i>Lack of interest/funding from city government</i>
c <i>Disease</i>	<i>Better quality and cheaper food</i>	<i>Lack of awareness in community</i>
d <i>High daily/weekly expenses</i>	<i>Cheaper food close to home</i>	<i>No space for a stable marketplace</i>

Risk No. 5 *Lack of safe drinking water*

Impact	Solution(s)	Barrier(s)
a <i>Disease</i>	<i>Safe drinking water in the plot</i>	<i>Disinterest from landlord</i>
b <i>High daily expense to buy water</i>	<i>Piped water from network</i>	<i>Lack of interest/funding from city government</i>
c <i>High medical costs</i>	<i>Low-cost medication</i>	<i>No government health center</i>

G. Notes

G1 Write down any additional observations about the interviewee:

[2] Analysis: Identify and Rank Risks

Form last updated Oct 2022

Risk	Number of instances by priority					Total points
	(1) 5 points	(2) 4 points	(3) 3 points	(4) 2 points	(5) 1 point	
<i>Fires</i>	/	-	///	//	////	22
<i>Floods</i>	////////	////	//	////	/	70
<i>Violence</i>	/	/	/	/	/	15
<i>Diseases/Poor health</i>	//////////	////////	//////	////	-	108
<i>Unemployment</i>	///	////	//	////////	///	60
etc...						

[3] Analysis: Identify and Rank Impacts

Form last updated Oct 2022

Risk	Number of instances	Total
<i>High medical costs</i>	////////////////////////////////////	51
<i>Work days lost</i>	////////////////////////////////	25
<i>Air pollution</i>	////////	11
<i>High cost of living</i>	//////////	18
<i>Vermin and insects</i>	////	6
etc...		

[4] Analysis: Identify and Rank Solutions

Form last updated Oct 2022

Risk	Number of mentions	Total
<i>Build marketplace</i>	////////	10
<i>Piped water</i>	////////////////////////////////////	41
<i>Latrines in plot</i>	////////////////////////////////////	62
<i>Build government health center</i>	//////////////////////////////////// ////////	77
<i>Build storm drains</i>	//////////	22
etc...		

[5] Analysis: Identify and Rank Barriers to Action

Form last updated Oct 2022

Risk	Number of mentions	Total
<i>Poor transport options</i>	////////	12
<i>Lack of community interest</i>	////	7
<i>Disease</i>	////////	18
<i>Lack of interest/funding from city government</i>	//////////////////////////////////// ////////////////////////////////////	97
<i>Corruption</i>	////	6
etc...		



Related Components

Methods

- [Recruiting and Training Community Mobilizers and Co-researchers](#)
- [Settlement Mapping](#)
- [Settlement Profiling](#)
- [Household Numbering and Enumeration](#)

Sources

Interviews (2022) with staff from SDI-Kenya and the Akiba Mashinani Trust as well as a review of relevant documents and data collection forms from these same organizations.

The [Views from the Frontline](#) methodology developed by the Global Network of Civil Society Organisations for Disaster Reduction.

Horn, P., Kimani, J., Makau, J., & Njoroge, P. (2020). [Scaling participation in informal settlement upgrading: A documentation of community mobilisation and consultation processes in the Mukuru Special Planning Area, Nairobi, Kenya.](#)

Osuteye, E., Leck, H., Johnson, C., Ndezi, T., Makoba, F.D., & Pelling, M. (2020). Communicating risk from the frontline: projecting community voices into disaster risk management policies across scales. In: Pelling M, ed. *Breaking cycles of Risk Accumulation in African Cities*. UN-Habitat. And: Sakijege T, Sartohadi J, Marfai M.A., Kassenga G, Kasala S. (2014). Government and Community Involvement in Environmental Protection and Flood Risk Management: Lessons from Keko Machungwa, Dar es Salaam, Tanzania. *J Environ Prot* (Irvine, Calif). 05(09):760–71.

Zidana, H., Sibanda, M., Karamallis, A., & Luka, Z. (2022). Chapter 2: Community Data for Change in Malawi's Urban Informal Settlements. In: Global Center on Adaptation (2022). [Stories of Resilience: Lessons from Local Adaptation Practice](#). Rotterdam.

COMMUNITY CO-PLANNING

Community Mobilization, Organization, Representation and
Coordination Strategy

203



Community Mobilization, Organization, Representation and Coordination Strategy

An indispensable practice at the center of participatory, inclusive and locally led upgrading for climate resilience, the community organizational model defines how residents mobilize, coordinate and communicate among themselves and how they interact with their government, civil society and other partners.



Who

Most useful for:

- Local Champions
- Residents
- CBOs
- Urban Poor Federations
- Federation-support NGOs

Also useful for:

- NGOs
- Academia
- Local Governments



What

The community organizational model is important to multiple phases of the upgrading process, including for political advocacy but in particular the planning and implementation phases as well as for maintenance of new infrastructure and services.

Residents select representatives among themselves using a community-defined process with the goal of engaging all residents in upgrading processes. Selected residents will represent their fellow residents in community planning forums, both receiving and disseminating information on the upgrading process. This ideally includes representation down to the household level.

For example, at its finest resolution, this could mean every household sending one representative to speak for them in a **cell** of ten households. Each cell in turn would then select a representative to speak for them in a **cluster** of up to 100 households. Each cluster would then select representatives to speak for them in community planning forums that could be held at the **segment** level (groupings of one to three neighborhoods). For community planning forums for more contentious issues like housing and roads that require more granular negotiations, “**superclusters**” of 10 clusters (about 1000 households) may be needed.

Each **cluster** should send representatives for each sector or thematic area being planned (e.g. water and sanitation, public health, etc). Residents and partners will need to determine what representation structure best works for them, not copy the example laid out here (see a diagram of this example representation model in [How](#). For the purposes of this Guide, these terms will be used: cell, cluster and segment as well as supercluster).

This representation system can be used for several important activities, including:

- Mobilizing residents to participate in data collection and planning activities.
- Coordinating mobilization, educational and planning meetings.
- Discussing key challenges residents face, their relative priorities and residents preferred solutions.
- Forming and validating upgrading plans across sectors.
- Communicating about planning activities with local government.
- Communicating about plans with residents across the settlement.

Why

Genuine **CO-PLANNING** by communities and local governments is enabled by community mobilization and organization initiatives. Unorganized, residents of informal settlements will not have the political power to negotiate with government nor the coordination required to collaboratively plan and upgrade their neighborhoods.

Mobilization and co-planning activities also provide opportunities for multiple other benefits, creating a new group of local change-makers and empowering residents, in particular women and youth who engage in mobilization efforts, data collection activities and horizontal learning exchanges with other communities. They also build new local expertise so that residents can plan for themselves instead of relying on outside 'experts'. The prominent role of mobilizers in the process can also strengthen their positions as local leaders, leading to new opportunities like political leadership or jobs with local or international NGOs.

See **COMMUNITY CO-PLANNING** for more.

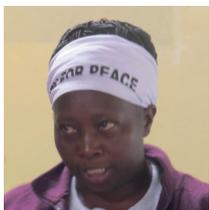
Crafting a locally-grounded **community strategy** is crucial for co-planning. It can ensure the meaningful participation of, sustained engagement with, and ownership to the point of decision-making by residents. Along with building the political and social consciousness of residents and community-led data collection activities, the **community organization model** determines how much involvement and ownership residents will have over upgrading processes.

Whereas other organizing strategies like savings groups are not necessarily place-based, organizing residents geographically based on the location of households and scaling up to cells, clusters, etcetera, creates a system of local representation that favors residents. In particular, if most residents rent instead of own, this system will favor tenants to engage in crucial discussions and decision-making that affect their lives. However, it encourages other residents to participate as well, including small-scale structure owners, caretakers and even informal service providers. It can also serve to reduce the influence of outsiders like large-scale structure owners who live elsewhere and politicians and private investors.

Like many community organizing activities, the benefits are not limited to the obvious goal alone (or its outputs). Through the process, participants also get to know their neighbors. Working together builds greater mutual understanding and community cohesion as well as autonomy and organizational capacity.

Achieving scale in participation and broad community-based representation is also crucial for organizational resilience. Whereas a typical government-led participatory consultation process that does not build local capacities and ownership will live no longer than the current planning project, a community-owned process has a much better chance of navigating the

many obstacles of turning plans into reality, including political turnover in local and national governments, skepticism and fear from some community stakeholders (e.g. structure owners), residents moving in and out of the settlement, and evictions. A broad body of participation and ownership also reduces failure points, recruiting many hands to take up the work when some inevitably are pulled away by the many challenges residents face.



“ What I can tell people going to carry out the SPA is that they do it without fear and use the process which we used, involve their whole community and talk with one voice. If they speak in one voice, they’ll have power; let them not be deceived and separated by those with money, but the common citizen to fully participate and speak with one voice. ”

Mary Nyambura Community Mobilizer Wape Wape, Mukuru Kwa Njenga

This approach can also help meet constitutional or other legal requirements for public participation in planning.



Where

The process does not have to – and likely will not – happen neatly or all at once. It is typically an iterative, concentric process instead of a linear one. Residents will likely encounter greater resistance or fear to the process in some areas. So, it is best to start where there is less resistance to get the process underway and then spread out as possible to new areas.

When

This process can be done after or in parallel to community data collection activities.

Or really any time that it is possible to do it. It can take anywhere from six to 12 months. Ideally, it would be taken up after **Settlement Mapping** and **Settlement Profiling** and done concurrently with **Household Numbering and Enumeration**.

This is because the concepts of the community organization model and the upgrading project itself can be introduced to residents while conducting the numbering and enumeration of households across the settlement.



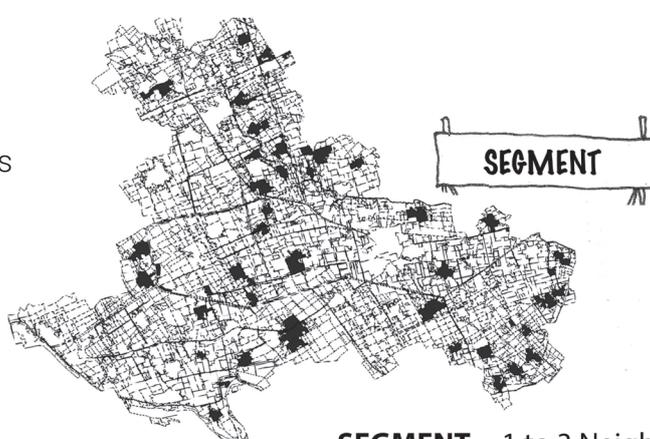
How

Determine the Representation Structure

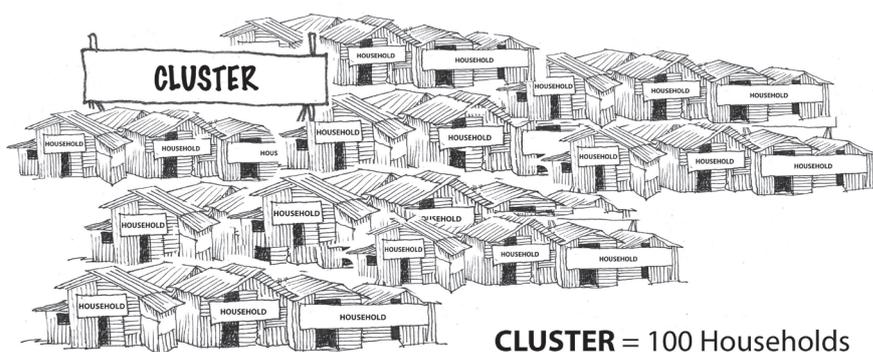
First, determine the granularity of representation – ideally, down to the household level but if this is not feasible, down to the cluster or another larger unit. Keep in mind that you do not want to reinvent the wheel – this is often an uphill battle so you need all the help you can get. Therefore, as much as possible, respect and build on existing geographical (e.g. neighborhoods) and leadership structures (e.g. elders, government subjuridictions, etc) as well as former or currently existing community organizations formed for specific projects (or around a certain agenda or set of goals). The structure that ultimately emerges will likely be a product of continuous, iterative discussions among residents and activists as well as local government, civil society, and university partners.

