



Resilient, Equitable Housing, Opportunities, and Urban Services (REHOUSE) Africa conference

August 13–14, 2024 | Movenpick Hotel, Nairobi, Kenya | Compiled by: Maeve Weston and Smriti Singh

Executive Summary

In August 2024, WRI Africa and the World Resources Institute (WRI) Ross Center for Sustainable Cities hosted the Resilient, Equitable Housing, Opportunities and Urban Services (REHOUSE) and Atlas of Urban Growth conference in Nairobi, Kenya. REHOUSE is a strategic partnership that aims to bring climate-resilient urban housing and services to the forefront of political, development, and climate agendas, accelerating large-scale climate action. The Atlas of Urban Growth Initiative aims to provide every city in Africa with spatial data and methods to improve planning and land development practices to accommodate anticipated urban population growth.

This regionally focused event brought together community members, donors, technical experts, researchers, and government officials and consisted of engaging discussions and hands-on exercises about the opportunities to build resilient cities and communities in the face of climate risks in Kenya, Ethiopia and Rwanda.

During the conference, participants discussed the compounding challenges that African cities are facing: rapid urban growth occurring amid serious resource constraints; high climate risks; and large segments of the population extremely vulnerable due to poverty, informality, lack of decent housing and basic services. Informality refers to residential areas where inhabitants have no security tenure, lack basic services and the housing may not comply with current planning and building regulations. Panelists discussed how to develop enabling policies and financing to strengthen climate adaptation for the urban poor through resilient housing and urban services, ways to integrate innovative practices and community-level data into existing processes and shared examples of innovative community-led practices and solutions. Finally, participants contributed to hands-on discussions on integrated, risk-informed planning to accommodate urban growth.

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These conference proceedings reflect the presentations and discussions of participants and do not necessarily represent the views of the World Resources Institute or other participating institutions.

Participants at the workshop made the following key recommendations:

- Enhance climate resilience in vulnerable urban informal settlements by prioritizing upgrading informal settlements with resilient housing solutions that incorporate essential infrastructure, such as water, sanitation, and electricity, while accounting for localized climate risks like flooding and extreme heat.
- Promote community participation in urban planning and policy processes, particularly by women and youth, to ensure that interventions address local needs effectively, and leverage community-led initiatives, such as participatory mapping and local adaptation plans, to inform larger-scale policy and financing strategies.
- Expand access to adaptation finance and innovative funding mechanisms, such as blended finance models, to channel resources toward upgrading informal settlements and scaling incremental housing improvements. Foster public-private partnerships to mobilize resources for large-scale housing and infrastructure projects, ensuring alignment with climate resilience goals.
- Bridge data gaps and connect community-level data with city-level data, ensuring that relevant data are accessible to communities and key stakeholders. This will enable informed decision-making and more effective urban planning processes.
- Build capacity and foster collaboration by enhancing the capacity of local and national governments to implement climate-resilient housing policies effectively, with an emphasis on cross-sectoral coordination and by collaborating with academic and technical institutions to integrate climate-resilience principles into national and local development frameworks.
- Use evidence-supported estimates to plan for future growth by providing land and basic infrastructure and services for new settlements in order to avoid formation of new and expanded informal settlements while also avoiding areas of high climate and environmental risk.

Introduction

Resilient, Equitable Housing, Opportunities, and Urban Services (REHOUSE) is a strategic partnership among the WRI Ross Center for Sustainable Cities, BRAC, Slum Dwellers International (SDI), Mahila Housing Trust, Habitat for Humanity International, and Build Change. This partnership aims to bring climate-resilient urban housing and services to the forefront of political, development, and climate agendas, accelerating large-scale climate action.

Globally, more than 1.2 billion urban dwellers lack reliable, safe, or affordable access to essential services like decent housing, running water, sanitation, electricity, and transportation. This urban services divide affects two out of three urban residents in low-income countries and with the urban population projected to increase by another 2.5 billion by 2050, the urban services divide is both a development challenge and a roadblock to climate action. Without access to adequate housing and urban services, people will suffer exacerbated impacts of extreme weather events that lead to more damage and lives lost. Housing is an entry point that has the most direct effect on people's lives and livelihoods, and yet housing and informal settlements are rarely discussed in international climate forums.

REHOUSE with its partners strategically leverages national, subnational, and local engagements to prioritize access to climate-resilient housing and basic urban services within informal and precarious settlements. The initiative's strategic principles include climate-resilient housing, inclusive governance and transparent data, and financing adaptation for the urban poor, with the intention to support equitable, climate-resilient housing to reduce climate-related vulnerabilities in cities, expand opportunities for urban poor communities, and improve quality of life for all.

Globally, REHOUSE plans to build a comprehensive data platform for evaluating urban climate risks and vulnerabilities, fostering peer learning, and coordinating efforts to channel climate adaptation and development finance to vulnerable communities. Nationally, REHOUSE influences climate and urbanization policies, funding programs, and urban infrastructure initiatives through strategic collaboration with national stakeholders. Locally, it supports citywide slum mapping and pilots innovative housing and service delivery models, scaling them up through engagement with community groups, city agencies, and donors, leveraging partner expertise and capacity.

BOX 1 | Atlas of Urban Growth

The Atlas of Urban Growth is a WRI Ross Center for Sustainable Cities initiative that aims to provide every city in Africa, and eventually the world, with spatial data and methods to improve planning and land development practices to accommodate anticipated urban population growth in ways that reduce the formation of new informal settlements, improve access to services, and avoid construction in areas at high risk from climate or other environmental hazards.

Source: WRI Authors.

The Africa Conference

In July and August 2024, REHOUSE hosted two country and regional conferences. On July 2, 2024, there was a REHOUSE India conference in New Delhi, India, and a separate conference proceeding summarizes the takeaways from that event. On August 13 and 14, 2024, WRI Africa and the WRI Ross Center for Sustainable Cities hosted the REHOUSE and Atlas of Urban Growth Conference in Nairobi, Kenya. This regionally focused event brought together community members, donors, technical experts, researchers, and government officials in addition to REHOUSE partners (See Appendix A). It consisted of engaging discussions and hands-on exercises about the opportunities to build resilient cities and communities in the face of climate risks in Kenya, Ethiopia and Rwanda.

