From Informality to Impact

The Untapped Potential of Scaling Urban Resilience Innovation in Informality

Policy and Investment Briefing Note

2024

GLOBAL RESILIENCE PARTNERSHIP

About the Global Resilience Partnership (GRP)

The Global Resilience Partnership (GRP) advances resilience through identifying and scaling on-the-ground innovation, generating and sharing knowledge, and shaping policy. Resilience underpins sustainable development in an increasingly unpredictable world. We envisage an inclusive world in harmony with nature, which is better prepared to cope with shocks, adapt to change, and transform – all within planetary boundaries. GRP is made up of 80+ Partners that have joined forces to work together towards this vision.

About Transitions Research

Transitions Research is a social science collective driving radical transitions at the intersection of technology, society, and sustainability. We aim to ensure these transitions are just and inclusive, and empower people while protecting the planet. Our work focuses on discovering sustainable pathways by generating anticipatory knowledge, co-creating solutions and building capacities for societal action. Our climate adaptation work enhances the resilience of socially vulnerable communities by co-creating and scaling innovative, on-the-ground solutions. We continuously learn from these efforts and share valuable insights and knowledge across the Global South, fostering broader impact and collaboration.

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Executive Summary

Currently only 1.2% of urban climate investments flow to climate change adaptation and resilience solutions. Increasing investment flows requires diversifying and strengthening the solution pipeline across different models – for-profit, not-for-profit, private-sector-led and private–public partnerships, as well as nurturing an enabling environment – policy, finance, measurement and evidence-building – for these solutions to scale.

To effectively tackle the climate crisis in cities, municipal and public sector finance alone cannot meet the current funding gap. However, there is little evidence and information available regarding the opportunities and challenges for the private sector and the not-for-profit sector to drive the design and implementation of urban resilience solutions, especially in informal contexts.

Vulnerability to climate risks is extremely skewed across urban populations, with informal workers, residents in informal settlements, migrants and displaced people, as well as young and elderly people, facing the triple challenge of higher exposure to climate change hazards, higher susceptibility to damages caused by climate change and a lesser financial ability to cope and recover from shocks.

This presents both a challenge and an opportunity for innovative solutions that build resilience to climate risks.

Purpose and Scope of This Report

This study reviewed ~130 urban resilience solutions implemented by for-profit and not-for-profit organisations in cities in the Global South, with a focus on informal contexts. The research included a comprehensive literature review, in-depth qualitative interviews with funders and implementers, and a large-scale survey. The report seeks to:

- **Review the current landscape of for-profit and not-for-profit urban resilience solutions**[1] being implemented in informal contexts (including but not limited to informal settlements, informal economies and labour) in the Global South.
- **Identify key opportunities and challenges** for scaling urban resilience solutions in informal contexts.
- **Provide recommendations for enabling policy and investment** approaches to help scale the for-profit and not-for-profit resilience solutions market.

Key Findings:

1. While the study has uncovered a wide depth and breadth of urban resilience solutions being implemented in informal contexts, findings indicate that **solutions across both for-profit and not-for-profit organisations are predominantly in the early stages of development and testing.** This suggests that despite a consensus around the case for action, the maturity of solutions implemented by non-government stakeholders remains in incipient phases.

2. **Philanthropic and research grants play a key role in supporting novel and early-stage solution development and testing.** Findings point to success stories of solutions maturing with the ownership and long-term uptake provided by municipalities, however such cases remain isolated. Better stakeholder and funder coordination, and hybrid financial instruments and business models are required to support solutions across their entire lifecycle.

3. **Investing in urban resilience solutions in informal contexts leads to broader outcomes that extend beyond climate resilience.** The study depicts how interventions contribute to sustainable development, improving health and wellbeing outcomes, gender equity, livelihoods and access to green jobs, as well as improved urban biodiversity, offering glimpses of the transformative potential of these solutions.

[1] By urban resilience solutions we mean products, services, processes, practices or structures that can enable people, households, communities, urban systems and market systems to reduce their vulnerability to climate change and help build resilience – the capacity to persist, adapt, and transform in the face of change.

Landscape of Urban Resilience Solutions in Informal Contexts

For-Profits Not-For-Profits Funders

CATEGORIES OF RESILIENCE SOLUTIONS

- Empowering Marginalised Communities
- Nature-based solutions
- Low-cost Infrastructure
- Making Finance and Markets Inclusive
- Information and Technology

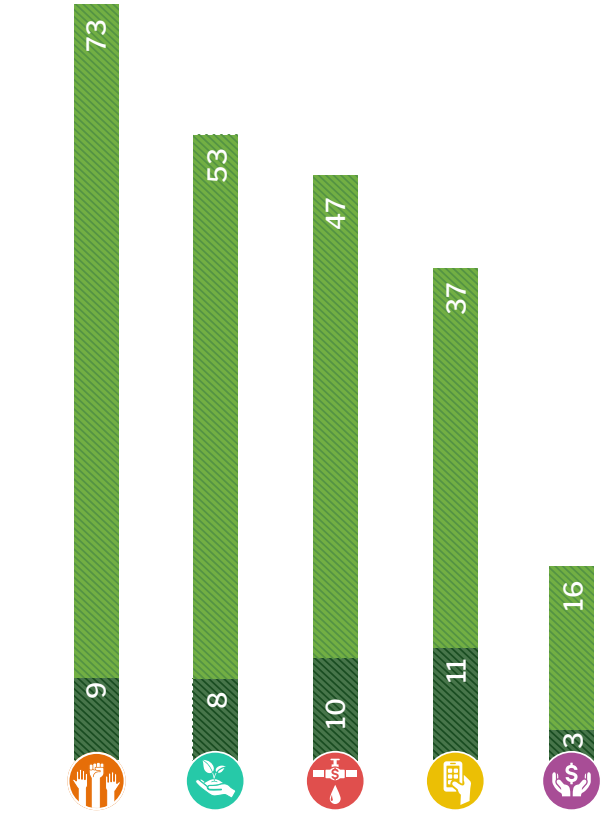
NUMBER OF URBAN RESILIENCE SOLUTIONS SCOPED