It is essential that participation be open to all residents independent of affiliation. The representation structure can build on and complement initiatives like savings groups. However, it must be independently formed to avoid any barriers to entry like committing to daily savings or repaying loans.

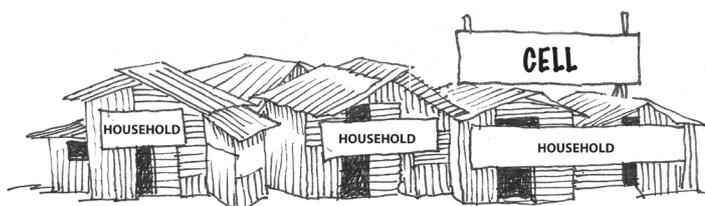
Here is a useful model to start with. The names used, sizes of each level, and how many levels you end up using will likely be different; what is important to understand is how these different levels nest within each other to create multiple scales of representation to aid community-led planning efforts and communication throughout upgrading processes. This model, drawn from the Mukuru SPA experience, forms households into groups of ten called **cells** (plots often contain 10 rooms in Mukuru (see page 2); if, say, 8 or



SEGMENT = 1 to 3 Neighbourhoods



CLUSTER = 100 Households



CELL = 10 Households

12 rooms are most common in your settlement, consider having cells match that number of households instead). Each cell selects a member to represent them in their **cluster**, which is a group of ten cells (100 households). In turn, clusters select representatives to send to **segment** meetings. Form segments based on the largest neighborhood in the settlement to ensure roughly equal representation in planning forums. For example, in Mukuru (Nairobi, Kenya) the largest neighborhood was about 8000 households – mobilizers therefore defined a segment as about 8000 households and grouped other neighborhoods into segments of one to three neighborhoods to form areas of about 8000 households each.

For community planning forums for more contentious issues like housing and roads that require more granular negotiations, **superclusters** of 10 clusters (about 1000 households) may be needed.

Recruit and Train Community Mobilizers

Recruiting mobilizers is an essential step in scaling an organizational model. They know their communities best and, with training, quickly learn how to engage their fellow residents and persuade them to participate. Where possible, rely on leaders and residents with experience in mobilization and community engagement to form a core mobilizer team. In turn, they can help recruit more mobilizers, starting locally in their own cluster and then spreading out across segments. Mobilizers will be in charge of engaging residents and teaching them about the organization model and upcoming upgrading initiatives. The work simply cannot be done without them.

See [Recruiting and Training Community Mobilizers and Co-Researchers](#) for more detail.



Engage All Residents

Strive to do household-level engagement to avoid capture by any one group — participation should be representative across gender, age, ethnicity, and livelihood. In particular for upgrading processes, it is crucial that it is inclusive of tenants, structure owners, informal service providers, and other special interests. Not only would barring their entry be exclusionary, it will very likely create conflict whereas patient, sustained engagement of these groups can turn possible adversaries into crucial allies.



Introduce the Model

It can first be introduced to residents via data collection activities. Visits to households for **Household Numbering and Enumeration** can double as awareness campaigns. It can also be introduced in any community meetings being held for other initiatives taking place in the settlement as well.



Select Representatives to Form Cells, Clusters and Segments

There is no formula for selecting representatives for each level – the process used will emerge through ongoing discussions among stakeholders. Methods for community decision-making are highly context specific and often deeply embedded in local culture. Be pragmatic and accept that it will be an imperfect process. Do the best you can.

Community mobilizers will identify plots and individual households to group into **cells**. They should inform residents about the the upgrading initiative and what it hopes to achieve for them (both in terms of services and local capacities). They should then ask households to select one person to represent them in cell meetings.

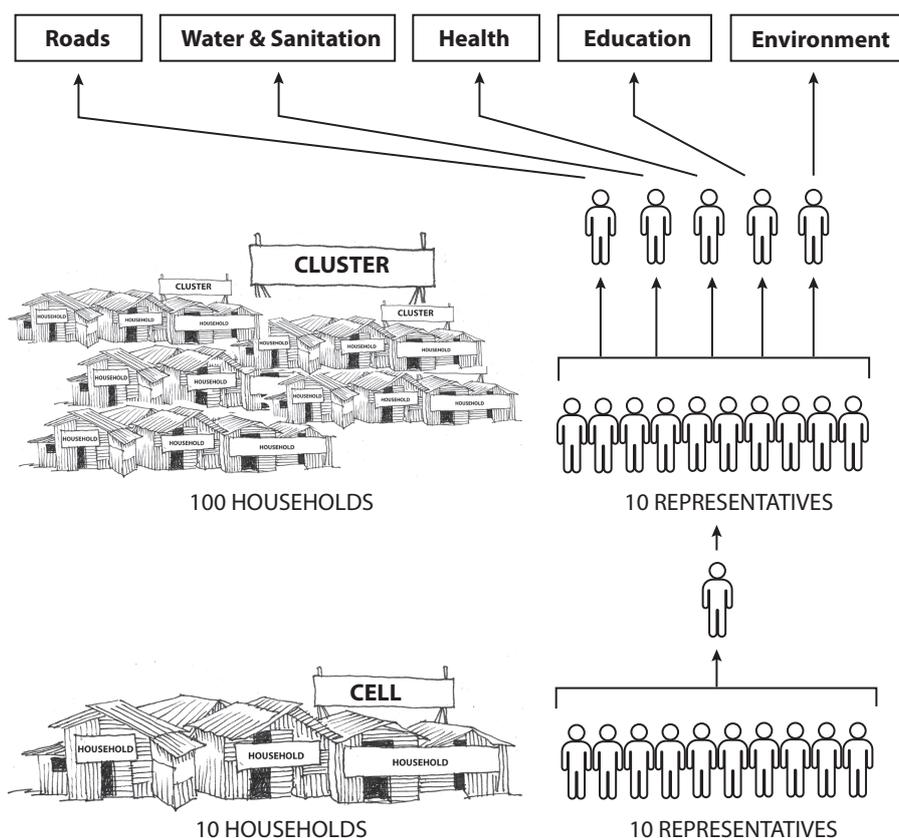
Community mobilizers can then begin to form **clusters** of 10 cells (100 households). In a cell meeting, ask members to select one person to represent them in cluster meetings. At this point, mobilizers should start holding cluster meetings to begin discussing residents' issues and priorities.

In a cluster meeting, ask members to select from among themselves who will represent them at **segment** meetings (one to three areas/ neighborhoods). Segment meetings should be held by sector/theme (e.g. water and sanitation or health). Each cluster should select one representative per theme (so if there are five themes, they would select five representatives).

Finally, for contentious issues like roads and housing that may require greater negotiation of scarce space, cluster members should select a representative to send to **superclusters** meetings (10 clusters; about 1000 households).

Community Planning Forums by Theme

(Segment and supercluster levels)



Convene Stakeholder Forums

Encourage residents to use clusters to hold regular forums to discuss opportunities and challenges – it can help move beyond simple community mobilization (to provide input to outsiders leading the process) to community organization (the autonomous capacity to act collectively to lead processes). Meetings at higher levels can be used as forums to inform residents about research findings from settlement profiling and situational analyses of existing conditions prior to beginning the planning process so that they arrive at meetings informed. Make sure that key representatives are present (e.g. elders, leaders of community, youth and religious organizations, etc). In turn, residents can discuss the validity of research findings and enrich them with their perspectives.



Determine the Consultation Plan

The organization model, as discussed, can serve multiple purposes and provide several co-benefits. Its main purpose, however, is to mobilize and organize residents for co-planning consultation forums with local government and civil society partners. The plan for consultations will be the product of ongoing dialogue between all stakeholders.

A key question is at what level to hold meetings – depending on the theme/sector being planned, this will likely happen at either the segment or supercluster levels. For many sectors like health, education, and water and sanitation, segment-level forums will be sufficient and holding meetings at smaller levels would be both costly and likely produce a lot of repetition – issues in these sectors typically do not vary greatly within a single settlement. However, for housing and road infrastructure, it is likely important to hold more localized forums at the supercluster to negotiate for space which is highly valuable to residents, in particular structure owners. Planning for roads and housing requires navigating contentious space challenges – making way for roads in most cases requires targeted demolitions of existing structures and displacement of some residents. Small-scale structure owners will also likely have many doubts and fears about losing their livelihoods and therefore require more attention.

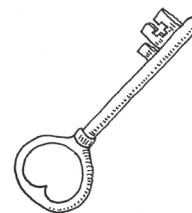
A default consultation pattern to start with could look like this:

1. **Pre-consultation.** Inform and educate residents about the upgrading process and research findings. This is also an opportunity to engage residents in exercises to assess challenges and opportunities, weigh priorities and propose solutions. Likely held at the segment level.

2. **Planning.** Residents to discuss and validate sector briefs or situation analysis reports created by local government planning consortia as well as identify additional needs, challenges and aspirations to inform subsequent sector plans.

3. **Feedback.** Residents to provide feedback and validation of draft sector plans. Planning consortia to incorporate feedback into plans.

4. **Validation.** Residents to validate final sector plans. Consortia to incorporate any final feedback from residents. If tight on time and resources, this consultation can be done at the same time as receiving feedback on draft sector plans.

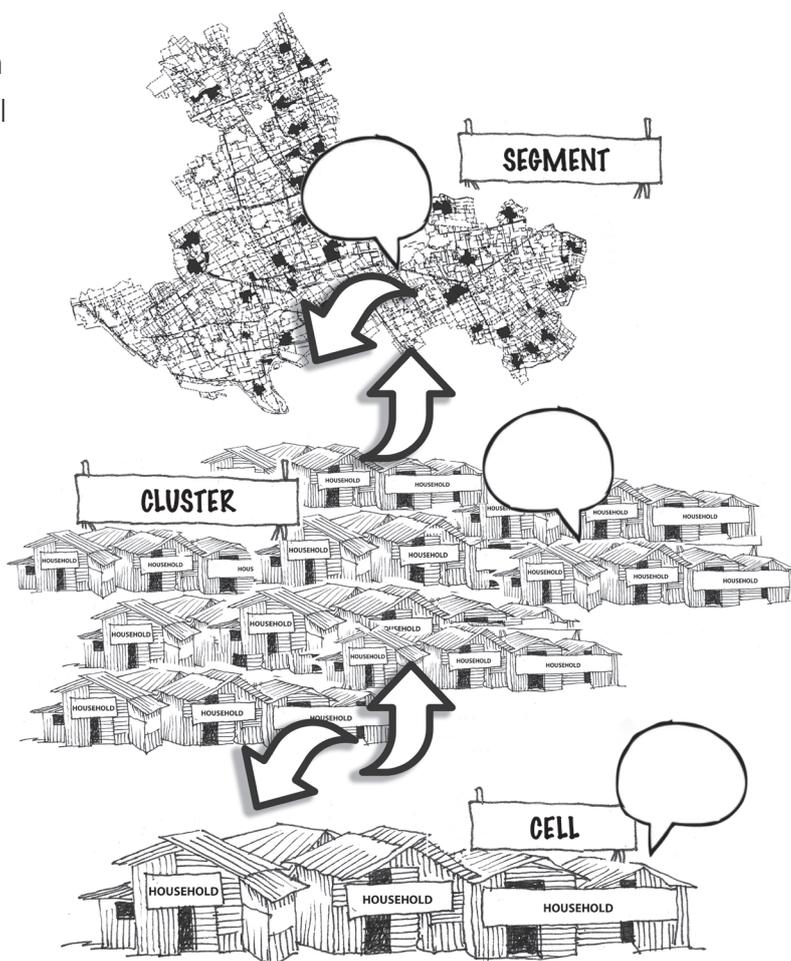


CHALLENGES OPPORTUNITIES

Once community validation is complete and the final plan adjusted and polished, it can be ratified by the local or national government.