There was a pre-conference visit and discussion with community members on August 12, co-hosted by SDI Kenya to Mathare, an informal settlement in Kenya that was affected by the flooding in Nairobi in April 2024.

The following two days of the conference focused on two agenda items:

- Improving housing conditions, access to urban services, and climate resilience for vulnerable communities living in existing urban informal settlements and other substandard, precarious housing located in places prone to climate risks within cities.
- Improving planning and land development to accommodate future urban population growth in ways that reduce the formation of new informal settlements, improve access to services, and avoid location of settlements in areas at high risk from climate or other environmental hazards.

The following topics were discussed:

1. Three compounding challenges that African cities are facing rapid urban growth occurring amid serious resource constraints; high climate risks; and large segments of the population extremely vulnerable due to poverty, informality, lack of decent housing and basic services.
2. The current policy landscape and collective needs assessment to develop enabling policies and financing to strengthen climate adaptation for the urban poor through resilient housing and urban services in Kenya, Ethiopia, and Rwanda.
3. Sharing of good practices and innovative community-led solutions.
4. Ways to integrate innovative practices and community-level data into existing processes.
5. Integrated, risk-informed planning to accommodate urban growth.

FIGURE 1 | Conference attendees



Source: Timeless Motions LTD

The conference was attended by 60 participants from different organizations including government agencies, civil societies, nongovernment organizations (NGOs), universities, and donors working on issues related to climate-resilient housing and urban services in informal settlements in Kenya, Ethiopia, and Rwanda (Figure 1).

Session summary

DAY 1: AUGUST 13, 2024	
Opening remarks	Speakers: ▪ Anjali Mahendra, director of global research, WRI Ross Center for Sustainable Cities ▪ Hellen Njoki Wanjohi-Opil, climate and engagement lead, WRI Africa ▪ Eric Mackres, senior manager, data and tools, WRI Ross Center for Sustainable Cities
Opening panel discussion	Moderator: Wanjira Mathai, WRI managing director, Africa and Global Partnerships Panelists: ▪ Joe Muturi, President of the global SDI network and chair of the SDI board ▪ Debra Roberts, Intergovernmental Panel on Climate Change (IPCC) co-chair and lead author, former municipal official in Durban, South Africa
Panel discussion on policy landscape in Kenya	Moderator: Melanie Robinson, global climate, economics, and finance program director, WRI Africa Panelists: ▪ Shipra Narang Suri, chief of UN-Habitat's Urban Practices Branch ▪ George Arwa, national project coordinator, for the Second Kenya Informal Settlements Improvement Project ▪ Nancy Njoki Wairimu, the National Federation leader from Mathare ▪ Marion Rono, consultant at Agence Française de Développement (AFD)
Panel discussion on policy landscape in Ethiopia and Rwanda	Moderator: Hellen Njoki Wanjohi-Opil, climate and engagement lead, WRI Africa Panelists: ▪ Tsegaye Moshe, housing development chief executive, Federal Democratic Republic of Ethiopia ▪ Bizualem Admasu Nesir, chief executive officer, land and cadaster, Ministry of Urban and Infrastructure ▪ Uwambajimana Isaie, community representative, Rwanda ▪ Yves Hategekimana, head of Earth observation, Rwanda Space Agency
Panel discussion on innovative community-led practices	Moderator: Aklilu Fikresilassie, director of cities for WRI Africa Panelists: ▪ Ariana Karamallis, global advocacy and development associate at Build Change ▪ Margaret Mengo, Regional director of program operations for Africa at Habitat for Humanity ▪ Alex Bekunda, country director for Rwanda at BRAC International ▪ Jane Weru, executive director and founder member of Akiba Mashinani Trust (AMT)
DAY 2: AUGUST 14, 2024	
Open remarks and reflections on Day 1	Debra Roberts, IPCC co-chair and lead author, former municipal official in Durban, South Africa
Data case study: Presentation on SDI's Know your City 2.0	Killion Nyambuga, program manager, city, settlement, and housing, SDI
Data case study: Presentation on Kigali's informal settlements	Marc Manyifika, country lead for urban water resilience, Rwanda, WRI Africa.
Presentation and workshop session on preparing for and accommodating urban growth	Patrick Lamson-Hall, New York University
Presentation and workshop session on risk and informed methods to identify lands for new housing and infrastructure	Eric Mackres, senior manager, data and tools, WRI Ross Center for Sustainable Cities

Session summaries

Day 1. August 13, 2024

The first day of the conference focused on enabling policy and finance to strengthen climate adaptation for the urban poor, and the role of knowledge sharing in tackling these challenges.

Introduction: Opening presentations on the challenges of urban climate risks, vulnerability associated with existing informality, and accommodating for future urban growth

The opening presentations highlighted three challenges facing cities in Africa:

- Challenge 1: Increasing urban climate risks due to growing climate hazards, high vulnerability, and low level of readiness (capacity, finance, planning)
- Challenge 2: High proportions of urban populations live in informal settlements in locations prone to climate risks
- Lack of adequate housing connected to basic urban services, for example, water, sanitation, electricity, and transportation to reach jobs, education, and health care and get out of harm's way
- Challenge 3: Accommodating rapid urban growth while accounting for climate risks (better spatial planning for climate resilient cities)

Anjali Mahendra, director of global research, WRI Ross Center for Sustainable Cities, framed challenges 1 and 2 and introduced the REHOUSE partnership (Figure 2). She presented that approximately 1.2 billion people live in informal settlements today, and 3 billion are expected to live in slums by 2050. In Kenya, 51 percent of urban residents live in slums; and in Nairobi, specifically, that figure is over 60 percent. By 2050, more than 200 million climate migrants are expected to move to urban areas to vulnerable informal settlements in search of jobs. Africa is one of the most affected areas by climate change, but it received only 20 percent of global adaptation finance flows, or US \$13 billion annually from 2021 to 2025. Africa's adaptation finance needs are estimated to be approximately \$579 billion by 2030.