27 27 FOR-PROFIT ORGANISATIONS

104 NOT-FOR-PROFIT ORGANISATIONS

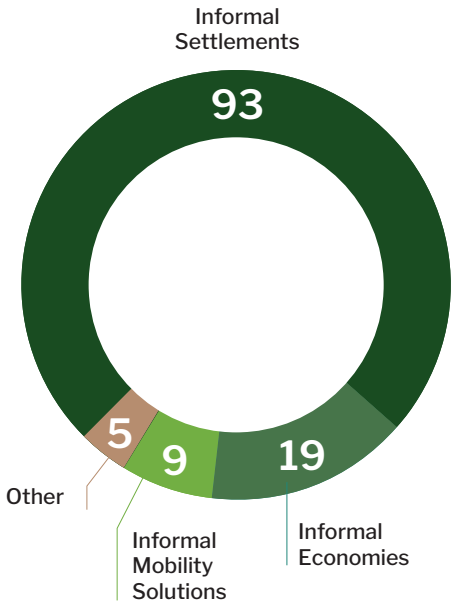
2 FUNDERS

ORGANISATIONS WORK ACROSS DIVERSE RESILIENCE SOLUTIONS

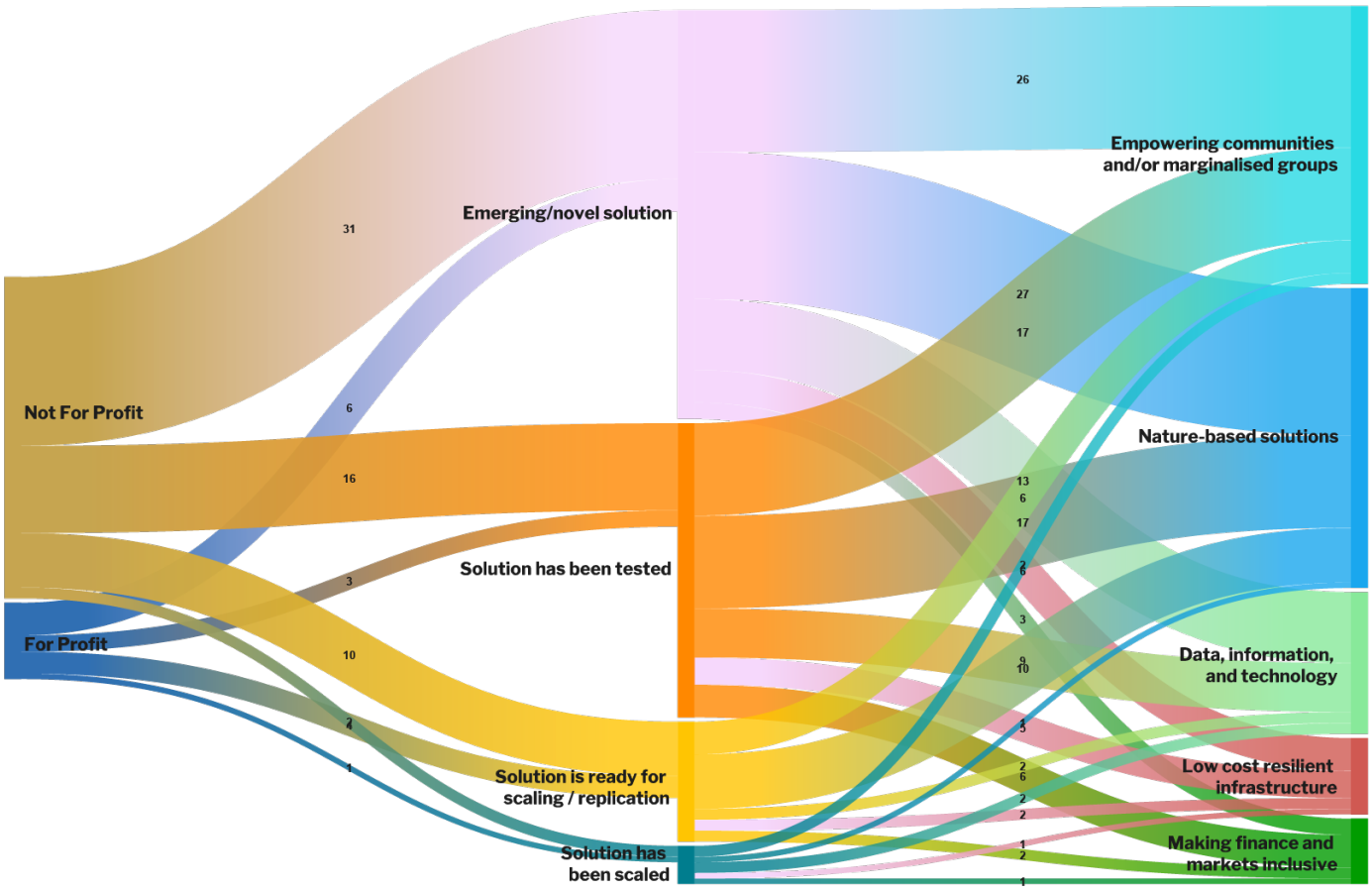


*Many organisations work in more than one category

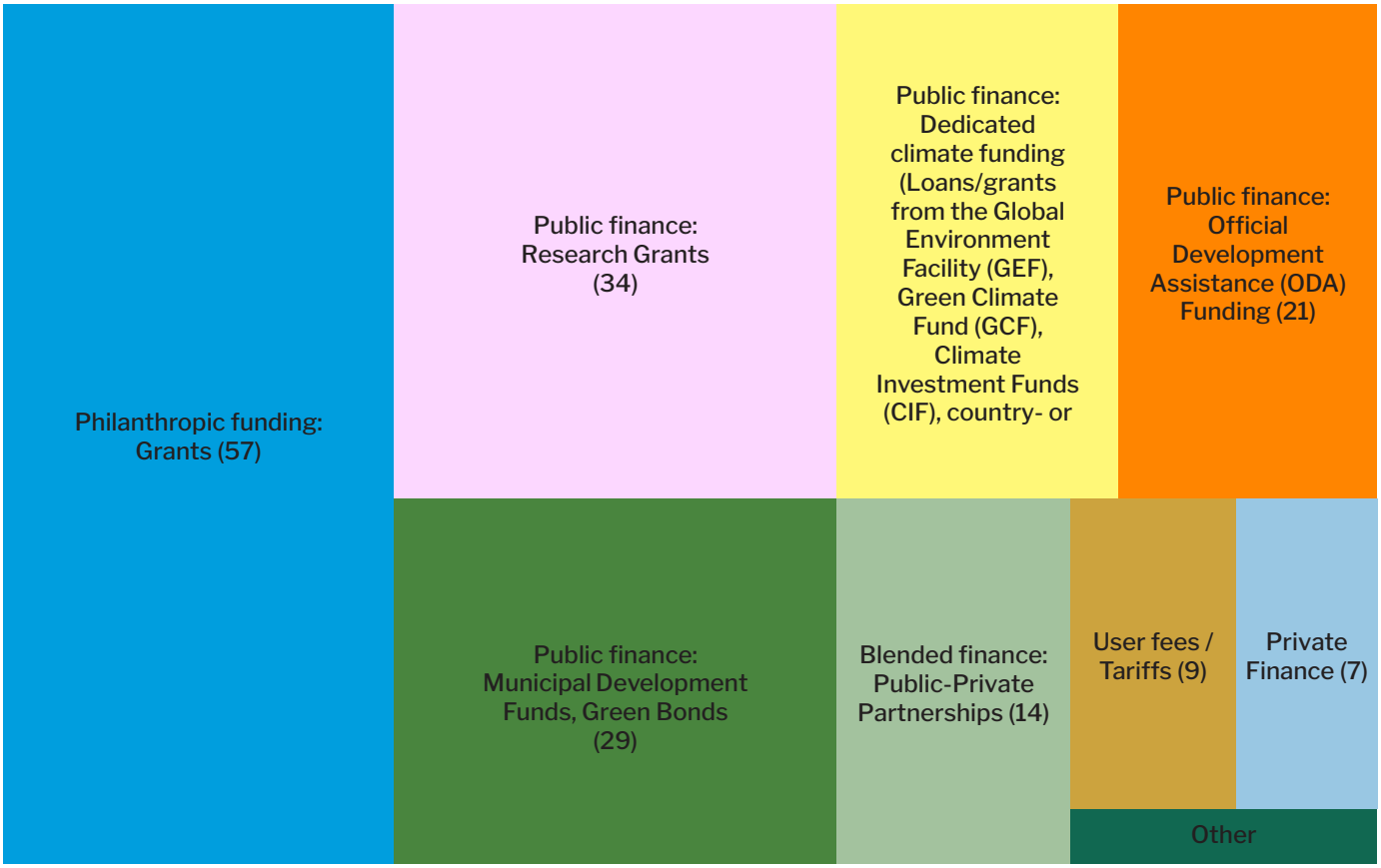
ORGANISATIONS WORK ACROSS TYPES OF INFORMALITY



FOR-PROFIT AND NOT-FOR-PROFIT SPLIT ACROSS MATURITY AND TYPES OF RESILIENCE SOLUTIONS



RESILIENCE SOLUTIONS FINANCING MODELS



Photograph by: EcoRich Solutions

The Current Landscape of Urban Resilience Solutions in Informal Contexts

Why Does Urban Resilience in Informal Contexts Matter?

Climate change and rapid urbanisation pose immediate challenges to the two billion workers in informal jobs (58% of the global workforce as of 2023) and the one billion people living in informal settlements (24.8% of the total urban population as of 2022) across the Global South. These communities face heightened risks from flooding, heatwaves and landslides due to a lack of essential infrastructure like drainage, waste management, and reliable access to water and energy. Socio-economic vulnerabilities – linked to precarious livelihoods, migrant status and social identities such as class, caste, race and gender – further amplify these risks.

Building urban resilience requires collaborative, cross-sector approaches that integrate diverse solutions while delivering climate justice to the most affected. However, governance, finance and capacity gaps exacerbate the problem, as informal settlements largely lie outside the ambit of formal municipal planning and regulatory frameworks. This limits access to public services and infrastructure development in these communities. Moreover, unclear land tenure creates obstacles for both residents and governments to invest in long-term solutions.

Rapid urbanisation, driven by rural-to-urban migration and population growth, presents cities with a dual challenge of providing adequate services and infrastructure while managing intensifying climate risks and rising greenhouse gas emissions. With much of the projected urban growth likely to be informal in nature, building climate resilience in informal settlements and economies is urgent, requiring scalable solutions, tailored to local contexts and challenges.

Recent analysis highlights the growing need and interest in innovative financing approaches to support urban resilience, particularly in cities in the Global South. Private sector stakeholders (such as banks, investors, and utility and infrastructure companies) have historically played a limited role in informal contexts due to perceived risks such as illegality, unclear governance and lack of short term returns.

However, to comprehensively address the rising risks that are concentrated in informal settlements, it is essential to mobilise private sector participation and novel business models. This shift is key to unlocking scalable solutions that can build urban resilience and ensure that informal contexts are not left behind in the climate adaptation agenda.

Methodology

The present study reviewed ~130 urban resilience solutions implemented by diverse actors in cities in the Global South, with a focus on informal contexts. The research explored solutions across five categories of intervention areas: [2]

- Nature-based Solutions;
- Empowering Marginalised Groups;
- Information and Technology;
- Making Finance and Markets more Inclusive; and
- Low-cost Infrastructure Solutions.

The review involved a comprehensive literature review, in-depth qualitative interviews with funders and implementers, and a large-scale survey (n=88).

Overview of Resilience Solutions in Informal Contexts

A diverse range of resilience solutions are being implemented in informal contexts in cities across the Global South. From the organisations included in this research, most for-profit and not-for-profit organisations address climate challenges in informal settlements (73% of organisations), while some focus on the informal economy (14.3%) and a select few focus on informal mobility solutions (6.3%). This section explores the types of solutions being implemented, funding models being deployed, key partnerships for implementation, and the maturity of these resilience innovations and the outcomes achieved.