Keep Residents Updated

In addition to providing representation in planning forums, the organization model is also an effective communication system – for example, representatives at the segment level return to their clusters to update members on discussions, activities and decisions. Cluster representatives in turn update cell members who carry news to their households. Representatives at each level should also engage residents in ongoing discussions throughout the upgrading process to solicit feedback and ideas to carry up through the representative levels so that information, input and even decision making flow up as well as down.



Considerations

Will this model work in our location?

It may not. Instead of trying to replicate its details, you may need to focus on its core tenets of providing representation and engaging all residents, organizing residents to plan for themselves and actively communicating throughout upgrading processes. What approach you ultimately take could look very different – the how is much less important than the what and the why.

What are the most important factors in determining the right model or approach?

The size of the settlement and its geographic pattern as well as local cultural practices around organizing and dialogue. The example model used here was the product of much trial and error in Mukuru – the number of households for each level, number of levels, methods for convening forums and engaging in dialogue and negotiations will all be specific to your context. The laws in your country will also shape the model that ultimately works best.

How should we manage setbacks and conflict?

Setbacks will occur more often than not. Conflict is inevitable. Expect both – it will not be a smooth process. Patiently continue to engage all stakeholders. Approach disagreements constructively, making space for all sides to speak. Where possible, resolve misconceptions by patiently correcting misinformation and clearly and repeatedly articulating the core message – ***improved services benefit everyone***. Also make sure to focus on the benefits to specific community stakeholders as they can be different for tenants, structure owners, informal service providers, etc.

Should we pay representatives, mobilizers and co-researchers?

Remuneration can limit how large a population you can reach as it can be expensive. The large financial resource this could require could impede scaling participation. It could also distort incentives for participating, shifting the focus from residents working together to plan and negotiate for upgrading to residents vying among each other for paid positions. Voluntary participation can help align incentives with the larger upgrading agenda of improved services. That said, if possible, you should provide limited compensation for organizing activities so costs like phone calls and time spent visiting households and attending meetings does not fall entirely on mobilizers and representatives.

Should we collect personal information like id and phone numbers?

If possible, phone numbers are valuable for mobilizing and communicating with residents. They can be used in a phone tree or by individual mobilizers and representatives to convene residents for meetings and other activities as well as communicating updates throughout the process. That said, residents may be distrustful and refuse to share phone numbers or provide fake numbers. That is ok, it should not impede the process too much. It is likely residents will be distrustful of sharing ID numbers.

Challenges

Residents' Lack of Awareness

“ I think the challenges we got at that time is that the residents didn't have the knowledge; they did not understand what it was and that's why they were bringing chaos in meetings. But when we sat down and explained, it necessitated that we go from door-to-door so we can explain to them the advantage of this thing. They later on came to understand, what was on their minds was that their village was being finished, but they came to understand and we explained to them the benefits of SPA and the life we would live as compared to the life we were having that time and even now we are living, but they later came to understand. It was just lack of knowledge. ”

Veronica Nthenya Mutiso Structure Owner – Vietnam, Mukuru Kwa Njenga (Nairobi, Kenya)

“ At first I did not understand it well and the time I got the trainings bit by bit I completely understood its importance. I was able to get views from [...] my fellow tenants. [...] their views are the most important in improving our area. Saying that their views are important made them happy and were able to contribute in saying what they need and what they do not need because at first they were taking it as negative. Maybe it's the doubts of what people have come to do in their plot. Later on they came to realize that their views are what contribute a lot in improving our area, and from there work became easier and we started collaborating. ”

Dominic Mulinge Tenant – Vietnam, Mukuru Kwa Njenga (Nairobi, Kenya)

Conflicting Interests and Misinformation

Perhaps the biggest challenge you will face is mobilizing all community stakeholders that will likely have conflicting interests. Structure owners, for example, may think you are coming to steal their plot and informal service providers may see better access to services as a threat to their business and question your motives. Strive to explain yourself clearly, stay on message about the benefits of upgrading for everyone (not just tenants) and include all residents. Patiently engage residents to combat misinformation and turn potential adversaries like structure owners and informal service providers into allies by including them.



“ I as a mobilizer and I know even the other mobilizers encountered challenges, when we went on the side of structure, the people who attacked us most were the landlords. They said that we wanted them to lose their houses. [They] would follow us even in our houses, saying that we are contributing to them losing their houses. Same applied with water and also electricity. But because they knew that we are residents of the area and we have brought many developments in the area that is what saved us. We went through a lot of challenges but through explaining to them, we say information is power; when we gave information it saved us. ”

Mary Nyambura Community Mobilizer Wape Wape, Mukuru Kwa Njenga

“ We were called for the first SPA meeting on matters concerning electricity. Most of us feared because we did not know what we were going to do there, maybe we could go there, you do some research and give us out to the government, so we had fear, but when it was explained to us we understood what SPA matters meant and we accepted and we were in agreement. ”

Joseph Odhiambo Informal Electricity Provider – Wape Wape, Mukuru Kwa Njenga (Nairobi, Kenya)

You can also combat misinformation by making common cause with residents; for example, if they fear evictions, make it clear that you would also be evicted.

“ So as a mobilizer I was convincing my people because I am also a tenant that if it is eviction, the government will carry us with our land where we have been dwelling for more than thirty years. So I was making efforts to convince them that if they will be evicted I will be the first person to be evicted so we held together and said our strength is our unity so nobody should tell us that we are going anywhere. ”

Pastor Elizabeth Mijeni Community Mobilizer – Mukuru Kwa Reuben

You can also build trust in the process by demonstrating the local government’s involvement; this may alleviate people’s fears that this is land grab by opportunists looking to develop the land for their own profit. Convene meetings with the local administration officials in the settlement as well as with local government staff in their department’s offices.

Providing Incorrect Information to Mobilizers

Residents distrustful of the process may provide incorrect information (for example, phone numbers). You can overcome this by patient engagement with all residents, inviting them to informational meetings. If possible, invite local government officials and other authority figures in the settlement so that residents can ask them questions themselves to begin trusting the upgrading process.

Examples from the Field

Mukuru, Nairobi (Kenya)

The model used in Mukuru, which this Guide is largely drawn from, was called Tujuane Tujengane (Kiswahili for ‘*Let’s know each other, so we build each other*’). The community mobilization strategy was developed between 2015 and 2016 through ongoing discussions between community activists and the Muungano Alliance. It was also informed by national and county statutes.

The model leveraged the national government's 'Nyumba Kumi' anti-terrorism program which are made up of ten households; these formed the cells that were the foundation of the nesting, multi-level community representation structure. Ten cells (100 households) were grouped into neighborhood forums called *barazas* or sub-clusters (which in this guide are simply called clusters). The *barazas* were also intended to be formalized as official Neighborhood Associations but this was to be for implementation, not planning, which has yet to officially begin. Sub-clusters were grouped into clusters of about 1,400 households (called superclusters in this guide) and finally 13 segments of about 8000 households (also called segments in this guide). Segments covered about one to three villages (i.e. neighborhoods).

The model engaged all residents at the household level independent of any affiliations. It also allowed local government planning consortia to engage and interact with the community without having to go through potential gatekeeping mechanisms like the urban poor federation's community savings process.

The participation of leaders, mobilizers, representatives and co-researchers was voluntary. Initially, some small compensation was given for mobilizing activities but funding ran out quickly so those costs were largely borne by mobilizers themselves, demonstrating that the strategy can work on a purely voluntary basis.

“ SPA has taught us one thing as a community, it has taught us about skills that is communication skills, listening skills and teamwork. Because if you want to succeed in something, you can't succeed alone, you must be in a team and a team that is focused and understands each other. ”

Emily Wanyama Community Mobilizer – Rurie, Mukuru Kwa Reuben

In total, 5,370 people participated in the cluster and segment-level community planning forums, representing about 100,000 total households (and over 400,000 people). A series of three planning forums were held for each of the five main sectors/themes – housing and road infrastructure at the cluster level (called supercluster in this guide) and the remaining four in ten of the 13 segments. The three meetings were:

1. A pre-consultation to inform residents about research findings.
2. A planning meeting based on briefs for each sector.
3. A final meeting to validate sectoral plans that were packaged together as the Mukuru Integrated Development Plan (MIDP).

“ Our work was to also give information. Because they also say information is power. It was to inform the community that there is SPA coming and it has been gazetted Mukuru as a Special Planning Area. Number two was also to do door-to-door campaigns to sensitize people that this thing is there and it involves us community members. So that was also our work. Number three was also to organize those home cells and educate them that SPA is coming and it will help in this and that in the community.”

James Musembi Community Mobilizer – Sinai, Mukuru Viwandani

The organization model has been used for multiple other complementary initiatives and recently, in July 2022, in the lead up to the Kenyan general elections, to create a **People’s Manifesto** that outlines the MIDP and asks local candidates to publicly pledge support to its official ratification and comprehensive implementation. Many local candidates, including for Governor of Nairobi City County, have publicly signed the Manifesto, testament to the importance of community-led planning processes for upgrading. If the planning process had instead been undertaken using conventional means with outside consultants conducting ‘participatory’ planning consultations, it is likely that no such manifesto would exist today and that the Mukuru upgrading plan would be collecting dust in a government office with little chance of being fully implemented.



“ I used to mobilize people in the community and before we bring the people to meetings, we started forming home cells and every cell was of ten families and from the ten families, we came to make a baraza which was formed of a hundred families. And we could not just tell people this is a cell, we used to walk inside our settlement, tell the people we are bringing them together and educating them that we need a change and we do not want outsiders to come into our settlement and to tell us what we are supposed to do. We told them it is high time to stand and speak what kind of changes that we want. So I was mobilizing, I was bringing the community together forming those meetings and I was also working with the local government.”

Christine Mwelu Community Mobilizer – Lunga-Lunga Centre, Mukuru Viwandani

Related Components

Methods

- Recruiting and Training Community Mobilizers and Co-researchers
- Settlement Mapping
- Settlement Profiling
- Household Numbering and Enumeration
- Risk Profiling: Identifying Risks, Assessing Solutions and Determining Community Priorities

Sources

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INTEGRATED PLANNING

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Forming Interdisciplinary Consortia

Consortia create a platform for collaboration and coordination, convening resources and a broad array of expertise to address the interdependent, multisectoral challenges in informal settlements. They also provide an effective model for co-planning with communities and building a coalition among historically adversarial parties like local government and civil society.



Who

Most useful for:

- Local Champions
- Local Governments
- Federation-support NGOs
- NGOs

Also useful for:

- Residents
- CBOs
- Academia
- Funders
- Urban Poor Federations



What

Planning for and upgrading informal settlements is the responsibility of local governments. Forming consortia expands their capacity to do so by recruiting additional expertise if and when needed. They also enable civil society and private sector professionals to engage with both local governments and communities. Each consortium should ideally be led by staff from a local government department. This provides government leadership, institutional legitimacy, and access to public funding for planning and implementation.

Experts from leading civil society organizations in each sector contribute their specialized knowledge to consortia and additional capacity for local government departments. They may also provide links to sources of development financing to complement local government resources.