The REHOUSE partnership aims to elevate climate-resilient housing and urban services in informal settlements on the global agenda. Anjali underscored that housing is a critical line of defense against climate impacts and highlighted how inadequate housing exacerbates heat, flooding, and water scarcity issues, particularly in informal settlements.

The REHOUSE partnership operates on three levels: global, national, and local. At the global level, it focuses on influencing adaptation finance and establishing a community of practice to share knowledge. Nationally, the goal is to integrate climate resilience into housing policies and national climate-adaptation plans. Locally, REHOUSE aims to gather community-level data on vulnerabilities and implement successful, scalable approaches to informal settlement upgrades. Anjali concluded by encouraging collaboration to drive meaningful change in cities like Nairobi.

Hellen Njoki Wanjohi-Opil, climate and engagement lead, WRI Africa, presented on WRI Africa's climate-resilience work in Kenya to show examples of how WRI and its partners are working to address challenges 1 and 2 (Figure 3). Kenya is urbanizing at a rate of 4.3 percent, and by 2050, 50 percent of Kenya's population is projected to be living in largely unplanned urban areas. This rapid urbanization, coupled with a high percentage of people living in informal settlements (more than 60 percent in cities like Nairobi), highlights the urgency of addressing climate risks like flooding and urban heat.

Informal settlements are hotspots for climate risks due to their housing structures, predominantly made of iron sheets, which make them particularly susceptible to extreme temperatures and flooding. For example, Kenya faced devastating flooding in April 2024 that affected informal settlement communities. Around 40,000 households were affected when homes near Nairobi's rivers were demolished and schools, water, and sanitation infrastructure were compromised. Yet, the government's affordable housing programs are not affordable for the residents of Nairobi's informal settlements.

FIGURE 2 | Anjali Mahendra during opening presentations



Source: Timeless Motion LTD.

FIGURE 3 | Hellen Njoki Wanjohi-Opil during opening presentations



Source: Timeless Motion LTD.

Hellen stressed the importance of involving local communities in decision-making, pointing out that these communities often have solutions to their challenges. She highlighted WRI's work on data collection and policy-making, particularly around climate resilience, air quality, and urban mobility and emphasized the need for collaboration among local communities, governments, and international organizations. Finally, Hellen concluded by emphasizing the importance of securing financing to translate plans into action and highlighted ongoing efforts to develop solutions in collaboration with communities.

Eric Mackres, senior manager, data and tools, WRI Ross Center for Sustainable Cities, discussed urban growth in the context of climate risk and informality, particularly in rapidly urbanizing regions like Africa (Figure 4). He noted that almost all future global population growth will occur in urban areas, primarily in less developed countries. African cities, for example, have seen significant growth in both population and land consumption. From 1990 to 2020, the population in African cities grew by 2.8 times, while the land area increased by 4.1 times, often in informal and unplanned ways. This has led to challenges like poor service provision and increased exposure to climate risks.

Eric emphasized the need for planned urban expansion to improve access to services, protect natural assets, and mitigate environmental hazards. He highlighted the importance of developing strategies to accommodate urban growth more sustainably, thereby ensuring better access to jobs, transportation, utilities, and open spaces, especially in informal settlements.

The Atlas of Urban Growth project aims to combine global data with local knowledge to help urban

planners make informed decisions about where and how to promote growth while addressing climate change. The atlas includes data on climate risks, urban population growth, density, and projections for cities in Africa, such as Nairobi, Kigali, and Addis Ababa. New York University, through UrbanShift, has a complementary course called Accommodating Urban Growth, which uses the atlas data to enable stakeholders in cities to prepare densification and expansion plans.

Key takeaways

- Cities in Africa are facing increasing climate hazards, and struggle with limited capacity, finance, and planning to mitigate these risks.
- A large portion of the urban population in African cities lives in informal settlements that are highly vulnerable to climate risks like flooding and heat. These areas lack access to essential services such as water, sanitation, and electricity.

- As African cities rapidly expand, they face the challenge of accommodating this growth while addressing climate risks. Cities need to plan for urban expansion to improve access to services, protect natural assets, and mitigate environmental hazards.
- Africa receives only 20 percent of global adaptation finance, although it needs around \$579 billion by 2030 to meet its adaptation needs.
- The REHOUSE partnership aims to elevate climate-resilient housing and urban services in informal settlements on the global agenda.

Opening panel discussion

The opening discussion began with opening remarks from Wanjira Mathai, managing director, Africa and global partnerships, at WRI, (Figure 5) and was followed by a discussion with Joe Muturi, president of the global SDI Network and chair of the SDI board (Figure 6), and Debra Roberts, IPCC co-chair and lead author, former municipal official in Durban, South Africa.

Wanjira Mathai, managing director, Africa and global partnerships at WRI, highlighted the growing issue of climate change-induced floods and their devastating effects on local communities and shared personal insights, emphasizing the critical role of frontliners in disaster response. Wanjira pointed out that what was once a distant concern in regions has now become a global challenge with floods affecting cities worldwide.

Wanjira recounted a visit to Mathare, where she met Humphrey from Ghetto Farmers. The local community had been severely affected by flooding and the reality on the ground was stark. During her visit, Humphrey expressed that, while they had some knowledge of what needed to be done, basic necessities like gumboots, nightlights, and food were still lacking. These resources were essential during their rescue efforts, which saved 50 people from the floodwaters. This experience highlighted the stark difference between data-driven knowledge and the practical needs of those directly affected.

Wanjira underscored the importance of building ecosystems of support for these frontliners, stating that their work will determine the success of larger climate-resilience efforts like REHOUSE. Many humanitarian organizations were unable to reach the flood-stricken areas due to washed-out roads and mudslides. In contrast, local heroes like Humphrey and his team continued their work, embodying the true essence of community resilience.