Categories of Resilience Solutions: What Types of Resilience Solutions Are Being Implemented in Informal Contexts?

The analysis of for-profit and not-for-profit entities reveals key trends in the types of solutions they prioritise. Solutions related to Empowering Marginalised Communities emerged as the most commonly deployed, with 65.07% of organisations focusing on this category. In contrast, only 15.07% of organisations involved focus on Making Finance and Markets Inclusive. Nature-based solutions and Low-cost Infrastructure also see significant engagement, with 48.4% and 45.23% of organisations working in these areas respectively. Meanwhile, solutions falling under the Information and Technology category are pursued by 38.09% of organisations. This highlights the interconnected nature of urban resilience, as organisations work across multiple categories, acknowledging that holistic resilience-building requires a multidimensional approach.

EcoRich Solutions, a Nairobi-based start-up, provides organic waste collection centres in informal urban settlements, employing local women as collectors. The waste is then fed into the decomposer chambers to produce organic fertiliser and then packaged in 25 kg and 50 kg bags, which are then distributed to small-holder farmers through a network of village champions. The resulting fertiliser is 70% cheaper than traditional alternatives. This type of solution also highlights the ways in which rural–urban resilience linkages can be tangibly made through maximising the benefits of urban density (and the high volume of organic waste being produced) while addressing rural challenges.

[2] The five types of intervention areas are based on a framework developed by the Global Resilience Partnership (GRP) through an assessment of how past Innovation Challenges have supported resilience building. During 2014–2019, GRP worked with 22 projects and 21 grantee consortia in 16 countries across sub-Saharan Africa and South and Southeast Asia, supporting over 5.7 million people through resilience interventions. Read more here about the framework.

There are notable differences in the strategic priorities of for-profit and not-for-profit organisations. Not-for-profits show a particularly strong emphasis on empowering marginalised communities, with 72.2% of them involved in this area. This is nearly double the rate of for-profit organisations, where only 36% focus on this category. Not-for-profits also lead in implementing nature-based solutions, with 52.4% participation compared to 32% for for-profits. For-profit organisations, however, take the lead in the information and technology category, with 44% engagement, while not-for-profit organisations trail slightly at 36.6%.

"One of the reasons we decided to establish ourselves as a for-profit organisation is because we've seen too many nonprofit initiatives that had the potential to close the gap we're addressing – offering simple, affordable tech tools – end up disappearing. It is not about becoming millionaires – it is about creating a sustainable model that keeps the company running long-term. When you develop a tool and gain the trust of a city or community, it is a problem if your tool becomes unavailable after a year or two. It damages trust, and they are less likely to engage with you again in the future. We do not want to be that kind of initiative that fades away."

– Evandro Holz, *CEO and Co-Founder at CIUrb.*

In the categories of inclusive finance and low-cost infrastructure, the differences are less pronounced, with not-for-profits showing a marginal lead of 3.8% and 6.5%, respectively. These patterns suggest that for-profit and not-for-profit organisations prioritise different areas of intervention when it comes to resilience solutions in informal urban contexts.

Photograph by: BeCool

Financing Urban Resilience Solutions

Despite increasing flows of finance for climate adaptation, overall, cities account for only 3-5% of global adaptation funding; within urban climate finance, adaptation only accounts for 1.2% of all urban climate finance flows. The majority of this tracked urban climate finance is directed towards governments and municipalities. International finance is a key driver of municipal finance, contributing to 84% of urban adaptation funding. However, cities in the least developed countries struggle to access these funds due to limited capacity to meet global institutional frameworks. Most of the tracked urban adaptation finance goes to Emerging Market and Developing Countries, with little reaching the least developed countries.

Financing for Non-Governmental Actors

Building urban resilience requires collaboration across diverse stakeholders and sectors, yet there is little robust evidence of the funding being deployed by non-governmental actors (such as the private sector and the not-for-profit sector), especially in informal contexts. Financing climate adaptation and resilience is increasingly seen as an opportunity for businesses and private investors, with research indicating that every dollar a company invests in implementing adaptation and resilience measures can yield $2 to $15 in financial benefits.

However, in the context of informality, private sector stakeholders have historically played a limited role in informal contexts. Despite this, a growing interest in social impact investing and innovative instruments demonstrates the potential for engaging both for-profit and not-for-profit actors for urban resilience interventions. For example, community finance has emerged as a promising model for leveraging private investment. By mobilising the collective savings and organisational capacity of communities, it is possible to develop blended finance models that can unlock bankable projects even in informal contexts.

NON-PROFIT

Climate Risk Insurance for Low-Income Women in India – Mahila Housing Trust

MAHILA HOUSING SEWA TRUST
Dignified Home, Dignified Work, Dignified Life
MHT

Covers **26,000** families in 3 cities in Gujarat (Ahmedabad, Surat, Vadodara)

Payout given to **2,000** members to **combat extreme heat** in 2024

Partnership with **2 private insurance companies**

In Ahmedabad, India, the Mahila Housing Trust (MHT) introduced Climate Risk Insurance (CRI), a groundbreaking solution aimed at enhancing the resilience of women in the informal sector against extreme heat. Developed in partnership with Celsius Pro, a technical partner, Howden, an insurance broker, and Go Digit Insurance, a local insurance company, this index-based parametric insurance product provides financial aid to low-income urban women affected by excessive heat. The coverage helps offset losses in income, and rising expenses for cooling, water and electricity, while also serving as an awareness tool to monitor heat events.

Diversified Funding Models for Not-for-Profit and For-Profit Solutions

While both for-profit and nonprofit research respondents draw on multiple funding streams, the majority heavily rely on philanthropic sources. Our findings show that 60% of not-for-profits and 42% of for-profits depend on philanthropic funding, a much higher proportion than the 17% of urban adaptation projects financed by grants cited in the literature. This points to an evidence gap in terms of the sources of finance as the projects currently tracked are predominantly implemented by municipalities, rather than by the private sector (such as SMEs, start-ups, and social enterprises), or by civil society stakeholders (such as NGOs/INGOs, community-based organisations, academia, etc.).

Philanthropic funds are especially important for novel initiatives, allowing for trial and error. A prime example of how philanthropic funds enable innovative initiatives is Namibia Flying Labs, a not-for-profit organisation that specialises in remote-sensing solutions for data collection and monitoring. With support from philanthropic funding, they collaborated with the Otjiwarongo municipality to identify and amend statutory planning documents, ensuring that service provision addressed the needs of communities in areas lacking essential services, such as informal settlements.

Early-stage support and partnership brokering offered by philanthropic organisations can lead to significant levels of investment leveraged. For example, the Terwilliger Center for Innovation in Shelter invests in innovative entrepreneurs and small but growing businesses focused on improving housing conditions, to date disbursing US$3.02 million to 11 companies globally. Collaborating with over 100 financial institutions, their early-stage investments unlocked US$7.9 billion in affordable housing and catalysed US$64 million in new business for firms serving urban low-income families.

Our findings indicate that often philanthropic funding is accompanied by international public financing and municipal funding to scale solutions. Build Change's technical assistance platform, BCtap, provides governments and implementing bodies with access to appropriate technology and technical expertise for implementing resilient housing at scale. BCtap guides users through all phases of resilient housing programmes – from data collection and design to financing, construction, quality supervision and reporting. Developed and refined in over 26 countries, BCtap has played a crucial role in preventing disasters and in safely rebuilding after more than 40 earthquakes, windstorms, floods and fires.

Not-for-profits tend to rely more on public finance, with common sources including overseas development assistance (24%), dedicated climate funds (28%), and research grants (40%). In contrast, for-profits are more likely to tap into private finance – loans, equity and blended finance; however, rates are still quite low.

One example of how multiple funding sources come together is Energy 4 Impact, Mercy Corps' energy innovation platform, dedicated to improving access to clean energy and promoting climate-resilient development. As part of this, the Powering Renewable Energy Opportunities (PREO) programme supports local innovators in sub-Saharan Africa to manufacture electric motorcycles on-site, develop networks of solar-powered battery-swap stations and provides rental-based clean energy storage solutions, including lithium-ion batteries. Funded by the FCDO and the IKEA Foundation, this initiative successfully secured £24 million in public and private capital, illustrating the significant leveraging potential of official development assistance (ODA) and philanthropic funding.

Despite this increasing diversity, certain funding avenues such as equity, loans and user fees remain underutilised, pointing to potential barriers or gaps in accessing these resources. This mirrors broader findings in literature that highlight the untapped potential of private financing for urban resilience.

While diversified funding strategies can build the financial resilience of urban solutions, they pose the converse challenge of increasing barriers to access for small-scale actors (both not-for-profit and for-profit). Often funding calls are only advertised on a funder's website, application forms and guidance notes are predominantly published in English, with few examples of coordinated efforts to support emerging innovators to identify the right type of funding for their particular type of solution and maturity level.