Strong leadership is essential. Leaders in local government know best how to navigate departments to recruit people and leverage resources. Civil society leaders can fill gaps, recruiting needed expertise and mobilizing resources when required. Leaders should keep in mind that planning is an inherently political process not just a technical one. They must articulate a compelling vision and cultivate alliances that will serve its goals.

Consortia members should mobilize adequate institutional support and resources to undertake their work. They also need entry points to engage residents. Their core tasks include: filling sectoral data gaps with community co-researchers to better understand existing conditions; preparing an associated sector brief; and developing a sector plan informed by residents' needs and aspirations and reflective of negotiations in community planning forums; harmonizing sector plans; and integrating the final plan with citywide plans.



Auxiliary roles to coordinate and support the technical consortia will also be needed. At the inter-consortia level, this includes leadership to champion the project and steward the process, recruit partners, and coordinate inter-consortia collaboration. Within each sectoral consortium, this includes lead organizations managing technical teams by framing issues, project planning, ensuring resource mobilization, and liaising with and supporting local government departments to effectively play their leadership role. In addition, teams are needed to:

- coordinate the engagement of consortia with residents and coordinate co-planning activities; and
- coordinate the spatial elements of sector plans. See [How](#) for more.

For accountability throughout the process and to maintain momentum, consortia activities should be embedded in local government budgets. This includes costs for holding inter-consortia meetings, technical consortia planning meetings, data collection, and, when necessary, hiring outside consultants.

Why

Interdependent challenges require integrated planning. Unlike greenfield sites, people already live in informal settlements; homes, businesses and local institutions already exist. The conventional small-scale, piecemeal investments made by residents and civil society partners tend to focus on one sector and one location in isolation without considering its relationship to other sectors and locations. Consortia enable an array of experts, officials and community stakeholders to develop sectoral plans in tandem, working together across disciplines. Working with community leaders, CBOs and locally-rooted NGOs, consortia also provide opportunities for deeper community engagement by sectoral experts.

In addition to creating greater opportunities for co-planning with communities, consortia can also enlist participation across local government departments. While planning is often left to the planning department alone, consortia enable other departments to contribute expertise, capacity and momentum to the process.

Consortia invite many players to participate and can create broader interest in and commitment to the process. Plans and outcomes are stronger when parties work together; consortia provide opportunities to minimize competition between organizations that might otherwise undermine the process. Involving many organizations can also help meet minimum legal requirements for participation. Partners can also pull and pool more resources for planning. Finally, local governments partnering with civil society leaders can link local government to broader processes of governance.

Consortia also enable stakeholders to do what they do best; each consortium can focus on their strengths and rely on other consortia where they lack expertise. This promotes synergies

and more inclusive plans. It can also conserve resources as consortia will have more in-house expertise and will not need to hire additional experts in many cases.

Finally, consortia offer an effective approach for coalition building among historically adversarial parties like local government and civil society. These partnerships can ultimately demonstrate that governments can work with other partners to plan their cities.



“ [By] bringing institutions on board [...] we were able to showcase that civil society can speak with a common voice and fight for the rights of the poor [...]. For us, it was an achievement to show that yes, we can work together to achieve and there is a lot of opportunity when we work as a team [...]. We were able to raise our issues very well to the government and they listened to us, we had synergy between government and civil society. ”

Jane Wairutu Program Manager, Slum Dwellers International – Kenya

Personal communication, 17 June 2022.

Where

Developing an upgrading plan is a highly local process. Stakeholders convened by consortia should also be locally-based and offer local knowledge and expertise. It can also be useful to include regional and international players; but, they should play a supportive role for local institutions and processes, not leadership roles. For example, an international NGO may have useful expertise in planning sanitation in informal settlements; unless the NGO has local staff, they will only be able to advise the process. In another example, local universities are important stakeholders to include in consortia. However, they can also leverage their broader network so that academics in other cities or countries can contribute expertise and capacity as needed to the process.

While consortia will likely meet in offices or conference centers, members should also be working in the settlement and engaging residents to collect data, determine priorities, develop and validate plans, and ultimately to implement those plans.

Finally, keep in mind that all the consortia are working in the same place and with the same people. Their specific tasks and objectives will differ but the broader goal of providing infrastructure that improves the lives of residents will be the same. Plans must be integrated for optimal design.

“ Our goals were really the same, we were targeting the same people. The different activities that each one of us was undertaking was cleared to the same people and as my colleague has mentioned, those people became very key because the corridors they were opening for the roads were the same ones to be used for providing the other services like the street lighting, they were the same service for the water and sanitation and also for the roads. So, by taking them and also agreeing on how we were to organize the execution of the activities [...], by opening the corridors and demarcating the boundaries, they helped the other services to be able to come in. Then we were able to agree that when it came now to the actual execution, the sewer services took the lead because they were deep and sometimes using the same corridor where the road carriage and water will come, so we put the sewers first, back fill and then the road carriage will operate over the sewers services and we were able now to use the same corridor for the various services. ”

Stephen Githinji Engineer in Environment, Water and Sanitation, Nairobi Metropolitan Services (Kenya)

Personal communication, 27-28 April 2022.

When

Consortia can be formed at any time. But, they will be most useful (and feasible) after an official project declaration has been made. Without a declaration, many potential partners may not have confidence in the project and be unwilling to commit people and resources to an uncertain process.

Sectoral consortia provide the most value during the data gathering and technical planning phases of the process. That said, planning in informal settlements should be incremental, focusing on the most urgent needs first and iterating from there. Therefore, consortia should be formed as possible. For example, once roads, water and sanitation infrastructure are planned but no plans for electricity have taken shape, a new consortium could be formed to take up this work. Even as infrastructure is being built, there might be ongoing opportunities for new consortia. For example, once roads have been constructed, a consortium could be formed to plan for improved solid waste management. Additionally, the consortium that was responsible for planning a sector might not be well-suited to overseeing the plan's implementation; therefore, forming a new consortium for implementation may be required.

How

Forming consortia and coordinating multisectoral planning will not be a neat, linear process. Multiple activities described in this section will happen at the same time. They also may not have a clear start or end point. That said, the following sequence roughly outlines an ideal workflow.

Form a Leadership Team

Persuading potential government, civil society and academic partners will require dedicated local champions to steward the process. To start, this leadership team does not need to be formally organized. Rely on your existing relationships and those of other leaders that join you to begin articulating a compelling vision and build momentum. This will be important for both identifying and convincing partners to join consortia.

The leadership team will be central to undertaking the activities described below, in particular for coordinating inter-consortia collaboration. It will also play a key role in navigating the inevitable turnover of local government staff and elected officials.

Articulate a Clear, Compelling Vision

Interdisciplinary, multipartner planning consortia is a novel strategy and will be unfamiliar to many planning practitioners. Indeed, the entire approach of co-planning upgrading initiatives at scale in informal settlements will likely be met with skepticism by many, in government and civil society alike.

Therefore, it is crucial to formulate a clear message of the benefits of the approach and consistently articulate a vision that captures the interests of different potential partners and presents compelling reasons for them to engage in an unknown and ambiguous process. These messages should be based on evidence that establishes real needs. Key messages include:

- the importance of integrated planning in the complex, interdependent development environments in informal settlements;
- the need for community participation and ownership in the process; and
- the value of collaboration between community, government and civil society partners.

The goal of forming consortia is not simply to coordinate sectoral planning, it is also to build a coalition among potentially adversarial parties. Coalition building will be critical for creating political will, generating resources, convening expertise and stewarding the advocacy, planning and implementation processes.

Draw inspiration from related Videos and this Guide, in particular the [Why](#) and [Examples from the Field](#) sections.

Determine Priority Sectors

Working closely with residents and their CBO and civil society partners, determine which sectors have the most pressing challenges in the settlement (see [COMMUNITY-LED DATA COLLECTION](#)). In addition to priority sectors, pay particular attention to associated spatial planning needs and accessibility factors.

Potential Sectors to Include

Land tenure	Ownership, rights and access to land
Circulation	Roads, lanes and paths; paving; connections to city; accessibility
Housing	Quality, availability and affordability of shelter
Water supply	Boreholes, trunk lines, last mile connections
Sanitation	Toilets, sewers, last mile connections, pit-emptying
Solid waste	Garbage collection and removal, recycling, street cleaning
Flood control	Stormwater drains
Electricity	Power lines, off-grid renewable sources
Energy	Cooking fuels, stoves
Web connectivity	Towers, land lines, public facilities
Mobility	Public transit, vehicle traffic, biking and walking
Emergency services	Fire response, medical response, disaster response
Security	Policing, crime prevention, street lighting
Public health	Hospitals, health centers, maternity and infant care clinics, home visits, disease, nutrition, pest control
Food	Markets, goods delivery
Education	Primary and secondary schools, vocational training centers
Public facilities	Community centers, public halls
Social care	Children daycare, elderly and disabled services
Employment	Jobs access, job safety and reliability, income generation opportunities
Commerce	Buying and selling of goods on streets and in markets
Open space	Green space, sports fields
Environment	Air quality, water bodies, riparian zones

Careful sequencing plays an important role. You likely will not be able to undertake planning for all sectors at once. Focus on the sectors where residents identify the most urgent needs. This will ensure greater community buy-in and help build momentum for iterative, incremental improvements.



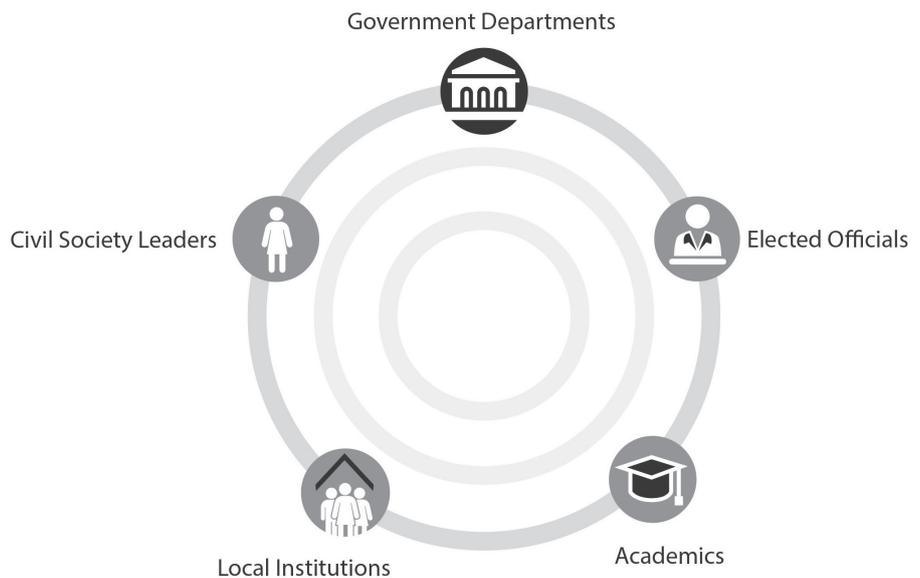
Roadways provide essential enabling infrastructure for many other sectors. Without roads, it is nearly impossible to plan and build other infrastructure like water, sanitation and electricity lines and storm drains as well as provide access for emergency services. They also support solid waste removal, increased commerce, and improved mobility and public transit access. Finally, roads support ongoing iteration for additional, incremental improvements in basic infrastructure and services.

Housing, especially on private land, can be contentious. In the exclusionary legal landscapes of most countries, private property rights are upheld over collective needs, in particular the needs of the urban poor. Private landowners will likely contest housing plans and they will have the law on their side. In addition, structure owners – whether they hold title deeds or not – will likely oppose housing plans as well. Therefore, even though housing may be a priority issue, you may want to sidestep its challenges to start. Plans, and implementation, in other key sectors can support iteration towards housing improvement plans.