Debra Roberts, IPCC co-chair and lead author, former municipal official in Durban, South Africa, highlighted the complex connections among poverty, unemployment, and vulnerability to climate change. She pointed out that while the poor and marginalized are often the most affected, climate disasters like the Durban floods in 2022 show that even the wealthier segments of society are not immune. Debra stressed the need for a more holistic understanding of vulnerability, which encompasses all socioeconomic levels, and emphasized the gaps in current climate data, such as the lack of adequate monitoring, adaptation strategies for vulnerable communities, and harmonized data for comparison. She also underscored the challenge of translating global climate data into meaningful local action.

Debra noted that scientific data, no matter how comprehensive, often fail to influence decision-making when they do not account for political realities. Drawing from her own experience as a local government official, she stressed the importance of integrating local knowledge, which is often shared through oral traditions in Africa, into formal climate reports. Global forums like the IPCC are beginning to include more practitioners, allowing more diverse perspectives on informality and urban resilience to be included in reports and policy discussions.

FIGURE 4 | Eric Mackres during opening presentations



Source: Timeless Motion LTD.

FIGURE 5 | Wanjira Mathai giving opening remarks



Source: Timeless Motion LTD.

Debra also touched on the broader issue of finance, noting the structural barriers to funding local climate action. She called for a complete overhaul of the global financial system, which currently fails to meet the needs of vulnerable communities. She suggested that more intermediaries are needed to bridge the gap between local needs and global financial mechanisms. She concluded by stressing the importance of involving communities in climate-adaptation efforts and ensuring that scientific data are accessible and relevant to local leaders.

Joe Muturi, president of global SDI network and chair of the SDI board, highlighted the disconnect between government-led responses to disasters and the needs of local communities. Using examples from Nairobi's informal settlements, Joe commented on the government's tendency to bulldoze homes without consulting the people who live there. He pointed out that communities often have their own solutions but lack the resources to implement them.

He also emphasized the importance of civil society organizations working together and with governments to create comprehensive plans for housing, waste management, and water services. Joe argued that many of the plans that could mitigate disaster impacts already exist but are not being acted upon.

Joe also discussed the inequities in housing, noting that while the government talks about affordable housing, many poor people are unable to afford these homes. He pointed out the irony of calling something affordable when it is still out of reach for the vast majority of those affected by climate disasters. He called for a new approach to engaging with the government, emphasizing the need for better communication and collaboration among government agencies, civil society, and local communities.

Joe emphasized the need for more localized discussions on climate adaptation and affordable housing. He noted that while high-level discussions about climate change and resilience often happen in global forums, they are disconnected from the realities on the ground. He called for a simplification of these discussions to focus on basic needs like housing, water, and sanitation, which are critical for building climate resilience in informal settlements. He also highlighted the need for civil society to push for government action, particularly as future climate disasters are inevitable.

Key takeaways

- Local frontliners, like community organizations, often fill gaps left by governments and humanitarian organizations during climate crises.
- Governments often fail to involve local communities in disaster planning and then end up doing things, such as evicting people and bulldozing homes in informal settlements, without consultation. There is a need for more collaboration between governments and civil society.
- The global financial system currently fails to meet the needs of vulnerable communities. Systemic change is needed to ensure that local climate adaptation efforts are adequately funded.
- It is vital to integrate local knowledge and solutions into formal climate-adaptation strategies so as to ensure that scientific data translate into actionable plans on the ground.
- There is an urgent need for more realistic housing solutions that cater to the most vulnerable populations as some government affordable housing remains not affordable to the poor.

FIGURE 6 | Opening panel discussion

Source: Timeless Motion LTD.

Panel discussion on policy landscape in Kenya

The panel included government officials, technical experts, and community members who discussed the critical role of national and state governments in Kenya in developing enabling policies and financing to strengthen climate adaptation for the urban poor through resilient housing and urban services (Figure 7).

The discussion prioritized the need for resilient housing and urban services, integration of community voices in policy development, and the unique challenges faced by informal settlements. Additionally, the session identified effective strategies for resource mobilization and the creation of enabling policies to enhance climate resilience for vulnerable populations.

Shipra Narang Suri, chief of UN-Habitat's Urban Practices Branch, emphasized the urgent need for systemic change to address slum transformation amid escalating climate risks. She highlighted critical bottlenecks hindering progress and advocated for multi-level governance and collaboration among various actors.

With over 1.1 billion people living in informal settlements and an equivalent number in inadequate housing, along with 350 million homeless individuals and 2.2 billion lacking access to water and sanitation, Shipra noted that the Sustainable Development Goals are off track. She called for national governments to dismantle barriers that impede progress and create an enabling environment for policies that support the goals.

Shipra criticized the fragmented nature of financing into different pools of development funds, adaptation funds, loss and damage funds that do not have any meaning for vulnerable communities in dire need of funds. She urged a comprehensive overhaul of financial mechanisms to ensure that resources flow effectively to local levels. She concluded by stressing the importance of localized discussions on climate adaptation and affordable housing, while underscoring civil society's vital role in advocating for appropriate government action to address inevitable future climate challenges.

FIGURE 7 | Panel discussion on the policy landscape in Kenya



Source: Timeless Motion LTD.

George Arua, the national coordinator for the government-run Kenya Informal Settlement Improvement Project (KISIP), discussed the key challenges and opportunities in implementing climate-resilient housing and urban services in Kenya. He highlighted the project's comprehensive approach, which focuses on tenure regularization, infrastructure improvement, socioeconomic inclusion, and institutional capacity building.

George emphasized that ownership of property is crucial for fostering resilience in informal settlements, as residents are more likely to invest in their homes when they have secure titles. The project aims to enhance infrastructure that is resilient to climate impacts, improve living conditions, and ensure that community plans optimize open and green spaces.

He pointed out that a citywide approach to climate change is essential, as the challenges extend beyond individual settlements. To address this, KISIP has implemented training programs to sensitize residents about climate change, early warning signs, and mitigation measures. Additionally, national and county strategies are being developed to mainstream slum upgrading and integrate climate resilience into urban planning. Further, George acknowledged the potential risks of gentrification following property ownership but stressed the project's commitment to enhancing socioeconomic well-being and preventing exclusivity.