Partnerships: Who Do Implementing Organisations Collaborate With to Build Urban Resilience?

Research findings point to a wide range of partnerships and collaborations unfolding in specific ways to implement urban resilience actions in informality, often driven by the types of funding available and the maturity stage of the solution. Emerging patterns indicate that often a for-profit or not-for-profit entity develops an idea and seeks proof-of-concept funding from philanthropic sources and/or overseas development assistance funding. Sidestepping the traditional technological route of innovation diffusion and scaling from academic research into market testing, solutions identified by our research appear to deploy research opportunistically – for example, through small-scale grants aimed at practitioners rather than through taking part in bigger research consortia. While this can be seen as proof of organisational agility and adaptability in the face of confusing and often challenging funding landscapes, questions arise regarding the role of research and evidence-building.

A key finding from the data reveals a substantial contrast in partnership rates between not-for-profit and for-profit organisations. Not-for-profits form approximately 6.6 times more partnerships than their for-profit counterparts, highlighting a stronger emphasis on collaborative efforts within the not-for-profit sector. While for-profit organisations engage in partnerships, they do so at a much lower rate, suggesting a more competitive approach as dominant.

NON-PROFIT

Community-Driven Early Warning Services for Informal Settlements in Kenya and Tanzania – DARAJA

RESURGENCE.

Nearly **1 million** users reached in Kenya and Tanzania

For every dollar invested, a **20-fold return on investment** through enhanced productivity and reduced climate-related losses

Nearly **doubled the number of residents** with access to weather information.

Home repairs increased by **300%,** moving possessions to safety by **166%** and cleaning drains by over **100%**

DARAJA, launched in Kenya and Tanzania in 2018, bridges the gap between national weather forecasters and underserved urban communities, particularly in informal settlements. By collaborating with residents, media, city authorities and disaster-risk experts, DARAJA simplifies weather forecasts using user-friendly terminology and icons, and disseminates them through access means, such as SMS, radio public notice boards, loudspeakers and schools, ensuring wide access. DARAJA's community-driven approach has significantly improved the understanding and use of weather information.

"We emphasise co-production as a core pillar of DARAJA's effectiveness. In our collaborative approach, we design the project strategy with all our partners, outlining how we want to deliver it. Our civil society organisation partners handle much of the on-the-ground work since they are closer to the communities. They organise workshops, secure community buy-in, and manage operational tasks. Meanwhile, the National Weather Agency focuses on the technical aspects, such as generating and refining forecasts. This core partnership effectively combines community engagement with technical expertise to implement the DARAJA initiative successfully."

– Sunayana Sen, *Director of Programs and Operations, Resurgence*

Among these partnerships, community groups and community-based organisations were the most common collaborators. Both for-profits (58.7%) and not-for-profits (54.8%) reported engaging with such partners in more than half of their collaborations. Not-for-profits exhibited a slightly stronger inclination toward these partnerships, further emphasising their community-driven approach. On the other hand, large private enterprises lagged behind, with only 13% involved in similar partnerships, indicating a lower rate of collaboration with smaller-scale civil society stakeholders.

"The needs of different communities – whether informal or formal – vary across geographies, so a product or service that resonates in one place might not in another. Occasionally, start-ups try to replicate the same solution in a new area without fully understanding the users, leading to significant investment before realising they need to pivot. The key is making sure they truly understand the new community before scaling, so they can tailor their approach from the start."
***– Tyler Ferdinand**, TECA Deputy Director, BFA Global*

When examining where community groups and community-based organisations are partnered with the most, there are commonalities. Unsurprisingly, solutions aiming at Empowering Marginalised Communities report the highest number of partnerships (overall 76%) with for-profits (53.8%) and not-for-profits (79.5%). Conversely, solutions aimed at Making Finance and Markets Inclusive report the least number of partnerships (overall 14%) with for-profits (7.7%) and not-for-profits (22.9%).

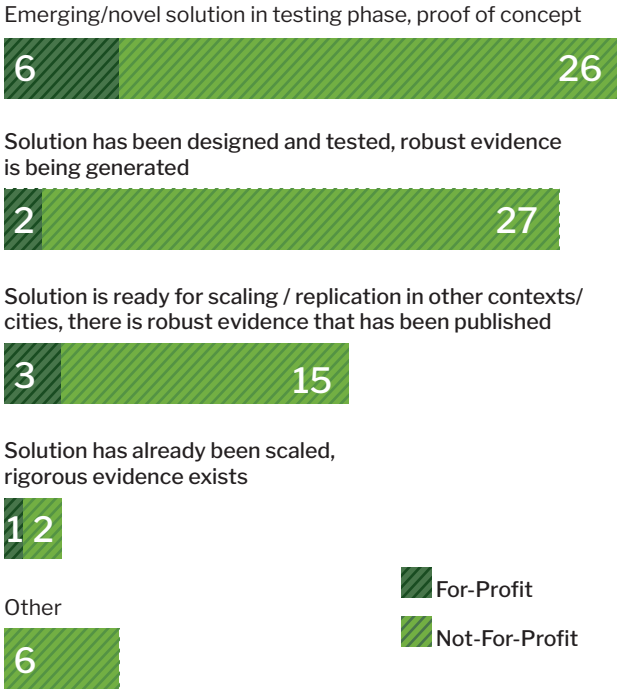
Maturity Level: Are Resilience Solutions Ready for Scaling?

To assess the maturity and progress of various solutions, our study examined their development through four key phases:

1. **Emerging/novel solution in testing/proof of concept phase, little/no robust evidence;**
2. **Solution has been designed and tested, robust evidence is being generated;**
3. **Solution is ready for scaling / replication in other contexts/cities, there is robust evidence that has been published; and**
4. **Solution has already been scaled, rigorous evidence exists.**

Our analysis indicates that solutions across both for-profit and not-for-profit organisations are predominantly in the early stages of development and testing, suggesting that despite a consensus around the need for action to build urban resilience in informality, the maturity of solutions implemented by non-government stakeholders remains in incipient phases.

MATURITY LEVEL OF SOLUTIONS



Source: Survey on Understanding Urban Resilience Solutions in Informal Contexts in the Global South

While a larger proportion of for-profit organisations categorise their solutions as emerging or in testing phase (50%), most not-for-profit organisations categorise their solutions as both in emerging or in testing phase (34%), as well as tested (35%). This denotes a potential difference in business and operational models – as for-profits often focus on a single product or service offering, while not-for-profits often operate across multiple projects and programmes (therefore more likely to have the capacity to develop multiple types of solutions). Examples include organisations such as Mahila Housing Trust, which implement both established solutions such as micro-lending for habitat improvement, as well as developing novel products such as the parametric insurance solution, which has just completed a pilot rollout in Gujarat, India.

Research findings indicate the importance of understanding which stakeholders (and which types of finance) are best placed to support different maturity levels. Practical Action's sustainable sanitation solution is one such example, where philanthropic funding was leveraged to develop and test a proof of concept into a robust case for investment. This initiative, supported by the Arghyam Foundation and the Bill and Melinda Gates Foundation, involved the establishment of new waste-processing