Identify Key Players

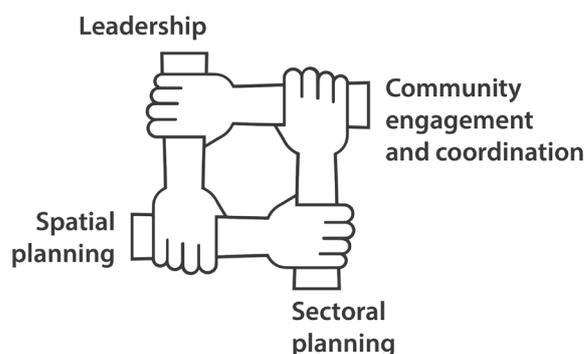
Rely on the knowledge and relationships of the leadership team to map key players, including local institutions, government departments, elected officials, civil society leaders and academics. Each will play important roles.

See [Determining Roles](#) for more.



Form Teams and Delineate Roles and Responsibilities

There are four primary roles with distinct sets of responsibilities. Each supports the work of the others.



Roles and Responsibilities

Leadership

Determine consortia, delineate roles and responsibilities, cultivate key alliances, recruit consortia members, and coordinate inter-consortia collaboration as well as lead technical work teams in sectoral consortia.

Likely comprised of local champions from government and civil society.

Community engagement and coordination

Interface between planning consortia and residents, support data collection to support technical sector plans, coordinate community planning forums, and manage negotiations between residents and planning consortia (as well as support the mobilization and organization of and communication between community stakeholders).

Likely comprised of community leaders, CBO and federation leaders, federation-support NGOs and other locally-rooted civil society organizations

Spatial planning

Manage spatial considerations of sectoral plans; through the community coordination team, negotiate space with residents; and coordinate other technical aspects of sector plans (in particular housing, circulation infrastructure and associated services like water, sanitation, storm drains and electricity).

Likely comprised of urban planners from government and civil society as well as community leaders

Sectoral planning

Co-design data collection tools with residents to fill gaps in sectoral information, participate in community planning forums, develop sector briefs and technical sector plans, work closely with the spatial planning and leadership team to harmonize sectoral plans and their coordinated implementation. While the other primary roles likely only require one team each, sectoral planning teams should be organized into consortia by themes, e.g. the Water and Sanitation Consortium, the Public Health Consortium, etc.

Likely comprised of engineers, urban planners and professional researchers from government, civil society and academia

Separating these roles into distinct teams enables you to convene a diverse array of expertise and allows teams, in particular the sectoral consortia, to focus on what they know best. For example, technical experts likely have little experience mobilizing residents and coordinating planning with communities. Forming a specialized Community Coordination team leaves engineers and planners free to focus on their work while also incorporating the local knowledge and planning decisions of residents.

Form Sectoral Consortia

Based on identified community priorities, available resources and opportunities, and political considerations, determine what consortia are needed. Aligning sectoral consortia with local government departments, combining sectors where appropriate (e.g. water, sanitation and electricity), can help ensure a greater level of buy-in and leadership from local government. Also consider aligning consortia to national (e.g. countrywide 2030 or 2050 plans) and international goals (e.g. the United Nations Sustainable Development Goals).

Recruit Partners

Leaders from local government departments and other members of the leadership team should leverage their networks to recruit partners. Pay special attention to what each player's incentives may be and speak to their interests. For government departments, this could be their statutory obligations and commitments to national and international development targets. For political leaders, this could be providing a platform to win votes. For utilities, it could be providing services sustainably in challenging environments and expanding revenue generation. For NGOs, it could be continuing work they already do but with greater scale and political buy-in.

Potential Candidates for Consortia Members

Leadership

- | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none">• Directors and other leaders in local government departments• Directors and other leaders in local civil society organizations• Prominent academics in local universities and institutes | <ul style="list-style-type: none">• Local elected officials• Local government administrators• Informal settlement residents recognized as local leaders• Any other local champions |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Community engagement and coordination

- | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none">• Residents recognized as local leaders• Residents trained in mobilization, coordination and research• CBOs | <ul style="list-style-type: none">• Federation-support and other grassroots-support NGOs• NGOs locally-rooted in the settlement |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|

Spatial planning

- Urban planning department of the local government
- Urban planning NGOs

Sectoral planning

- Local government departments
- NGOs, development institutions and private sector organizations with relevant, needed expertise in each sector

While most partners should be locally-based, there may be meaningful opportunities to enlist aid from internationally-based NGOs and academic institutions.

Create a Coordinated Work Plan

Each consortium will undertake work individually but it is crucial to regularly coordinate work across consortia. Consortia tasks likely include:

- Filling data gaps by working with community co-researchers.
- Preparing a situational analysis of existing conditions.
- Preparing a sector brief to share with residents and other consortia.
- Holding community planning forums where residents will:
 - share needs and aspirations, negotiate among themselves, and envision plans;
 - provide feedback on draft sector plans; and
 - final sector plans..
- Preparing draft sector plans and a final sector plan.
- Helping integrate the final sector plan with other sector plans as well as citywide plans.
- Advocate for ratification of the final plan.



Coordinate Inter-Consortia Collaboration

Interdependent challenges require integrated planning. The leadership team and consortia leaders should coordinate the work of each consortium to harmonize sectoral plans. Organize inter-consortia meetings every few months during the planning period where consortia members can present their work and get input from other consortia. This is particularly important for spatial planning so the spatial planning team should play a prominent role in these meetings. For example, the alignment and width of roads must go hand-in-hand with plans for water and sanitation infrastructure. Water and sanitation impacts public health. Schools need water and sanitation connections.

Well coordinated inter-consortia collaboration is a crucial practice at the center of the consortia planning approach. It facilitates continuous reflection, knowledge sharing and collaboration across the different consortia. Convening specialized expertise across a range of disciplines and the resources and experiences of each partner institution, can help develop new knowledge as well as deepen consortia members' understanding of lived realities in the settlement.

Iterate

Informal settlements do not lend themselves to conventional planning approaches (such as a comprehensive master plan). Unlike greenfield sites, people already live there; homes, businesses and local institutions already exist. Some needs are more urgent than others and some locations are more vulnerable than others. Start by focusing on the most urgent needs and most vulnerable locations. Official planning documents and infrastructure investments help create an enabling environment for ongoing planning for iterative, incremental improvements. As you fill gaps in service provision, there will be more space to take on new challenges and new sectors. You can rely on existing consortia or form new ones, as required.

In addition, the consortium responsible for planning a sector might not be well-suited to overseeing the plan's implementation; therefore, forming a new consortium for implementation may be required.



Considerations

Can we copy the consortia model from an existing project?

No. You can draw lessons and inspiration from existing projects. But consortia formation, work plan and collaboration will depend on who is involved and the specific needs of each settlement. There is no blueprint. Instead seek to replicate the roles played by different institutions, organizations and people and adapt them to your context. Who plays each role could be quite different from one city and settlement to the next. You will also likely encounter the need for new roles and approaches to collaboration with communities and between consortia as you go.

What if needed expertise does not exist locally?

Look beyond your city or even your country if need be. But be selective — only enlist organizations that will contribute tangible expertise and resources and that will commit to the process. Otherwise, enlisting them will not provide meaningful input or outcomes and make already challenging coordination work even more difficult.

Challenges

Sustained Leadership

An undertaking as complex and politically challenging as participatory upgrading at scale requires persistent champions and dedicated stewards. However, if the responsibility for carrying the project forward is placed in few hands, this can compromise a project's momentum, longevity and ultimate success if these few stewards do not continue to play their crucial roles. This is more likely to happen than not, as stewards encounter challenges navigating political turnover, in their personal life, or simply grow tired. To overcome this, spread out the entry points for participation, buy-in and responsibilities as much as possible from the start so that the project is less dependent on a few people and possibly even gain some institutional momentum in the local government.

Lack of Resources for Planning

If public funds are not dedicated to planning from the start, scarcity of resources will provide ongoing challenges for consortia. However, if you wait for resources and funding, you may never get started. Once you have begun, you can find resources as you go.

You can overcome a lack of resources by convening a broad array of expertise so that consortia do not have to pay consultants to do work they can do themselves. You can also reiterate the value of participation for an organization's larger goals and persuade them to do their own resource mobilization when necessary. Even better, persuade partners to commit their own resources from the beginning. This does not have to be money; their time and expertise will be

just as valuable if not more so. Also ask partners to commit to completing the process to deter losing valuable expertise before work is done.

Keep in mind that the lack of resources can also provide some advantages like greater collaboration to confront challenges and a deeper sense of ownership of the process.



“ The nature of the planning process was more of an advantage than a challenge. [...] many, many times while we needed to do something and we didn't have money, so we had to sit together and kind of figure, how do we do this without resources? Or who has just enough resources to get this thing done? So, the lack of resources, I think that could be a challenge when it comes to implementing a similar process without availability of resources. But it also deepened the sense of ownership, because everybody gave out something that was given freely. ”

Jane Weru Executive Director, Akiba Mashinani Trust (Nairobi, Kenya)

Personal communication, 17 June 2022.

Unknown, Ambiguous Process With No Precedent

Given that this approach to upgrading will be unfamiliar to many and therefore represent an ambiguous process with little precedent, you may encounter skepticism, misunderstanding and lukewarm commitment (if not outright dismissal). And because many organizations will be involved, each may seek different outcomes that best serve their vision for and interests in the project. Civil society organizations and local government departments may also be unaccustomed to working together. They may also be uncertain what outcome the process will have. This can all add up to a risky proposition for consortia members. You can overcome this by persistently repeating the project vision and sharing examples from successful projects. Also look for small wins to demonstrate tangible outcomes as you go.

You can also instill greater confidence in the process by convincing key players in government and partners to sign Memorandums of Understanding (MoUs).

Lack of Community Networks Organized At Scale

Without social movements like urban poor federations, mobilizing residents at scale will likely prove challenging and perhaps even impossible. In this case, start small to learn. During this period, invite experienced practitioners from other cities and countries for learning exchanges. Once you have gained sufficient experience in mobilizing residents to co-plan and convening interdisciplinary expertise, you can attempt greater scale.

Different Work Speeds

Because each consortium will have different leadership, resources and challenges, the consortia will inevitably work at different speeds. This will likely create delays and frustrations. You can

mitigate this by investing in inter-consortia meetings to push consortia to get their work done. However, in some cases, you will simply have to accept the delays and do the best you can.

Partners Leaving During the Process

Due to competing priorities for time and resources, some consortia members will inevitably drop out of the process. Staff turnover is also common within partner organizations and other staff may not have the time, expertise or interest to replace them.

You can overcome these challenges by finding additional partners as possible to take their place. This is another reason that having a dedicated leadership team both for the entire process and within individual consortia is so important.

Examples from the Field

Mukuru, Nairobi (Kenya)

Mukuru is a large, densely populated area; no one organization would have been able to undertake planning alone. To address the interdependent, multisectoral challenges, interdisciplinary planning consortia were formed, convening expertise in priority sectors including housing and road infrastructure; water, sanitation and energy; environment and natural resources; and health and education services. Local government departments, along with leading civil society organizations in each sector, led the consortia planning process to formulate sector plans and ultimately an Integrated Development Plan for Mukuru. Civil society, academic and private sector partners provided needed expertise and additional capacity for local government departments.



“ The County government worked closely with the Muungano Alliance [and other consortia leads] to bring 42 partners on board from leading civil society organizations and universities. County departments led each consortium and coordinated the partners. The consortia model proved itself an effective strategy for collaborating closely with communities and building a coalition among historically adversarial parties. The consortia also enabled members to contribute different types of expertise to develop an inclusive, locally-appropriate and integrated upgrading plan for Mukuru. We believe this model of consortia, of having different consortia, is a good model that would be able to ensure that other settlements also benefit just as Mukuru has done. ”

Marion Rono Deputy Director of Housing and Urban Renewal, Nairobi Metropolitan Services

Personal communication, 1 August 2022.