Nancy Njoki, a community leader with Muungano wa Wanavijiji, shared insights on the key risks and priorities faced by urban poor communities regarding climate resilience and housing. She highlighted significant challenges, such as severe flooding due to inadequate drainage systems, which often leads to house destruction and electrocution hazards in informal settlements. Nancy also pointed out that the pollution from overflowing sewer systems and the lack of proper waste disposal contribute to health risks and respiratory diseases among residents.

She emphasized the harsh living conditions in informal settlements, where residents experience extreme temperatures and limited access to safe water. Despite these challenges, Nancy noted the community's resilience and initiative in addressing their issues by advocating for a bottom-up approach to planning and policy development.

Nancy stressed the importance of recognizing the capabilities and knowledge within the community, urging that their voices be central to discussions about development. She criticized the top-down approach that often overlooks community plans, leading to ineffective interventions, such as the recent demolition of homes without proper consultation. She called for increased recognition and involvement of community members in public participation and decision-making processes to create more effective and sustainable solutions for climate resilience and housing.

Marion Rono, a consultant at AFD with extensive experience in housing and urban services, highlighted urgent actions needed to support climate resilience through policy and financing. She emphasized the importance of assessing emissions from housing and infrastructure during development, noting that buildings contribute about 19 percent of global emissions. Marion discussed tools developed by AFD to classify settlements based on climate risk and to identify appropriate mitigation measures, allowing for targeted interventions in areas like Mathare.

Marion advocated for integrated policies that address climate issues alongside urban planning, referencing the successful Mukuru Spatial Plan, which included diverse stakeholders and climate considerations. She suggested introducing incentives for developers to create climate-resilient housing, similar to existing incentives for low-cost housing.

On financing, Marion pointed out that while Kenya receives significant funding, it often isn't tied to effective planning. She called for development partners to align financial resources with planned settlement improvements. Additionally, she raised concerns about the slow pace of housing development funded by the affordable housing levy and urged that civil society be allowed access to these funds to promote climate-resilient housing in informal settlements. Marion concluded by emphasizing the need for collaborative efforts to effectively use existing financial resources for community needs.

Key takeaways

- Effective disaster response and urban planning require active involvement of local communities to ensure that their needs and solutions are prioritized.
- There is a pressing need for systemic change in slum transformation efforts, emphasizing multilevel governance and collaboration among various stakeholders.
- Tools to classify settlements by climate risk are essential for identifying appropriate interventions and enhancing resilience in vulnerable areas.
- Secure property ownership is critical for fostering resilience, as residents are more likely to invest in their homes when they have titles.
- Urban planning must integrate climate considerations alongside other development issues to create comprehensive solutions for housing and infrastructure.
- Innovative access to existing funding sources, such as the affordable housing levy in Kenya, and collaboration between civil society and government is important for climate-resilient housing initiatives to move forward at the pace and scale needed.

Panel discussion with government officials and community members on the critical role of the national and state governments in Rwanda and Ethiopia

The panel discussed the policy landscape in Rwanda and Ethiopia (Figure 8). Tsegaye Moshe, housing development chief executive of Ethiopia, highlighted the vulnerabilities faced by communities affected by their physical location and socioeconomic conditions, including political and institutional marginalization. He outlined the government's strategies to address these challenges through urban upgrading, rural housing development, and relocation to safer areas. He noted the government's achievements in Ethiopia through housing provision, with nearly 4,000 units built nationwide and 3,200 in Addis Ababa, facilitated by a lottery system and compulsory savings for beneficiaries. He acknowledged the affordability issues and the need for a mortgage system to enhance housing finance.

FIGURE 8 | Panel discussion on the policy landscape in Rwanda and Ethiopia



Source: Timeless Motion LTD.

Tsegaye noted that in order to prevent rural-to-urban migration, the government plans to build 2.8 million housing units in 17,000 rural centers and improve access to health and education services. He advocated for public-private partnerships (PPP) to leverage private-sector investment and mentioned existing PPP projects where the government provides land with urban services and allocates 30 percent of new units for those from informal settlements while 70 percent goes to the private sector and is sold on the market.

He also emphasized the need for international support to establish housing finance mechanisms and technologies, asserting that addressing the broader housing crisis will ultimately help resolve issues facing informal settlements in Ethiopia.

Bizualem Admasu Nesir, chief executive officer of the land and cadaster department at Ethiopia's Ministry of Urban and Infrastructure, highlighted the critical role of land access in addressing climate-adaptation needs for vulnerable populations. He noted that while land in Ethiopia is publicly owned, acquiring it can be challenging for those who are displaced. Key policies, such as the land proclamation and urban planning strategies, focus on climate resilience, sustainable land use, and slum upgrading initiatives.

Bizualem discussed various programs aimed at improving housing conditions, including Ethiopia's national climate-resilient green economy strategy, focusing on sustainable land use, green infrastructure, and disaster risk reduction. The approach includes resilient housing initiatives linked to projects like urban productive safety nets, aimed at improving living conditions for those in slums and informal settlements. Furthermore, he mentioned targeted social programs in place to provide financial and technical support to vulnerable populations facing various climate-related challenges. He emphasized the importance of community participation in decision-making processes to tailor solutions to local needs. He noted that each of Ethiopia's more than 30 regions has its own policies to operationalize national strategies, addressing the unique challenges faced by urban centers like Addis Ababa, where land is expensive and informality is less tolerated.

Bizualem outlined the government's approach to managing informal settlements, including regularization processes and compensation for those displaced. The government provides replacement plots and social housing, referred to as kebele houses, to ensure livelihood restoration. Despite these efforts, he acknowledged the significant challenges in mobilizing resources and developing infrastructure to support these initiatives. To accelerate action, he emphasized the need to address financial barriers; enhance collaboration among government, the private sector, NGOs, and international organizations; and improve resource mobilization to effectively assist vulnerable populations facing climate challenges.

Yves Hategekimana, head of Earth observation, Rwanda Space Agency, discussed the national and regional policies aimed at addressing climate-adaptation needs for the most vulnerable populations. He highlighted Rwanda's unique challenges, including its high population density in a small geographic area, which intensifies competition for land and natural resources. He outlined several key policies, including the National Strategy for Climate and Low-Carbon Development, which identifies vulnerable communities and outlines the support they require. The Urban Development Policy and National Urbanization Policy focus on upgrading informal settlements and ensuring that these areas are properly mapped and understood to facilitate necessary interventions.