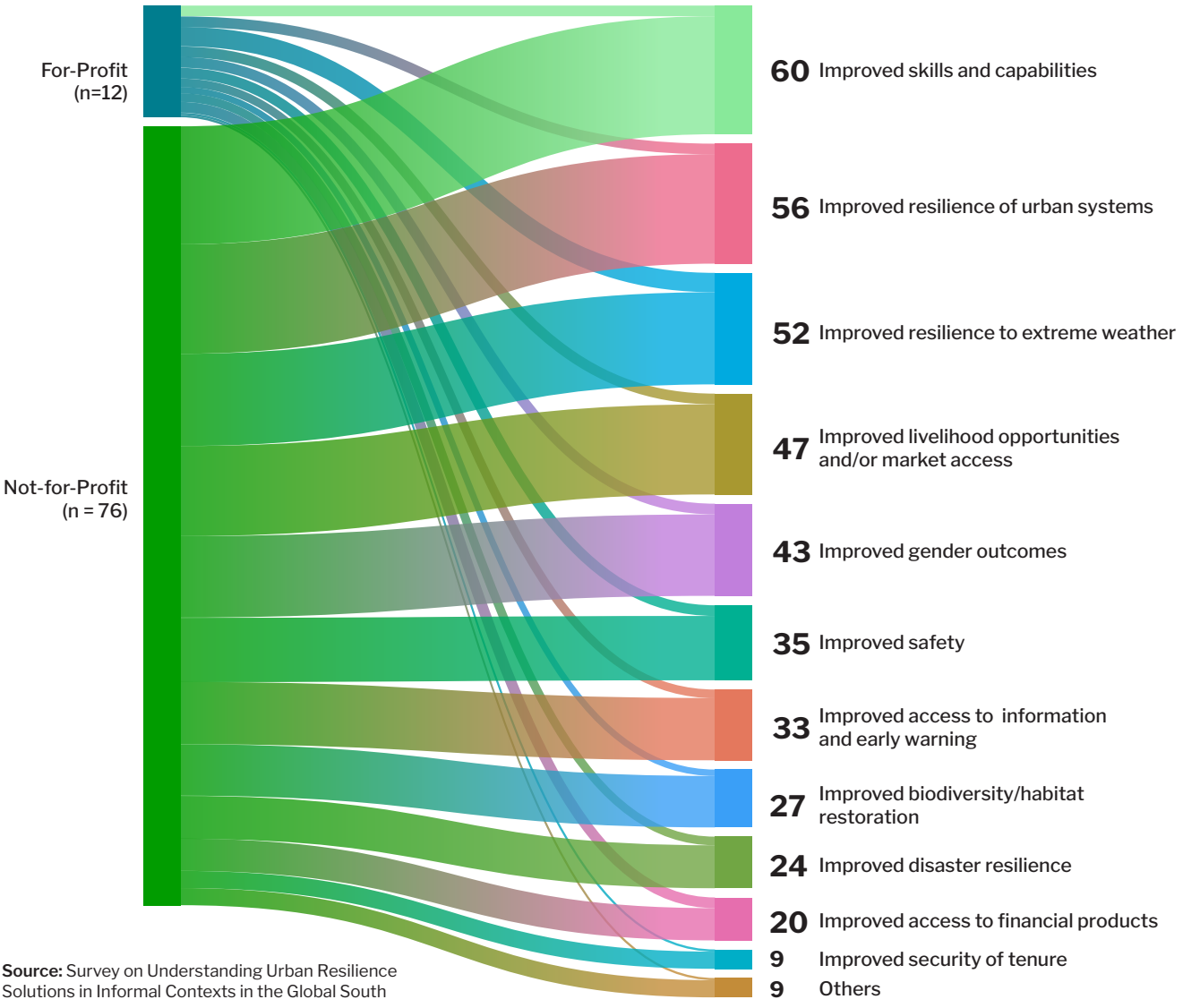
plants, improved working conditions for tank emptiers, and provided mobile services for residents to facilitate same-day tank emptying. The project was piloted in the cities of Angul and Dhenkanal in Odisha, India, and has since scaled, transitioning to local municipalities for long-term implementation.

It is also important to note that the maturity levels of solutions are not always uniform across geographies. For example, DARAJA scales its solution at three levels: within settlements (intra-city), across cities and across countries, demonstrating different levels of maturity in each context. This highlights the need for context-specific approaches to scaling, as solutions may progress at varying rates depending on local conditions and challenges.

Unlocking the Wider Benefits of Interventions in Informal Contexts

In informal urban settings, climate-induced shocks and stresses compound daily economic, health and social challenges faced by vulnerable communities. Resilience interventions not only help these communities cope with the increasing intensity and frequency of extreme weather events, but also unlock broader societal and economic benefits. These interventions contribute to sustainable development, improving capacity, gender equity, livelihoods and even urban biodiversity, offering a transformative potential that extends beyond climate resilience.

OUTCOMES OF URBAN RESILIENCE INTERVENTIONS BY DIFFERENT TYPES OF ORGANISATIONS.



Source: Survey on Understanding Urban Resilience Solutions in Informal Contexts in the Global South

The diversity of outcomes reported by organisations working in informal contexts underscores the far-reaching benefits of resilience-building efforts. While nearly 60% of organisations noted improvements in resilience to extreme weather, the most frequently reported outcome was the enhancement of human capacity, with almost 70% of organisations indicating improved skills and capabilities among local communities. This highlights the pivotal role resilience interventions play in empowering communities to manage not just climate risks, but broader challenges as well.

The Sajida Foundation works with households in informal settlements in cities in Bangladesh to provide tailored support to improve livelihood services, community building, education, and physical and mental health. While their work contributes to improved resilience to extreme weather, they are also able to improve physical safety, livelihood opportunities and resilience of urban systems.

Comparing Outcomes: For-Profits and Not-for-Profits

There are notable differences between the outcomes reported by for-profit and not-for-profit organisations. In terms of outcomes that directly improve resilience to climate risks, for-profits show significantly higher success in improving resilience to extreme weather (75% vs. 56.58% for not-for-profits). The gap is narrower for improving disaster resilience, with for-profits at 33.33% and non-profits at 26.32%. However, improved access to information and early warning systems is reported slightly more often by not-for-profits (38.16%) compared to for-profits (33.33%).

Both for-profit and not-for-profit organisations play a crucial role in improving economic outcomes. The most pronounced difference lies in improved access to financial products, where for-profits report greater success (41.67% vs. 19.74%). In contrast, not-for-profits outperform in improving livelihood opportunities (55.26% vs. 41.67% for for-profits). Regarding outcomes that improve the physical and built environment, not-for-profits are more successful in improving resilience of urban systems (67.11% vs. 41.67% for for-profits), while both types of organisations report similar levels of success in biodiversity and habitat restoration (31.58% for non-profits, 25% for for-profits).

Finally, there is a plethora of social and well-being outcomes reported. Not-for-profits demonstrate stronger results in improving skills and capabilities (72.37% vs. 41.67% for for-profits). Similarly, not-for-profits report higher success in improving gender outcomes (50% vs. 41.67% for for-profits), while both types of organisations report similar levels of success in improving safety (41.67% for for-profits, 39.47% for non-profits). For tenure security, both sectors show low success rates, with for-profits at 8.33% and non-profits at 10.53%.

FOR-PROFIT

Solar Cold Storage for Informal Vendors in Nigeria – Koolboks

KOOLBOKS
Life is Kool !

Sold to **4,000** SMEs to date in Nigeria

8 out of 10 customers' business improved

Reduced **2,512 metric tons** of food waste

Avoided **2,355 metric tons** of GHG emissions.

In the markets of Lagos, Nigeria, Koolboks solar-powered freezers help vendors overcome irregular and costly power supply, keeping products, such as fish, produce and drinks, fresh for longer. Koolboks engages with informal vendors through outreach (one-on-one sales, telemarketing, market activations, etc.), explaining the cost savings and benefits. Vendors are offered a low-risk trial with an innovative pay-as-you-go financing model, enabling them to test the technology and making sustainable cooling accessible to all. The solution's success lies in its affordability, user outreach and partnership with vendors, which has improved revenue and reduced waste.

Photograph by: Koolboks

Photograph by: DARAJA

Opportunities and Challenges for Scaling Urban Resilience Solutions

The responsibility for building resilience to climate change is often portrayed as a statutory duty that should predominantly lie with governments. However, cities in the Global South often lack the capacity for transformative climate action due to institutional fragmentation, budgetary constraints, and governance, accountability and transparency challenges. With a substantial and growing proportion of urban populations residing in informal settlements – where climate risks are concentrated – individuals, communities and civil society organisations are frequently left to address these challenges on their own. This section highlights key challenges and opportunities for scaling urban resilience in informal contexts.

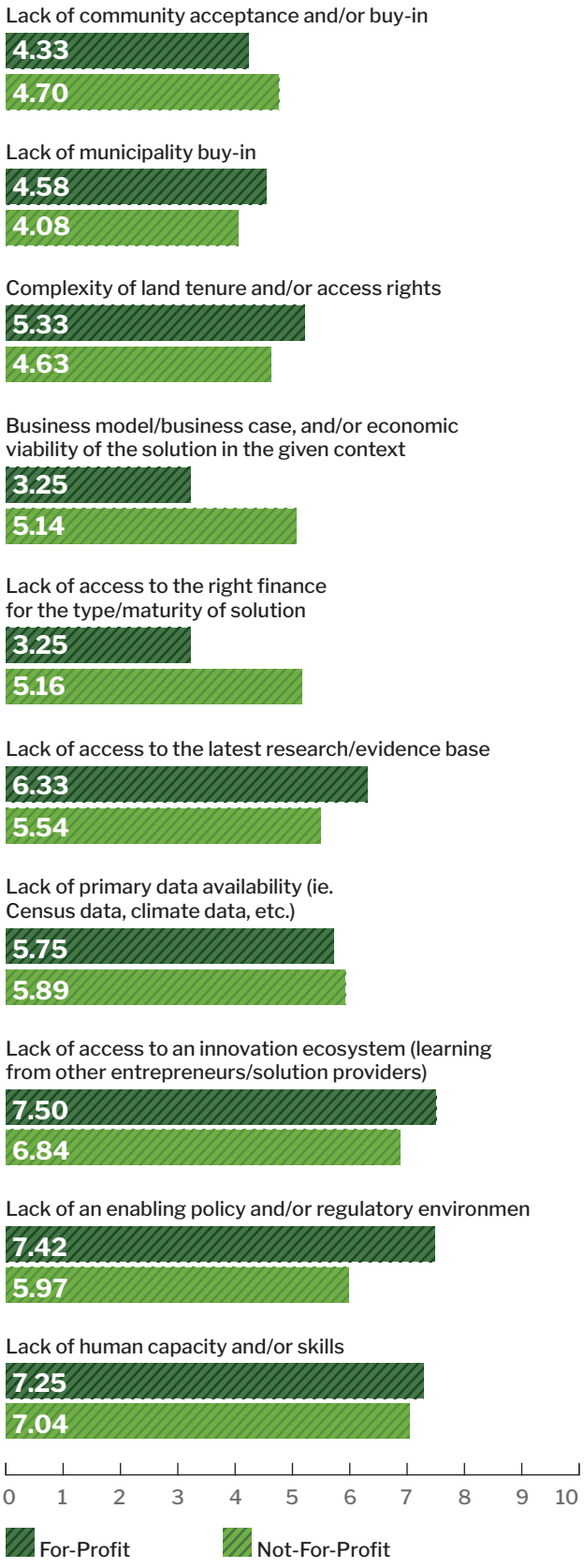
Challenges in Scaling Urban Resilience Solutions in Informal Contexts

Our study reveals a diverse range of challenges, spanning issues related to finance, human capacity and the governance/regulatory landscape. These obstacles impact the ability to scale and sustain resilience initiatives, highlighting the need for more coordinated efforts across sectors.