Given that the planning process was something new and therefore ambiguous, a defining challenge for the consortia was assuring members had adequate resources and institutional

support. County departments and civil society partners worked together to identify resources for planning activities. It proved challenging to maintain the involvement of some consortia members as they largely worked on a pro bono basis. Since 2017, consortia members have given USD 1.6 million in their time to the SPA planning process. Despite these challenges, major tasks were largely completed on schedule. The work of the Muungano Alliance was particularly successful, working closely with consortia to hold community planning forums that captured residents' inputs down to the household level.

According to many key players in the Mukuru SPA, they could not have achieved what they did without the consortia. The political climate was challenging and Nairobi City County had a volatile government. Each time that leadership built relationships with key officials, there was political turnover. MoUs that were intended to resolve this issue were never signed. Some consortia and members were more motivated than others and performed at different levels. Despite this, the government has already begun to implement plans that have reduced residents' climate vulnerabilities. Additional consortia have also already been formed, for example to plan the riparian zone along the Ngong River. The Mukuru SPA provides a successful model of coalition-building and iterative, incremental planning.

Related Components

Guides

- [Determining Roles](#)

Methods

- [Risk Profiling: Identifying Risks, Assessing Solutions and Determining Community Priorities](#)

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Assessing Planning Standards and Negotiating Alternatives

Formal, conventional infrastructure standards are unrealistic and impractical in informal settlements where space and resources are often scarce. To address residents' vulnerabilities, assess the implications of applying conventional, formal planning standards and negotiate with both government and communities to formulate alternatives that minimize the displacement of residents and the fracture of community bonds. At the same time, ensure standards prioritize collective needs for health, safety, dignity and accessibility over individual interests or ownership.



Who

Most useful for:

- Local Champions
- Local Governments
- Residents
- CBOs
- Urban Poor Federations
- Federation-support NGOs

Also useful for:

- NGOs

What

Conventional, prevailing planning practices and infrastructure standards are designed for making plans before development takes place and on land where ownership is formally registered.

Planning in informal settlements requires the inverse: planning after development has already occurred and where structure ownership is largely unregistered and owners unknown. Despite this reality, government-driven development in informal settlements typically seeks to uphold statutory planning standards.

Engage both local government and communities to negotiate revised, alternative standards. This process asks local government staff to rethink their conventional approach to planning and provides greater ownership over the planning process for communities. Local governments must clearly understand the absurdity of applying formal standards in informal settlements (e.g. the number of schools required per standards could displace most, if not all, of the households they are meant to serve) while seeing the promise of community-driven alternatives to improve health, safety and accessibility. At the same time, communities must be engaged to leverage their local expertise to formulate standards that recognize space and resource constraints while also ensuring access to essential services.

Start by cataloging and assessing development and land use regulations that apply in your settlement. Also assess existing conditions to better understand what types of re-development are possible. Then, using simple models, provide evidence for the outsized and negative impacts that adhering to formal standards would have in the settlement. At the same time, demonstrate that alternative standards can enable the improvement of living conditions without compromising on health, safety or accessibility standards for infrastructure and services. Finally, work closely with communities to develop alternative standards. See [How](#) for more detail.

Note that this work will establish revised standards, an important precursor to developing sectoral and spatial plans; for more on developing plans.

“ In the review of the standards, we did not relax or lower the standards, what we did is review the standards to fit the situation. ”

Peter Wachira Engineer, Nairobi City Water and Sewerage Company (Kenya)

Personal communication, 27-28 April 2022.

Why

To confront the vulnerabilities and resource scarcity in informal settlements, you must rethink conventional planning approaches and legislation. On average, 60 percent of urban Africans live in informal settlements. Despite 'formal' development being the outlier and informal development the norm, informality is typically viewed as a state of exception by governments and the planning establishment alike. It is therefore deemed illegal by statutory planning standards.

The scale of need and the complexity of planning, building and maintaining infrastructure and services in informal settlements in African cities requires the power and resources of governments working with community, civil society and private sector partners. This, in turn, requires the negotiation of official zones of exception (e.g. 'special planning areas') where formal, statutory standards can be suspended in preference for alternative, pragmatic standards that recognize both spatial and resource constraints and the urgency for improved health, safety, dignity and accessibility for residents.

Development interventions in informal settlements tend to be small and piecemeal; therefore, planning statutes can often be overlooked. However, in the rare event that government undertakes planning settlement-wide, infrastructure standards are normally upheld. This causes high levels of displacement. It is therefore critically important to negotiate alternatives.

Standards must recognize the realities faced by the urban poor and the historic and ongoing failure wrought by applying formal planning practices and standards in this context. Evidence suggests that the disparity between the informal and formal city is widening as living conditions continue to deteriorate and residents' vulnerabilities are amplified by climate change.

Upgrading plans must be more pragmatic. There is no panacea; cities do not have the resources or capacity to build infrastructure and services to the standards required in planning statutes for all their citizens. Trying to uphold these standards in informal settlements does more to exclude than include informal settlement residents. The goal should instead be to reduce residents' greatest vulnerabilities in the immediate term and decrease prolonged exposure to climate and other risks in the medium and long terms. For more on goals, principles and sequencing of upgrading investments.

Negotiating alternative standards centers communities in the upgrading process. Without this, the upgrading initiative will be no different than any other planning process. While residents lack technical planning skills, they are best positioned to understand what they need most from different infrastructure and service investments and what is inessential.

Residents should also be the ones to make tradeoff decisions between competing priorities as the space required to build infrastructure and services will directly affect them. Indeed, if they are not engaged in the process of formulating alternative standards, they will likely resist and even hinder the planning process.



“ Planning today largely abandons informal settlements. Statutory planning standards deny residents access to crucial infrastructure and services. The Mukuru SPA [in Nairobi, Kenya] powerfully questioned and challenged the legitimacy of formal planning standards in the context of the vulnerabilities and resource constraints present in Mukuru and other informal settlements. For the Mukuru SPA, we evolved and retrofitted standards to meet the huge need and at the same time minimize the huge social cost of applying statutory standards. ”

Professor Sejal Patel CEPT University (India)

Personal communication, 26 August 2022.

“ Understanding that we have to look at the informal settlements differently. When it comes to planning, if we treat them with the normal conventional standards, then we might end up losing. So, I think that’s generally applicable; let’s look at whatever the model of planning [should be] for these areas so that we are realistic and we plan depending on that context instead of just picking the formal and dropping it in the informal. ”

Patrick Njoroge Program Manager, Akiba Mashinani Trust (Nairobi, Kenya)

Personal communication, 27-28 April 2022.

Where

Discussion about unrealistic planning standards and the negotiation of alternatives must be centered in communities themselves. If the process largely takes place outside informal settlements, discussions will be abstract and the revised standards will remain impractical.

That said, all necessary government stakeholders must also participate throughout the process to ensure that alternative standards have a route to legal legitimacy. Their buy-in will be crucial for taking alternative standards from concept to practice. The mechanism for legitimacy may already exist (e.g. an exception zone or ‘special planning area’); if not, government staff will play an essential role in providing legality.

Finally, keep at the forefront of negotiations that development, and therefore its infrastructure standards, should prioritize local residents' urgent needs instead of outsiders' political or financial agendas.

“ One of the challenges of doing [a] road [using conventional standards], especially by engineers, is to see the road as purely meeting engineering solutions in the sense that it has to be a particular width, it has to be a particular material. It almost assumes that there are no people where the road will pass, it's actually seen as if it is just going to be used for connection only. ”

Professor Arthur Munyua Mwaura Department of Urban and Regional Planning, University of Nairobi (Kenya)

Personal communication, 29 July 2022.

When

Assessing standards and negotiating alternatives to apply settlement-wide should begin before detailed spatial and sectoral planning, as developing detailed plans will rely on the revised standards. The standards must be officially accepted before they can be used. That said, the details of sector-specific standards will likely be subject to ongoing negotiation as communities and government co-develop spatial and sectoral plans. Therefore, while this process can (and should) begin while planning consortia are still being formed, the consortia themselves will need to assess and continue to negotiate standards during their sectoral planning work.

How

Assess Relevant Development and Land Use Regulations

Before proposing alternatives, you must first understand the laws that regulate urban development in your relevant jurisdictions (i.e. city, county, state/province, country). These dictate **minimum planning standards** for things like the width of different classes of roadways, the size of sports fields in schools, and ventilation requirements in buildings. These are often called '*development control regulations*', '*building by-laws*', or (*formal*) '*planning standards*'. They typically include the following categories:

1. Health and hygiene

- Water
- Sewer
- Toilets and bathrooms

2. Safety

- Emergency services (fire response and ambulances).
- Law enforcement.
- Building design for adequate structural integrity, ventilation and lighting, fire safety, accessibility.

3. Built environment form and aesthetics

You must also investigate any **zoning or other land use controls** that are in place in the settlement. Zoning regulates what types of land use are permitted geographically as well as things like plot size, and the placement, height and density of structures. Is the settlement zoned for industrial use? Commercial? Public? Does it fall within multiple land use zones?

While the current land use pattern in the settlement likely already does not match with land use zones or meet minimum formal planning standards, plans for new infrastructure, services or housing may not comply with land use regulations and therefore meet resistance and require negotiation.

In this preliminary assessment, you should do the following:

1. **Formal standards:** Compile all relevant development control regulations for applicable jurisdictions. These are typically found in national and sub-national (e.g. county, city) development and building code handbooks.
2. **Land use:** Create two land use maps:
 - a. **Official land use / zoning.** You should be able to source this from the local government's planning department.
 - b. **Current land use.** As the local government will likely not have this data, you will need to rely on **Settlement Mapping** or other locally-generated data.

Common land use designations include:

(RES) Residential; (COM) Commercial; (MIX); Mixed residential/commercial; (IND); Industrial; (HLH) Health services; (ED) Education services; (COM) Community; (REL) Religious; (INS) Other institutional; (PUB-UTL) Public utility; (ROW) Right-of-way / Road reserve; (OTH) Other – specify.



Assess Existing Conditions

While a more detailed situational analysis of existing conditions should be undertaken by each consortia, it is important to ask several questions that will inform the design of alternative standards:

1. **How many temporary vs semi-permanent vs permanent structures are there in the settlement?** The more temporary structures there are, the more negotiable space will be. The more permanent structures there are, the less that can be done to redevelop the settlement and the less flexibility there will be for redesigning standards.
2. **What are the main environmental constraints?** These constraints will influence what is possible in terms of revised standards and subsequent spatial and sectoral plans.