Yves emphasized the importance of mapping these areas to determine specific needs and costs associated with upgrades. This initiative falls under the Kigali City Master Plan, established in 2013, which designates zones for development, green spaces, and infrastructure. Despite enforcement of the master plan, unauthorized construction occurring in areas outside Kigali has created new challenges. The government is addressing these issues while recognizing that enforcement can lead to loopholes that people exploit to build unlawfully.

Additionally, he mentioned that the community-based adaptation program is part of the local climate action plan, focusing on integrating natural solutions within community engagement efforts. This approach aligns with the broader goal of enhancing climate resilience through local participation. He praised the Rwandan government for its effective communication and engagement strategies, fostering collaboration between authorities and local communities to address their specific needs and challenges.

Uwambajimana Isaie, community representative, Rwanda, discussed how community representatives play an important role in identifying and implementing successful solutions for climate-resilient housing and urban services. He noted that the insights and experiences of community members provide valuable lessons for how national and state policies can be designed or adjusted to better support these efforts. Isaie discussed slum upgrading and stressed that it needs to be community centered and inclusive, use locally produced materials, include flexible design elements, and include compensation for effective community members.

He shared the example of the Mpazi Project, which is an informal settlement where the government temporarily relocates residents to construct new developments of affordable housing. The project is ongoing and will have 19 blocks with 688 units. There is green space, clean water, a waste water treatment plant, and a rain harvesting tank.

He emphasized the need to enhance community engagement, especially by involving informal settlement residents in planning and implementation of adaptation measures.

Key takeaways

- Comprehensive housing strategies that focus on urban redevelopment, rural housing initiatives, and targeted social programs significantly enhance living conditions for marginalized communities.
- Safe relocation of residents from hazardous areas to secure zones should be prioritized, ensuring that new housing meets safety standards and improves overall quality of life.
- PPPs are important to enhance housing development by enabling private-sector investment while reserving a portion of new housing for vulnerable residents.
- Robust community engagement through participatory approaches to involve local populations in planning and decision-making processes is essential to implement solutions tailored to specific community needs.
- Community-based adaptation that integrates urban services and nature-based solutions and engages communities must be a key part of national and local climate action plans and policies.
- Collaborative efforts among government entities, the private sector, NGOs, and international organizations are needed to accelerate climate adaptation initiatives and improve housing solutions for those most at risk.

Panel discussion on innovative best practices and challenges to scale solutions

The panel addressed innovative community-led practices for climate-resilient housing and urban services, focusing on the challenges faced by vulnerable populations in informal settlements (Figure 9). The discussion emphasized the importance of partnerships and evidence-based planning, highlighting the need for resilient housing, resource mobilization, and the integration of community voices in policy development. Additionally, the panel identified the necessity for supportive government policies and collaborative efforts among stakeholders to create scalable solutions that enhance climate adaptation for the urban poor.

Ariana Karamallis, global advocacy and development manager at Build Change, highlighted innovative community-led practices aimed at ensuring climate-resilient housing and urban services. She emphasized Build Change's commitment to addressing systemic barriers related to policy, finance, and technology to scale access to resilient housing in the global south. Initially focused on post-disaster recovery, Build Change has evolved its approach to tackle these broader systemic challenges before disasters strike.

To this end, she discussed the Build Change Technical Assistance Platform (BCtap), which was designed to be an end-to-end digital solution that is user-friendly and enables access to resilient housing at scale. A key example of its implementation is in the Philippines where Build Change has partnered with microfinance institutions to develop an incremental housing finance loan product tailored for low-income homeowners. This homeowner-driven approach allows individuals to incrementally upgrade and retrofit their homes while receiving technical support from Build Change through the digital platform. The BCtap enables loan officers from microfinance institutions to manage and scale these services to their existing client base, thereby significantly addressing the challenge of providing affordable financing to homeowners. Since its pilot in 2019, the program has expanded to various regions in the Philippines and is being replicated in Indonesia, benefiting more than 2,000 households to date.

Ariana stressed the importance of incremental improvements, noting that meaningful change often occurs gradually rather than all at once. In discussing scaling opportunities and barriers, she noted that while replicating the model might seem straightforward, it is essential to adapt it to different contexts, especially in areas lacking microfinance institutions. She highlighted the potential for blended finance models, which combine loans with subsidies, to support

FIGURE 9 | Panel discussion on innovative community-led practices



Source: Timeless Motion LTD.

incremental improvements. She stressed the importance of a homeowner-driven approach, advocating for community involvement throughout the process to ensure that solutions are tailored to local needs. Additionally, Ariana shared insights from Colombia, where Build Change collaborates with the government to enhance existing housing subsidy programs for informal self-built housing. More recently, Build Change has started working directly with community-based organizations, building their capacity to implement government-sponsored home improvement programs. By building the capacity of community-based organizations, Build Change aims to empower these groups to implement housing upgrades effectively.

Margaret Mengo, the regional director of program operations for Africa at Habitat for Humanity, emphasized the urgent need for the housing sector to evolve in response to ongoing challenges, particularly in the context of climate change and urbanization. She shared information about the Healthy Housing project in Kisumu, Kenya, which addresses climate challenges and health issues like malaria. Partnering with the Kenya Medical Research Institute, the initiative focuses on designing disease vector-proof housing to mitigate the effects of rising temperatures and humidity that foster mosquito breeding. The project incorporates passive design strategies to enhance indoor air quality and reduce indoor temperatures by six to eight degrees, leading to a 50 percent reduction in mosquito incidents and a significant decrease in malaria prevalence. The project involves community participation in the design process, ensuring that solutions meet the needs of local residents. Margaret highlighted the importance of collaboration with various partners, including the Architectural Association of Kenya and county governments, to expand the initiative.