The most significant barrier identified is the lack of human capacity. For-profit organisations reported challenges related to the lack of an

CHALLENGES IN IMPLEMENTING RESILIENCE SOLUTIONS IN INFORMAL CONTEXTS: COMPARING FOR-PROFITS AND NOT-FOR-PROFITS

Organizations ranked each challenge on a scale from 1 to 10, with 1 representing the least significant challenge and 10 indicating the most significant challenge



Source: Survey on Understanding Urban Resilience Solutions in Informal Contexts in the Global South

innovation ecosystem, complex or unclear land tenure and risk-averse regulatory environments, while not-for-profit organisations emphasised the need for improved access to financing, sustainable business models and community buy-in. Additionally, both types of organisations expressed concerns about the scarcity of primary data, such as census and climate information, which is essential for the informed design and implementation of effective solutions.

Lack of Access to the Right Financial Instruments

Perhaps unsurprisingly, funding presents a major challenge to scaling implementation. Organisations primarily reliant on philanthropic and overseas development assistance funding struggle to align their work with funder priorities, which often favour traditional project design over more innovative approaches. Short-term funding cycles also hinder the long-term sustainability of solutions, as resilience-building requires long-term support to evidence change, foster behaviour change and collect evidence.

"Our projects (DARAJA) typically take about three years. This duration allows us to establish a solid foundation and test our pilot interventions over three seasonal cycles, ensuring they are effective solutions. It also provides enough time for individuals to change their behaviours in a sustainable way. The more evidence we gather, the stronger our case for further replication becomes. It is important for funders to recognise that building resilience is a longer-term process. These projects serve as building blocks for resilience rather than a quick fix."

***– Sunayana Sen**, Director of Programs and Operations, Resurgence*

Investors, too, often expect rapid growth from organisations implementing resilience solutions. For private, early-stage resilience start-ups, investors desire quick results, creating a mismatch between funding expectations and the slower outcomes typical of resilience projects.

Misaligned Funder–Community Agendas

Funder agendas are perceived to be misaligned with community needs, as they are often designed without local inputs. Funders may prioritise issues such as air quality, while communities are focused on more urgent concerns such as water and sanitation, resulting in projects that do not meet community needs.

The need for established organisational track records and fiscal, reporting and audit requirements often results in funding being awarded to a small number of well-established organisations, leaving smaller or newer grassroots and community-based organisations at a disadvantage.

"There are projects that are co-created by civil society and government, but many are heavily influenced by funder priorities. A funder might come in and ask civil society to collect data on air quality. However, the first step should always be to understand the community's needs. In many cases, air quality may not even be a top priority for them."

***– Joe Muturi**, President of the SDI Global Network*

Additionally, investors often overlook simple, low-fidelity yet highly effective solutions in favour of more hi-tech and attention-grabbing technologies such as AI or blockchain, which may not be the most effective for building resilience. Similarly, respondents indicate a greater focus on 'quick win' solutions often does not address complex, wicked problems such as land tenure and ownership.

"The main funding challenge we face is that today, if you're not talking about buzzwords like artificial intelligence, data mining, or blockchain, investors tend to ignore you. There's this expectation to make things more complicated than they need to be. If you present a solution that's simple and effective, the response is often, 'Sorry, not interested." Investors seem to care more about adding trendy terms to their portfolio than addressing real needs."

***– Evandro Holz**, CEO and Co-Founder, ClUrb*

Finally, urban resilience projects are also perceived to compete for funding with rural initiatives, as funders often view rural populations as more vulnerable to climate change. This bias limits funding for urban resilience, despite the high vulnerability of many urban communities.

Lack of Sustainable Revenue Models

In informal contexts, many resilience solutions focus on providing essential services. While crucial for building adaptive capacity, these solutions are not always scaleable. In the case of for-profit organisations, funders often hesitate to invest in such services, as they are not perceived to generate long-term impacts or revenue. Many resilience solutions, especially infrastructure-focused and nature-based ones, lack sustainable business models. Services such as water pumps often depend on continuous grant funding, as they serve low-income communities with limited purchasing power. Without sustainable models, projects can falter, such as when infrastructure is installed without plans for maintenance or expansion, limiting the project's reach and long-term effectiveness.

"Long-term sustainability and commercial viability of a solution is key to achieving developmental outcomes at scale. In the context of informal settlements, it is crucial to develop models that work for users whilst ensuring affordability and ease of access and use. For instance, finding business models for clean water delivery that don't pass on high costs to users is important. Water is a human right. That said, it must be recognised that clean water provisioning via tankers or water canisters is not cheap by any means and often very unreliable."

***– Akanksha Sharma**, Head of the ClimateTech and Digital Utilities programmes, GSMA*

This also tends to drive greater interest in commercial solutions aligned with decarbonisation, as business models in areas such as energy and waste are more established and easier to monetise.

Lack of Municipality Buy-In

Informal settlements are often deprioritised at different levels of government, despite being among the most rapidly urbanising. This places a significant burden on communities to implement resilience solutions independently, often without adequate resources. Political instability, corruption or conflict further challenge long-term resilience building efforts. Even where political will exists, limited knowledge to implement climate solutions in governments can often impede progress.

However, public engagement can motivate officials to act: in Jodhpur, India, Mahila Housing Trust was able to mobilise communities and facilitate a dialogue with the government to discuss the impacts of extreme heat in settlements and on livelihoods. The local government has worked with them to prepare and implement a city-wide heat action plan.

"The challenge with governments is that they often lack the knowledge to act. To address this, it is essential to partner with them, demonstrating not only how to implement solutions but also encouraging them to follow through. In Jodhpur, we held a joint workshop where women from the community called on the city to take heat action. They understood that addressing climate change must be done systemically, not through isolated efforts. The city agreed, and a heat action plan was developed, with the women collecting data to identify the most vulnerable areas, particularly poor neighbourhoods without access to water. As a result, the city began issuing early warning systems (red, orange, yellow alerts) for heatwaves. It is crucial to build a critical mass of citizens who can engage with the government to not only act but also understand how to implement solutions effectively."

***– Bijal Brahmbhatt**, Director, Mahila Housing Trust*

Lack of Enabling Regulatory Environment

Navigating urban governance is challenging, especially in informal settlements, where institutional fragmentation and power dynamics complicate partnerships. Funders' short project cycles (12–24 months) often clash with the lengthy processes of obtaining government approvals, hindering project implementation.

"One of the main challenges we face with our startups is navigating business–policy barriers. For example, in Mozambique and Ghana, it is incredibly difficult for startups to get off the ground due to excessive paperwork and an unclear registration process, especially for multi-national founder teams. In Tanzania, early-stage startups are required to hire a tax consultant, but most don't have the capital to do so. If they don't meet these requirements, they are slapped with excessive fines. These kinds of non-favorable business policies and regulations are significant hurdles, particularly across Sub-Saharan Africa. "

***– Tyler Ferdinand**, TECA Deputy Director, BFA Global*

"Beyond funding, another significant challenge is the sheer complexity of urban environments. It requires dealing with multiple, often disconnected, organisations – different government bodies, municipalities, private agencies, start-ups, and more. Navigating this bureaucratic maze can be overwhelming, especially if one is unfamiliar with the local landscape."

***– Akanksha Sharma**, Head of the ClimateTech and Digital Utilities programmes, GSMA*

Lack of Human Capacity

Implementing resilience solutions in informal contexts faces significant challenges due to the need for context- and user-informed tailoring, which results in the need for a high intensity of resources and human capacity. Scaling across different geographies demands local partnerships and adaptation of tools, which can be resource-heavy and time-consuming.

"One of the main barriers to scaling is that in every new country, you essentially need to set up a local operation. You can't just implement the tool globally all at once. You have to establish partnerships with local stakeholders and navigate country-specific bureaucracies. Some of these hurdles can only be overcome by working on a country-by-country basis. It's not as simple as saying, 'We have a tool, now let's operate everywhere." Each country requires a separate, tailored approach to ensure the tool functions effectively within its unique context."