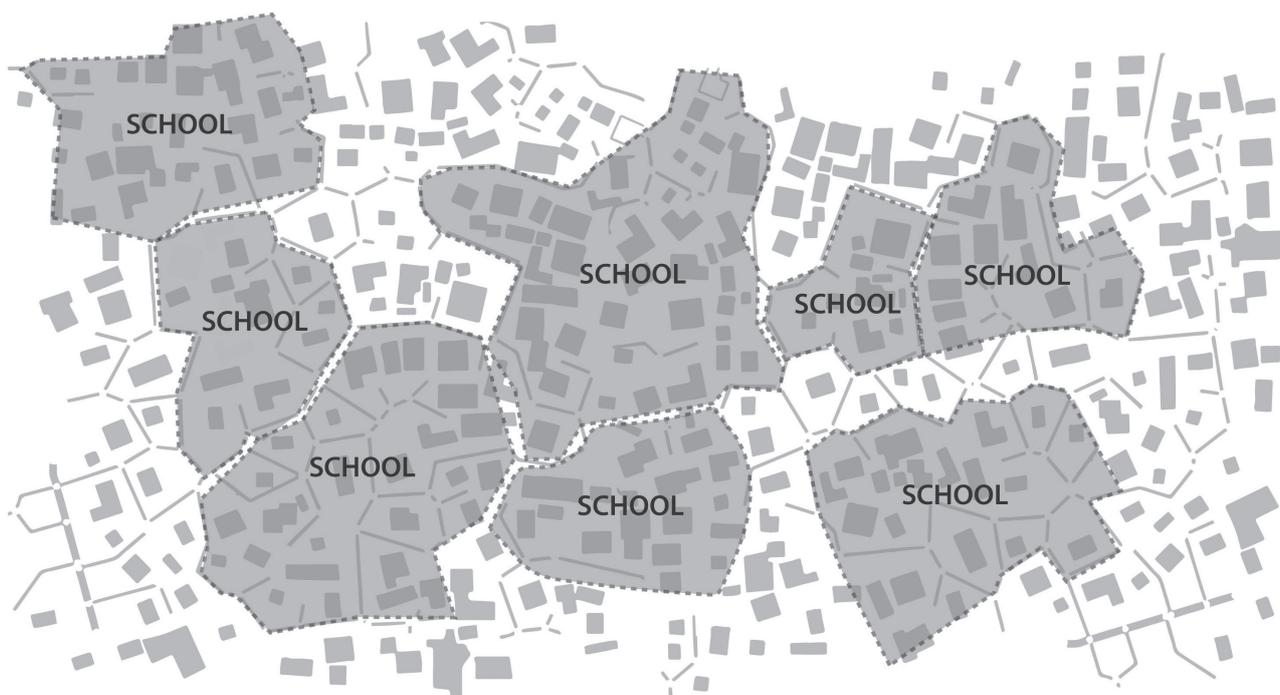
Negotiate With Government: Build the Case for Alternative Standards

Before communities and local government can work together to plan improvements in infrastructure, services or housing, you must **establish the need to formulate alternatives to the formal planning standards**. A zone of exception from local and national development regulations will need to be designated by government. For this to happen, local officials need to understand why this is necessary (and how it can be done without compromising on health, safety or accessibility).

Formal standards were designed to work with the conventional urban development planning process where planning precedes development. The opposite is true in informal settlements: development precedes planning. In this context, where space is typically a major constraint, formal standards are unrealistic and impractical.

The simplest way to demonstrate this is to **build spreadsheet models for different sectors**. For example:

1. **Number of facilities:** Calculate the number of schools required for the number of school-aged children in the settlement per national standards.
2. **Land area per facility:** Determine the minimum hectares required for a primary school per official development control regulations.
 - a. **Total land area:** Multiply the *hectares required for one school* by the *number of schools* to yield the *total hectares required* by formal planning standards.



b. **Compare:** Finally, compare the *total hectares for schools* to the *total hectares for the entire land area of the settlement*. The area required for schools per formal standards will likely take up most, if not all, of the land area in the settlement. This would displace a large number of existing structures and therefore be unrealistic. It would also be counterproductive, providing educational services to residents who would be displaced by them and therefore have to move to another part of the city.

You can build models to demonstrate a similar dynamic for other sectors, including circulation (roadways), emergency services (fire stations), law enforcement (police stations), open space (public parks), etc.

Negotiate With Government: Demonstrate the Promise of Alternative Standards

Providing evidence of how unrealistic and impractical formal standards are is an essential first step. However, you must also **demonstrate that alternative standards can enable the improvement of living conditions without compromising on health, safety or accessibility standards** for infrastructure and services.

To demonstrate this, work with residents to identify the essential elements of different services, facilities, and infrastructure. Use this to create alternative designs that serve their essential functions but in less space. For example, widths for different classes of roadways are often much wider than required to provide access for emergency service vehicles (e.g. fire engines, ambulances). Widths are instead intended to facilitate vehicular traffic flow. In informal settlements, many if not most residents do not own vehicles and get around on foot so wide roads are not a priority. Working with residents and local fire stations, you can determine the minimum widths needed for a fire engine to be able to access areas and their required turning radius.

Another example is simplified sewer systems (SSS). While conventional trunk sewer infrastructure is needed to connect settlements to citywide infrastructure, SSS provide an adequate last mile solution for improved sanitation and health. Conventional sewers requires a substantial amount of space and can be costly to build. SSS can be installed at shallower depths, need less space, and therefore require less displacement of existing structures. They also require less materials and labor and are therefore cheaper to build.

You will likely find that when you shift the priority to essential functions for health, safety and accessibility, less space is required and at a lower cost.

Negotiate With Communities: Define Principles and Establish Priorities

First, work closely with residents to define **guiding principles** for balancing contending priorities when developing alternative standards. Important principles include:

1. **Minimize** demolition, displacement and the fracturing of community bonds by adhering to the practice of ‘conservative surgery’.
2. **Prioritize** public health, safety, accessibility and dignity above individual interests or ownership.
3. **Mitigate** residents’ vulnerability to environmental risks.

Also **establish priorities for each sector** to guide discussions so that standards reflect what is most important to residents. For roads, for example, if most residents get around by walking, pedestrian mobility could be a priority over motorized vehicles.



Negotiate With Communities: Develop Alternative Standards

As the mechanism for going beyond simple community input or even participation, use **a process of iteration** to share decision-making power with residents to negotiate infrastructure standards. Beyond decision-making power, the iterative format also enables residents to conceptualize the implications of decisions and therefore balance competing priorities when envisioning standards. Use this process for each relevant sector.

The following is a **useful pattern** for engaging residents in the standards development process.

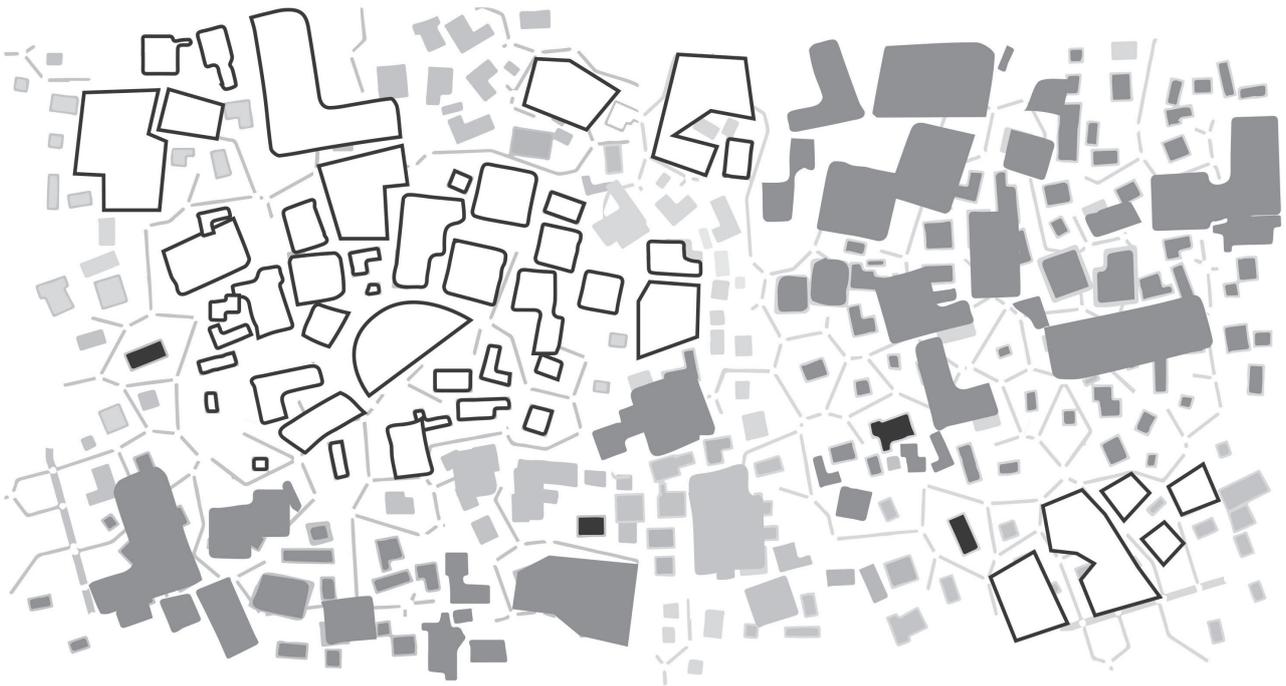
Iteration A. Baseline

Determine how much space would be needed using the conventional, formal standards. This is your baseline and will make it clear to residents how important formulating alternative standards will be for upgrading with minimal displacement and disruption. While the spreadsheet model gives a rough sense of this, residents will need to see it for themselves to understand concepts

and actively engage in formulating standards. Create physical, visual representations of different types of infrastructure and facilities (paper cut-out shapes) to place on a large, printed map. Use these during community planning meetings for each sector.

Variations of Iteration A could include:

- **Iteration A/1:** The conventional, formal standards with no adjustments.
- **Iteration A/2:** The conventional standards but with adjustments to save space. Principles for adjustments include: prioritizing essential functions and excluding non-essential ones; developing vertically to fit the same functions in smaller footprints; combining similar activities into one space; changing the shape of facilities to fit in undeveloped sites.



Iteration B. Community proposals and negotiation

Convene community planning meetings at the segment level (one to three areas/neighborhoods). The goal of the meetings is to present the concept of formal standards and the impact they would have on the settlement and then invite residents to discuss priorities and propose alternatives.

Proposed Agenda for a Community Meeting

1. Formal standards

Explain formal, conventional standards and demonstrate their implications for development in the settlement

Come with the completed analyses for Iteration A—Baseline as well as the map and cut-out shapes to physically demonstrate the impacts that development with formal standards would have in the settlement.

2. Envision

Discuss residents' ideal vision of the infrastructure/facility and list its components

Bring easel pads (or other large sheets of paper) and invite residents to draw their ideal vision for different types of infrastructure or facilities (e.g. an arterial road, a local access road, a health clinic, a primary school, etc). Together, identify what the components of each type of infrastructure/facility are and list them.

3. Prioritize

Discuss residents' priorities for the infrastructure/facility and rank components

Using the lists of components, lead residents in exercises to rank components from most to least important. The simplest way to rank components would be to ask residents to assign importance using a scale of ten, ten being most important and one being least important; then tally the points assigned by residents to each component to produce the ranking.

A more robust method would be to do pairwise ranking; it would invite greater debate and negotiation among residents as well as demonstrate clearer consensus or disagreement on the importance of different components. See the table below for an example.