She noted the necessity of adopting incremental housing approaches, which allow for gradual improvements over time, in contrast to the current trend of seeking one-time construction solutions. She also advocated for innovative construction techniques that use sustainable materials, such as environmental waste and bamboo, to encourage a shift from traditional brick-and-mortar methods. This shift not only addresses housing shortages but also aligns with sustainable practices.

Margaret stressed the importance of breaking social norms to promote gender inclusivity within the construction sector. She argued that women should be actively integrated into this male-dominated field, as long as they possess the requisite skills. This inclusion not only empowers women but also enriches the construction workforce.

Another critical area that Margaret addressed was research. She called for consistent investment to ensure that new materials are safe and sustainable. She also emphasized that innovative solutions must be rigorously tested to avoid frequent rebuilding due to the use of unsuitable materials, along with the necessity of government support and policy changes to prioritize housing as a fundamental right. Through the Home Equals campaign, Habitat for Humanity advocates for a comprehensive approach to the housing ecosystem that encompasses various aspects of home life.

Jane Weru, the executive director and founder of AMT, detailed the organization's efforts toward addressing housing and sanitation issues in informal settlements. She shared that in 2012, a group of elderly men approached AMT for financial assistance to prevent eviction from their land. Recognizing the systemic issue, AMT partnered with the Katiba Institute, which focuses on defending and facilitating implementation of Kenya's constitution, to secure a court injunction to stop the evictions but realized that halting the evictions alone would not solve the underlying challenges in the settlement.

With funding from the International Development Research Centre, AMT conducted research to understand land ownership and urban service management in the area. The research discovered that residents were paying excessively for water and electricity due to exploitation by middlemen, which prompted AMT to advocate for the area to be designated as a special planning zone. This designation allowed for the development of a strategic redevelopment plan based on comprehensive data collection that prepared the community for government intervention and support during the COVID-19 pandemic.

Jane noted that the government, recognizing the need for infrastructure in the informal settlements, used AMT's plans to invest in critical services, including roads, clinics, and sanitation systems. A notable outcome was the successful campaign by Muungano women for improved sanitation facilities, which addressed the indignity of

inadequate toilet access. Through collaboration with the government and NGOs, AMT laid the groundwork for providing thousands of toilets connected to sewer systems, with 1,500 already established as part of a goal to build at least 10,000.

Jane highlighted the significant land issues in Kenya, noting that, under conditional leases, about 50 percent of informal settlements occupy private land that remains undeveloped. She urged the government to reclaim this land for redevelopment, emphasizing that true progress requires strong state involvement in planning and infrastructure. She called for a multi-sectoral approach that includes the government, community, and civil society to effectively address these challenges and expressed optimism that effective partnerships can be formed to create sustainable solutions for informal settlements.

Alex Bekunda, country director for Rwanda at BRAC International, provided an overview of the organization's efforts and strategies for scaling effective solutions in addressing community challenges. He introduced BRAC as one of the largest NGOs from the global south, founded in Bangladesh in 1972 and currently operational in over 21 countries, focusing on social development, microfinance, and social enterprise.

In discussing how to scale successful initiatives, Alex emphasized the critical importance of partnerships with governments and civil society. He cited a program in Bangladesh, funded by UK aid, that enhances the resilience capacities of migrants in urban areas through an integrated approach. This program demonstrates BRAC's commitment to addressing multiple facets of community needs, including employment opportunities for youth.

He highlighted that BRAC's approach involves engaging local communities in mapping their vulnerabilities and collaboratively identifying context-specific income-generating activities. This community-driven process leads to the development of local adaptation plans, which can be scaled across the country. He noted that similar strategies are being implemented in Rwanda, where BRAC is piloting locally led adaptation in collaboration with the Rwanda Space Agency and engaging communities in identifying the shocks and stresses that are limiting their capacities. He also stressed that fostering partnerships and using an integrated approach are essential for effectively scaling solutions that benefit entire communities.

Key takeaways

- The integration of community voices in policy development is essential for creating effective and sustainable solutions in informal settlements, ensuring that interventions are tailored to the specific needs and challenges faced by residents.
- Strong partnerships among governments, NGOs, and community organizations are crucial for scaling successful climate adaptation initiatives, as collaboration fosters resource sharing, knowledge exchange, and comprehensive planning.
- Evidence-based planning, supported by thorough research and data collection, is vital for understanding the dynamics of informal settlements, enabling the design of informed policies and targeted interventions.
- Innovative and incremental housing solutions that use sustainable materials and construction techniques can enhance resilience for low-income homeowners while addressing financial constraints.
- Addressing land-tenure issues is fundamental for enabling redevelopment in informal settlements, as secure land ownership empowers residents and facilitates investment in infrastructure and services.
- A multisectoral approach that combines housing, sanitation, and economic development initiatives creates comprehensive resilience, improving overall living conditions and quality of life for the urban poor communities.

Day 2. August 14, 2024

Day 2 focused on how data can inform decision-making on climate-resilient housing and services for informal settlements and empower communities and how cities can do integrated, risk-informed planning to accommodate urban growth.

Opening remarks

Debra Roberts, IPCC co-chair and lead author, former municipal official in Durban, South Africa, reflected on the discussions held during Day 1 of the event (Figure 10). She emphasized the need for a systemic approach to understanding the challenges posed by climate change, adaptation, and loss and damage finance. She noted that, although there is a wealth of knowledge, data, and resources available today, communities continue to face profound challenges, such as the dual crises of flooding and evictions, which occurred in Kenya earlier in the year.