***– Evandro Holz**, CEO and Co-Founder, ClUrb*

Funders also cite capacity gaps from a financing perspective. For-profit organisations often overlook local user needs, replicating ineffective solutions across regions and wasting investments on costly pilots. Meanwhile, both for-profit and not-for-profit organisations struggle to articulate their business models and pitches, making it difficult to secure funding.

"This complexity of urban environments underscores the importance of local entrepreneurship. Trying to transplant a solution from one context to another, without local insights and connections, rarely works."

***– Akanksha Sharma**, Head of the ClimateTech and Digital Utilities programmes, GSMA*

"Through our pre-seed VC fund and accelerator, the Catalyst Fund, we realised that there wasn't enough diversity in the types of sectors or solutions we were receiving through applications. This highlighted a gap in innovative solutions tackling a broad range of climate-related challenges. We also see that a large part of the investor community, including angels who are more willing to take on risk, are still refining their climate investment strategy and often don't fully understand where the potential of investing in different types of early-stage climate companies lies, especially outside of energy and water."

***– Tyler Ferdinand**, TECA Deputy Director at BFA Global*

Lack of Evidence Base

Informal settlements often lack primary data (such as census information), leading to solutions that are often based on assumptions rather than evidence. Furthermore, exclusion has created distrust between marginalised groups and local authorities, making co-creation processes essential for fostering trust and ensuring effective implementation.

"Most cities don't invest in building evidence. One of the key opportunities is to collect data, profile communities and truly understand their challenges. We rely too much on assumptions. For example, many dismiss the link between mental health and climate change. But the evidence we've gathered shows a clear connection. When floods destroy homes and businesses, or even take lives, what does that trigger? Often, it's mental health issues."

***– Joe Muturi**, President of the SDI Global Network*

NON-PROFIT

Know Your City: Community-Led Data for Inclusive Planning of Informal Settlements – SDI

Covers >7,000 communities in >200 cities

Active in **30 countries** across **3 continents**

Involves women and youth leaders

Slum/Shack Dwellers International collaborates with informal communities through its Know Your City project to collect and standardise data on living conditions in informal settlements. This enumeration communicates the scale of informality and deprivation, ensuring infrastructure planning includes these areas for investment. The data, gathered through surveys and focus group discussions, highlights issues like land ownership and basic service gaps. By emphasising community-ownership of data, SDI empowers women and youth to lead data collection and facilitate partnerships with local councils for essential services, such as sanitation and garbage collection. This process has enabled urban transformations related to dialogue with their cities, slum upgrading via service provision and land tenure recognition, and climate risk-mapping and adaptation. For instance, in Mathare Valley, one of Nairobi's largest informal settlements, settlement profiling supported by SDI Kenya identified waste management as a major challenge. This led to the development of a localised plan, involving voluntary door-to-door waste collection and advocacy for proper disposal, while river rehabilitation actions have enhanced health and hygiene, reducing waterborne diseases.

Opportunities for Implementing and Scaling Urban Resilience Solutions in Informal Contexts

Despite the many challenges that limit the scaling potential of urban resilience solutions, research findings point to key opportunities that can ensure impactful resilience outcomes in informal contexts.

Leveraging Local Knowledge and Community-Driven Approaches

Both for-profit and not-for-profit organisations' solutions can greatly benefit from the wealth of knowledge that exists within informal communities. These communities have developed deep-rooted systems of adaptation and resilience, which can provide insight for designing effective solutions.

By closely collaborating with local communities, organisations can ensure that their interventions are contextually relevant, sustainable and truly meet the needs of their users. Implementing organisations that engage with communities in the co-creation of resilience strategies highlight that this fosters ownership and ensures long-term sustainability of the solutions, whether through tailored products, services or grassroots initiatives.

"Informal settlements represent an untapped resource of local knowledge. Residents know their neighbourhoods intimately and are aware of the solutions to the challenges they face. This community knowledge is often overlooked by formal initiatives, but it holds immense potential for developing meaningful and effective solutions."

***– Evandro Holz**, CEO and Co-Founder, CIUrb*

Funders, too, recognise the strength of social capital in urban informal settlements, which fosters rapid information sharing and peer learning. This social network approach can accelerate the adoption of resilience solutions, especially for those leveraging new technologies.

"Cities offer the advantage of higher population density offering easy access to social networks. Scaling solutions therefore becomes easier in such settings than in rural areas. They often the benefit of more digital literacy, awareness of and access to financial services and availability of operations and maintenance services in close vicinity."

***– Akanksha Sharma**, Head of the ClimateTech and Digital Utilities programmes, GSMA*

Strategic Partnerships and Collaboration

Cross-sectoral partnerships present a key opportunity to pool resources and expertise at the right point in the maturity evolution of a solution, as well as in reducing the perceived risk of novel, early-stage solutions. Partnerships with local institutions are especially valuable, fostering community integration and aligning solutions with local needs.

Furthermore, funders perceive significant potential in partnerships that align with government programmes, as these collaborations can enhance scalability and ensure long-term sustainability of resilience initiatives in informal contexts.

"Working at the intersection of utilities and cities for over a decade, we have supported and seen examples showcasing the power of partnerships and collaboration between public and private sectors. We have set up 'The Digital Utilities Partnerships Hub' to provide resources for start-ups and the public sector to partner successfully."

***– Akanksha Sharma**, Head of the ClimateTech and Digital Utilities programmes, GSMA*

FOR-PROFIT

Cool Roofs for Heat Resilience in Indonesia – BeCool

Obtained **15 degree Celsius** decrease in surface temperatures, and **3 degree Celsius decrease** in interior temperatures, up to 84% solar reflection

Covered **17,000 square metres** of low-income housing, **11,000 square metres** of industrial buildings, **65,000 square metres** of public buildings

Expedites construction timelines by up to **26%** and reduces construction costs by up to **$3 per square metre**

BeCool enhances resilience against rising indoor temperatures by applying solar-reflective paint and installing cooling panels with high solar reflectance in low-income urban housing and factory buildings, where residents and workers are vulnerable to extreme heat. This initiative addresses the vulnerability of residents and workers to extreme heat. Through collaborations with academia, industry and government, BeCool has developed and scaled a simple, cost-effective solution that mitigates urban heat, reduces heat-related health risks and lowers energy costs, while also lowering construction costs and timelines.

While informal settlements are typically disconnected from large-scale finance, collaborations can align local resilience goals with broader funding opportunities. Additionally, facilitating knowledge transfer through peer exchanges and case studies can promote the adoption of best practices.

Context- and User-Informed Technology, Tools, and Digital Solutions

Technology offers a transformative opportunity to enhance urban resilience for informal communities, but it must be designed inclusively to ensure community adoption. Both for-profit and not-for-profit organisations can lead the development of digital tools that enhance real-time hazard monitoring, early warning systems and crisis communication. For-profit organisations have the unique opportunity to create scalable products that serve informal market needs, while not-for-profit organisations can focus on ensuring these tools are accessible to vulnerable populations. For example, digital platforms that allow communities to participate in data collection, risk assessment and decision-making can further deepen the impact and scale of these tools.

Skills Development for Economic Resilience

Building the capacity of local communities, leaders and strengthening associated governance structures ensures that resilience initiatives can be maintained and diffused over time. For example, training programmes on disaster preparedness, low-cost infrastructure maintenance, and housing retrofit can bolster resilience at the grassroots level, while providing opportunities for job creation.

"We conduct training on Community-Based Climate Change Adaptability (CBCCA). We involve local NGOs [and] faith actors, and develop community committees that already have community acceptance. This lets them conduct vulnerability and capacity assessments to create action plans."

***– Asher Shahzad**, Pakistan Partnership Initiative*

FOR-PROFIT

Technology-Enabled Disaster Preparedness and Response in South America and Africa – ClUrb's ACCTION App

Reached **10 cities** in 5 countries (South America, Africa) covering more than **6 million people**

Average time for deployment during a crisis event: **1 day**

Number of unique users: **>3,000** (at peak).

More than **5,000 meals distributed** during flood events in South Brazil in May 2024

The ACCTION app, developed by ClUrb, is a user-friendly web and mobile-based tool that enables cities and communities to collaboratively prepare for, respond to and recover from disasters. Tailored for ease of use, the app guides users through a step-by-step process to develop and implement localised action plans, such as coordinating flood relief efforts, quickly and with minimal external support. By leveraging local knowledge and combining it with established resilience frameworks, ACCTION simplifies disaster response, empowering communities to take the lead in crisis management and enhancing urban resilience. Unlike most disaster-management tools, which are designed for experts, ACCTION bridges the gap by grounding its approach in both technical rigour and community-driven insights

In informal contexts, work and living conditions are deeply intertwined, making it essential to address both for resilience-building. Climate solutions, such as solar energy and electric rickshaws, can enhance the working conditions of indoor workers and rickshaw drivers during extreme events. However, high technology costs pose a barrier; subsidising these solutions is essential in making them more accessible, improving profitability of informal vendors, reducing emissions and enhancing adaptive capacities. The informal economy is often affected by external factors such as extreme heat and flooding, which disrupt work. Solutions such as parametric insurance can provide crucial support for workers in the informal economy who would otherwise be forced to work during extreme weather events.