4. Propose

Invite residents to propose adjustments to standards that minimize the space and resources required while improving public health, safety and accessibility

Using the ranked list of components as well as the community-defined principles (e.g. minimize displacement) and priorities (e.g. pedestrian mobility), discuss how standards could be adjusted to accommodate space and resource constraints. Use the following criteria to guide the discussion:

- Prioritize essential functions and exclude non-essential ones
 - Develop vertically to fit the same functions in smaller footprints
 - Combine similar activities into one space
 - Change the shape of facilities to fit in undeveloped sites
- + any other criteria that participants identify

5. Negotiate

Negotiate a final set of proposals as the outcome of the meeting

Table. Pairwise Ranking of Roadway Components

Components	Greenway	Footpath	Carriageway	Cycle lane	Score	Rank
	Greenway	-	0	0		
Footpath	1	-	0.5	1	3	1
Carriageway	1	0.5	-	1	2.5	2
Cycle lane	1	0	0	-	1	3
+ component						

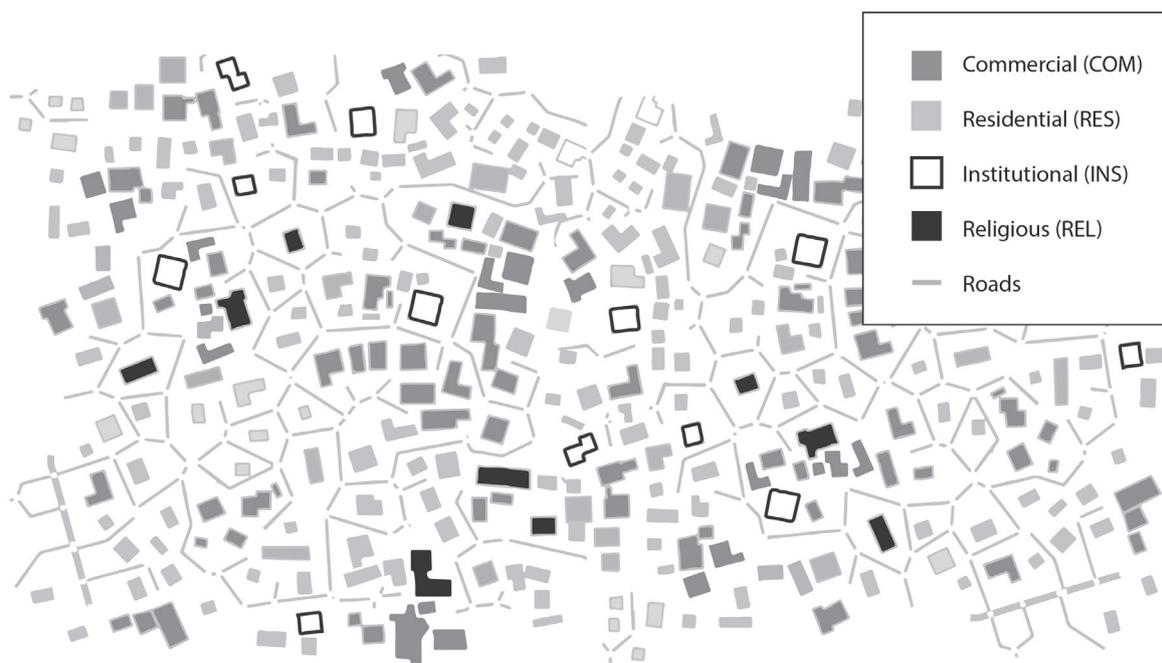
Pairwise ranking is a method for assessing the importance of competing priorities. For example, a road can include several different components like the carriageway, footpath, cycle lane and greenway (among others). Using the list of components generated during discussion, create one row per component and a mirror column for each row. This allows you to rank every component by comparing each to every other component one-by-one (instead of ranking them all at once). For example, if participants believe that a footpath is more important than a greenway, assign it one point. At the same time, assign its inverse (greenway vs footpath) zero points. In another example, if participants think two components are of equal importance (e.g. foot path vs carriage way), assign each 0.5 points. Once all components have been compared to each other, sum the values in each row to determine its score. Finally, assign a rank to each component based on its score – one to the highest score, two to the next highest score, etc. In the example table above, footpaths are the highest priority component while greenways are the lowest priority.

Iteration C. Reconciliation

For the final iteration, compile the final priorities and proposals from each of the community meetings in Iteration B and reconcile them. Reconciliation will come in two parts:

1. Each meeting will yield different alternative standards and therefore must be reconciled with each other to create one cohesive set.
2. Some of the community-defined standards will likely need to be refined based on:
 - a. Technical design and engineering considerations.
 - b. Minimum standards required to ensure basic functions and not compromise on health, safety or accessibility.

Once you have a reconciled set of standards, you must **validate** them with residents and **iterate to negotiate** as many times as it requires to achieve consensus (note that it is unlikely that there will be 100 percent consensus but it is important that most residents agree on the final set of standards).



To validate the proposed set of standards, convene another series of community meetings. Record residents' feedback and make any adjustments that are required. After adjustments have been made, present the updated set of standards to residents. Do this as many times as necessary.

Apply Standards

The final product of the process laid out in this Guide will be a set of alternative standards for each sector that is being planned as part of the upgrading initiative. Note that, at this point, these are *not sector nor spatial plans*. They are criteria to be applied when developing sector and spatial plans. Further negotiations will be necessary, in particular for spatial plans. At this stage, the spatial planning team and sectoral consortia will use the standards when planning the road network; water, sanitation and other infrastructure; and siting different service facilities. This may require more technical methods like mapping in GIS software. It will also require assessing environmental constraints (e.g. waterways, slope, soil, etc). It may even lead to the need to re-negotiate and update some standards or to assess their application on a case-by-case basis.

Considerations

How do we legitimize the revised, alternative standards?

This will depend on the laws that govern development and land use in your country. Work with local universities or research institutes that have expertise in these laws. In Mukuru (Nairobi, Kenya), they relied on a Special Planning Area (SPA) designation, a novel interpretation of a provision that previously had only been used for industrial development areas. Seek equally innovative legal strategies to enable the use of alternative standards in your city.

Can this be done on private land where landowners oppose the process?

Yes. While it will inevitably make it more challenging to achieve the use of alternative standards, rely on government's obligations to provide minimum levels of public health, safety, accessibility and public participation in planning.

Challenges

Government Adopting Alternative Standards

Government officials are beholden to their development guidelines. Persuading them to adopt alternatives can be challenging. To overcome this, rely on the numbers produced by the different scenarios. Show them how many people will be displaced using conventional standards (many or all) vs the revised standards (few).

Lack of Precedent

When there is little precedent, it can be difficult to come up with what the revised standards should be because there is nothing to compare them to. Work with universities to find useful precedents and to understand what is the minimum space that can be used while still producing functional infrastructure and services. Also, look to the Mukuru SPA (Nairobi, Kenya) for precedent.

Formulating Standards for Your Settlement Alone

Government may want you to develop standards so as to inform broader informal development policy. While you want your work to provide a precedent for these policies, getting them approved can take years when you have urgent health, safety and resilience issues to address today. To overcome this, work with receptive local government officials. Demonstrate the urgency and urge them to consider this work as a pilot that can serve to inform longer-term efforts to update development guidelines for informal settlements nationwide.

Areas of the Settlement That Are Reluctant to Participate

Do your best to show them the importance of their participation and its benefits. Ultimately, some will still refuse. That is ok. Focus your efforts on areas that are willing to participate and then hold those areas up as examples when re-engaging these areas at a later date.

Consulting the Right Stakeholders

All stakeholders must be engaged. However, be aware that when negotiating required space in the standards, tenants will likely be generous because they will not lose any assets. Even though they may be reluctant, make sure to engage structure owners who have more to lose so that standards are pragmatic and don't just serve tenants.

Reconciling the Proposals of Different Areas in the Settlement

Different areas will invariably have different ideas about what are the most important components of different infrastructure and services and how much space is required. Harmonizing their proposals will be tricky. Take all the input given and do your best to find a reasonable compromise that still results in viable infrastructure and services. Then, share this with residents, highlighting what they get in return for compromising.

Examples from the Field

Mukuru, Nairobi (Kenya)

Acknowledging the unique developmental and political challenges in Mukuru, planning partners adopted an unconventional planning framework. Enabled by the SPA declaration, it prioritized immediate needs and incremental, iterative improvements and adopted alternatives to conventional planning standards to minimize the displacement of Mukuru residents without sacrificing security, health or resilience considerations.

The Housing, Infrastructure and Commerce consortium, along with Indian partners SPARC and CEPT University, used iterative scenarios to model the space required according to different planning standards. Modeling done using conventional standards found that conforming to planning regulations used for public infrastructure in formal estates would displace all households in Mukuru. The alternative standards ultimately adopted instead optimized for the needs and proposals of residents while minimizing the fragmentation of community bonds by limiting the displacement required (about 12 percent of residents) to accommodate new infrastructure and services (e.g. a 12-meter-wide road instead of the conventional 48-meter road). In particular, the alternative standards prioritized non-motorized transport as few residents own vehicles.

Beyond minimizing displacement, the new standards upheld key objectives agreed on by residents: prioritizing public health, safety, dignity, and accessibility over individual interests or ownership and the mitigation of environmental risks and vulnerabilities. As a whole, these discourses among residents and local government and civil society partners formed a loose framework for navigating various competing priorities among stakeholders, balancing pragmatism and incrementalism with ambition and a groundbreaking scope for both participatory planning processes and subsequent investments in crucial infrastructure and services.

The SPA also explored alternative service delivery models and technologies. As a pragmatic compromise between the small, informal water vendors and piped water to every plot, “water ATMs”, also known as pre-paid dispensers (PPDs), were chosen as a pragmatic solution for clean water provision. Low-cost, easy to install and maintain simplified sewer systems (SSS) were chosen for last-mile sanitation infrastructure. Yet to be tested, a model that would rely on

informal energy providers as last-mile entrepreneurs with local expertise (instead of excluding them as predatory cartels and therefore adversaries) was also explored.

“ The plan aims to make sure that the standards are not just statutory-oriented in terms of meeting certain requirements of a formally planned area but to make sure that they are more performance-oriented in terms of their outputs with regards to say the road width, the housing and the commerce, the plan aims to make sure that these are integrated in the sense that it's not a single use zone, or one that is just going to have housing alone but in terms of transportation, that means your people are able to walk, not necessarily being able to drive, there are very few vehicles in Mukuru, but along with that transportation system then we have the housing and we have the businesses. So the idea is to make sure that these things are integrated in a way that makes it possible to perform and meet the needs of the residents themselves. So is more or less like a social and economic hub, that we aim to achieve in Mukuru, more than just a place where people live and also a place where they can also work. ”

Professor Arthur Munyua Mwaura Department of Urban and Regional Planning, University of Nairobi

Personal communication, 29 July 2022.

“ So you'll find that the physical planning handbook works with the population; let's say one school is supposed to serve 5000 people so we divide that with the total population of Mukuru and see how many schools we need at that level, so again we put stems and just by doing that even before we begun the consultation we realized that we even don't have the space, the schools are more than the total space we have so that would mean Mukuru is an educational hub but with no one to serve because that means you displace everyone. So that was what we were calling iteration one. Then we had iteration 1(b) which was playing around with the same stems but going vertical, now developing vertically, so again the space was still not sufficient, so that called for iteration two which is community consultation now. The community consultation was going to the communities and being very deliberate and asking what facilities do you need in this community; so the priorities were roads, schools, hospitals, social halls. Those were the priorities and recreation, now the next question was which road do you feel will be totally functional for you as a community, serve you very well but in the most minimum space that is available. So the community again was coming up with that and then we draw with the communities and then after that we created iteration 3 which is now standardizing all that because different communities have different spaces at village level. You'll find that the community that gave the highest road width was 18, but there are communities that gave the highest road width as 10, so that was the level one road. So we had to now standardize which was iteration 3 which again we did with the county and the Nairobi Metropolitan Services and the other consortium and then we took this back to the community and after they approved that they were satisfied with the rationalized, that is when now the implementation began. So that was the process of augmenting the standards. ”

Charity Mumbi Project Officer, SDI-Kenya

Personal communication, 29 July 2022.

“ The designation of Mukuru as a Special Planning Area removed it from the general planning for a city; it was supposed to be planned as a special area where there was review of the normal standards of implementation for the roads, water and those things, and [...] that’s how we have been able to now implement the simplified sewer system as opposed to the conventional systems. So, the main thing for the SPA was actually to remove it from the normal planning because of the peculiar challenges. ”

Kagiri Gicheru Manager of Informal Settlements Region, Nairobi City Water and Sewerage Company

Personal communication, 27-28 April 2022.

Related Components

Guides

- [Forming Interdisciplinary Consortia](#)

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