Access to Finance and Hybrid Funding Models

Diverse financing models such as microfinance, community savings or public–private partnerships can be better integrated to create investment channels for informal settlements. Collaborations between for-profit and not-for-profit sectors can lead to the development of hybrid financing models, where for-profit investments are de-risked by not-for-profit-backed grants. Donor and philanthropic funding can be used to strategically support pilot projects and build evidence to attract longer-term private or government funding.

"Initially, with governments, you need to demonstrate solutions without public investment, which serves two key purposes for cities in the Global South. First, it shows your seriousness and commitment, and second, it helps them understand what you're proposing, which they need to grasp at first. This demonstration phase is essential for leveraging much larger funding from governments that typically don't have dedicated budgets for climate adaptation. Donor support acts as a catalyst, enabling these partnerships to scale and unlock greater government investment."

– *Bijal Brahmbhatt*, *Director, Mahila Housing Trust*

Encouraging private sector investment in resilience projects, particularly in informal settlements, can significantly enhance infrastructure and services, but government support is essential in creating an enabling environment for climate-resilient investments.

To address the funding bias toward mitigation projects, integrating mitigation and adaptation solutions offers a strategic opportunity. By developing solutions that combine revenue-generating models – such as solar energy – with essential services such as water access or nature-based initiatives such as river basin rehabilitation, initiatives can achieve both commercial viability and enhanced resilience, making them more attractive to funders and impactful over the long term.

"The key solution is creating avenues to turn urban problems into bankable, scalable enterprise solutions. A good example is when we turn the waste dumping menace into renewable products, and make business sense out of it. The second most viable solution is the provision of access to affordable credit(grants or loans) to small and medium businesses(SMEs) who have scalable ideas on waste management. Waste management can best be handled from an enterprise perspective."

– *Harrison Mwaniki Mwololo*, *Founder and Chairperson- Chyulu Development Foundation*

Photograph by: PREO depicting e-mobility startups TRI and ECOBODAA

Recommendations

To enhance the scope and impact of for-profit and not-for-profit organisations building urban resilience in informal contexts, municipalities, funders, policymakers and city networks can help leverage key opportunities and address barriers. This section outlines priority intervention areas for these stakeholders.

What Municipalities Can Do:

Work with rather than against informality patterns: Recognise and integrate informal settlements in city master plans to ensure access to infrastructure and services. Streamlining administrative processes can reduce procedural delays, ensuring that these communities can access essential services and resources. Municipalities should adopt a proactive approach to in-situ upgrading, exploring models that provide legal recognition of land tenure, allowing residents to invest in long-term resilient infrastructure.

Facilitate an enabling environment: Municipalities can introduce building standards that promote resilient and affordable housing, tailored for informal areas and enforced through community involvement, and simplify the process for permits, making it easier for NGOs, private developers and community organisations to implement projects. Municipalities can also simplify regulations for small businesses and entrepreneurs to operate legally, thus fostering local economic resilience, and create centralised service hubs for residents to access permits, financial services and technical assistance for upgrading homes and businesses.

Institutionalise proven solutions and ensure long-term commitment: Work in partnership with for-profit and not-for-profit solution developers to monitor the types of early-stage solutions being developed and commit to the uptake of successful pilots through long-term maintenance and/or solution ownership. Municipality commitment to solution uptake can de-risk donor and funder investments in early-stage, novel solutions. As part of this, municipalities can offer subsidies, tax breaks or grants for resilience projects (e.g., climate-adaptive housing, flood mitigation), and partner with microfinance institutions and social impact investors to provide small-scale loans or grants tailored for informal communities.

What Philanthropic Funders and Donors Can Do:

Coordinate amongst the funding ecosystem to streamline access: Our research demonstrates the critical role of philanthropic and donor-led funding in supporting novel solutions. However, the early-stage funding landscape is overtly complex to navigate, especially for new entrants. Funders should collaborate to provide consolidated up-to-date information on relevant funding opportunities, eligibility criteria, deadlines, and reporting requirements. Additionally, creating tailored guidance for small-scale organisations, including step-by-step processes to access different financial instruments, and increasing the local-language availability of guidance could reduce barriers and make it easier for innovators to navigate complex funding landscapes.

Leverage reporting to tackle evidence gaps and build the case for investment: Contractual funding agreements often require monitoring, evaluation and learning processes to be put in place for the duration of the funding. However, there is little onward support and investment in curating and codifying grantee and investee reports into publicly accessible knowledge products, with insights and lessons learned rarely disseminated beyond the funding organisation. Funders can better leverage reporting and evaluation requirements to tackle evidence gaps and translate findings into actionable next steps for relevant onward investors (such as scaling partners, larger investors, banks, municipalities, etc.).

What City-Led Networks Can Do:

Leverage influence to elevate informal contexts as key for building urban resilience: City-led networks are uniquely positioned to champion the importance of building resilience in informal settlements. By using their influence and reach, city networks can steer this discourse to influence policy and bridge the gaps between the evidence and implementation of resilience solutions.

Facilitate evidence-building and knowledge brokering: By collaborating with the funder ecosystem, city networks can support evidence-building efforts to objectively assess and codify what works, what does not, and in what contexts. This can include developing standardised data collection frameworks, leveraging technology for data gathering, facilitating partnerships with academic institutions, creating open data platforms, and providing technical assistance on monitoring and evaluation for smaller and/or newer implementing organisations.

What Policymakers Can Do:

At the international level, create purposeful linkages between Loss and Damage, Locally-Led Adaptation, the Sharm-el Sheikh Adaptation Agenda, the Global Stocktake process and the implementation of the New Urban Agenda to consider the particular vulnerabilities of informal urban settlements and assess the latest evidence bodies to ensure cohesion and coordination among global policy agendas and approaches. Ensure that informal urban settlements benefit from the establishment of various funds such as the Loss and Damage Fund and the technical assistance provided through the Santiago Network.

At the national level, include informal settlements in national adaptation plans (NAPs), provide support for data collection and national vulnerability assessments, integrate an analysis of urbanisations drivers such as in-country human mobility and/or displacement/migration, and build national early warning systems.

Photograph by: Mahila Housing Trust

Conclusion

The future is urban, but so is the present.

As climate change continues to disproportionately affect vulnerable populations, upcoming climate negotiations at COP29 and COP30 offer pivotal opportunities to put urban informality at the centre of global climate discussions. Addressing the unique needs of informal contexts will be crucial for achieving climate justice and fostering inclusive adaptation.

This report seeks to address a key evidence gap concerning the role of for-profit and not-for-profit organisations in developing, implementing and scaling novel solutions to build urban resilience in informal contexts. Our findings depict the status of the current landscape and highlight the barriers and opportunities that for-profit and not-for-profit organisations face in this pursuit.

There is an urgent need for innovative financing approaches and instruments that can incentivise diverse sources of capital at scale. Mobilising the private sector, civil society and community-based organisations is increasingly recognised as a powerful way to leverage efforts and programmes for climate resilience, and to support innovators and entrepreneurs to scale the pipeline of solutions available. Achieving this requires a range of models and stakeholders to act collaboratively: public sector, not-for-profit and for-profit organisations, public–private partnerships, private-led initiatives. For these solutions to scale effectively, an enabling environment must be created through policy, evidence-building, and hybrid financial instruments and business models.

It is time to act decisively to ensure that informal settlements are not further left behind. The success of urban resilience solutions in these contexts will determine not only the future of our cities, but also the well-being of billions of people.

ANNEX – CONTRIBUTING ORGANISATIONS

We would like to extend our gratitude to the following organisations for contributing their insights and solutions:

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Atma Connect

BeCool

BFA Global

Borneo Urban Lab

breathing landscape || breathing dialogues

Build Change

Build Green Group

C40 Cities

Cardiff University, Welsh School of Architecture

CDRI

Center for People and Environment

Chyulu Development Foundation C.B.O

CIEBA

Cities Alliance

City of Cape Town

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ClUrb

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GREDD

Green Africa Youth Organization

GreenCape

GSMA

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RMIT

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SAJIDA Foundation

Save the Villagers Foundation

Slum Dwellers International

SELCO Foundation

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SERAC Bangladesh

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Urban Health Resource Centre

Urban Planning for Community Change (UPC)

Urban Think Tank Empower

Verdure Environmental Foundation

WCG DEA&DP

Weather Mtaani

World Resources Institute

GLOBAL RESILIENCE PARTNERSHIP

GRP is made up of 80+ organisations that have joined forces to advance climate resilience. We believe that resilience underpins sustainable development in an increasingly unpredictable world.

GRP is registered as a non-profit organisation in South Africa and co-hosted by the Stockholm Resilience Centre at Stockholm University.

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