Debra highlighted the disconnect between the availability of knowledge and the ability to address real-world issues effectively. She stressed the importance of viewing data and knowledge as part of a complex ecosystem, shaped by enablers and barriers, rather than stand-alone solutions. To better understand this ecosystem, Roberts laid out five Ps: politics, poverty, paralysis, participation, and pragmatism:

1. Politics influences how data are generated, valued, and used, with political realities affecting the context. The knowledge gap in understanding politics of all forms (e.g., party politics, politics within and between communities) creates challenges for addressing issues like informal settlements. We need a more nuanced understanding of the political economy of different cities, communities, and sectors alongside more fine-scale urban data.
2. Poverty is both a state and a result of systemic inequalities, making it crucial to address the broader global structures that perpetuate poverty. Poverty reflects structural inequalities at all levels in resource access and use in cities and lies at the heart of the informality crisis. We need to better understand these inequalities as well as the global power dynamics and financial architecture that limit cities' access to finance.
3. Paralysis is the tendency to become stuck in outdated approaches, failing to recognize that future challenges may require entirely new tools and strategies. The world is heading toward a future with significant environmental and social pressures, such as overshooting 1.5°C in global warming, which will demand innovative responses based on new knowledge and data that can help us address these unprecedented urban challenges.
4. Participation means greater inclusion in decision-making processes. Many solutions fail because they do not involve the people most affected by the problems. Those who have a seat at the decision-making table determine the data and knowledge to be prioritized. Community engagement and knowledge are critical in establishing the radical collaboration needed in cities to address challenges like climate change.
5. Pragmatism is the need for practical, development-oriented data and knowledge that can demonstrate co-benefits, ensuring that development remains central to addressing complex societal issues like climate change.

FIGURE 10 | Debra Roberts providing opening remarks on Day 2



Source: Timeless Motion LTD.

Case studies on connecting bottom-up and top-down data

Anjali Mahendra, director of global research, WRI Ross Center for Sustainable Cities, presented on the data work planned under REHOUSE. REHOUSE plans to develop a global data platform on climate risks and vulnerability in informal and other precarious settlements in urban and peri-urban areas. The platform will have four objectives:

- Combine top-down climate modeling, national census, and international data with bottom-up community level socioeconomic and lived experience data to fully understand risks at a granular level.
- Inform national and city-level decisions on development and climate policy, finance, planning, and investment on the ground.
- Use the data to engage with government and other urban stakeholders in partnership with community groups to bring tangible benefits to communities.
- Empower communities to advocate for better, safer, affordable housing and urban services as key to climate resilience.

Killion Nyambuga, SDI, discussed the Know Your City (KYC) tool, a community-led initiative for data collection used in more than 30 countries to address issues in informal settlements (Figure 11). SDI is a movement of slum dwellers working to organize urban poor communities and advocate for improved living conditions. In Kenya, SDI has mapped more than 158 informal settlements in Nairobi. Although these mapped settlements make up only 2.5 percent of the city's land, they face high population densities and significant hazards like fires, floods, evictions, and poor access to services.

Killion explained that the KYC campaign aims to collect data to inform advocacy for better infrastructure, services, and planning in informal settlements. The data focus on issues like land tenure; demographics; housing; access to water, sanitation, and energy; and community leadership. The information is collected using digital tools like GPS, drones, and mobile platforms, allowing communities to store, analyze, and visualize the data to engage with local authorities and stakeholders.

A key aspect of this effort is fostering partnerships between local communities and governments to improve urban planning and infrastructure in informal settlements. For example, SDI's work in Mukuru, Nairobi, involved mapping more than 22,000 structures and identifying risks related to flooding, air quality, and access to basic services. This data informed the Mukuru Special Planning Area initiative, influencing road and service infrastructure planning and improving living conditions in the settlement.

FIGURE 11 | Killion Nyambuga presenting on Know Your City 2.0



Killion emphasized the importance of community-led data collection for transforming informal settlements and highlighted ongoing efforts to refine the KYC tool by incorporating new technologies like OpenStreetMap and risk assessment tools.

Marc Manyifika, country lead for urban water resilience, Rwanda, WRI, discussed the significance of engaging decision-makers in understanding the impact of their policies on informal settlements (Figure 12). He highlighted the rapid urban growth in Kigali, where approximately 65 percent of residents in informal settlements migrate from rural areas. The city is projected to face increasing population density, with an estimated demand for 5.5 million housing units by 2050, while only 2.5 million currently exist. Marc pointed out that informal settlements often encroach

Source: Timeless Motion LTD.

on urban forests and wetlands, and the affordability of housing remains a critical issue, as many programs do not meet community needs.

To address these challenges, Marc emphasized the necessity of a multi-sectoral approach involving collaboration between the government and civil society. He noted the difficulty in reaching a consensus on defining informal settlements, which he characterized as poor housing conditions combined with high-risk locations and low access to basic services. This definition was crucial for developing key performance indicators (KPIs) to analyze housing conditions, overcrowding, land-tenure security, and access to essential services.

He also acknowledged the importance of data collection to inform policy revisions and planning processes. He underscored that the evolution of informal settlements must be correlated with policy changes over the past 30 years, using specific KPIs to facilitate this analysis. He expressed the need for a clear understanding of the implications of definitions and metrics used by policymakers, as these can significantly affect perceptions of access to urban services.

FIGURE 12 | Marc Manyifika presenting on multi-sectoral approach in Rwanda



Source: Timeless Motion LTD.

Presentation and workshop session on estimating population growth and land needs for participant cities

Patrick Lamson-Hall, New York University, presented virtually on quantifying urban growth in Africa. In sub-Saharan Africa, two out of five new urban dwellers are migrating from rural areas. Because of this increased migration from rural areas, urban areas in sub-Saharan Africa are growing faster than the national populations. As cities grow in population, they also increase in area. Worldwide, 64 percent of cities at least doubled their areas from 1990 to 2015. Twenty-eight percent of cities have at least quadrupled their areas. It is clear from the data and evidence that cities are growing, and while we cannot stop that growth, we can think about how our cities are growing and take actions to accommodate that growth.

The Atlas of Urban Growth will provide city-specific data on climate risks and physical assets (such as flooding, landslides, and protected areas) and urban growth maps and statistics (such as historic urban population and projections for population growth, among others). The first version of the Atlas for all of Africa is currently in progress.

Most cities are not planning for growth. In Africa, from 1990 to 2015, 82 percent of newly built residential areas were unplanned or informal. Cities in the global South need plans that can address rapid urban growth and help avoid development in high-risk areas. These plans also need to protect the natural environment and green space, and the plans must be implementable.

Given population forecasts for 2050 and four possible density scenarios to consider, participants were asked to calculate how much land will be needed to accommodate the populations in their city (Addis Abba, Nairobi, or Kigali) in 2050 (Figure 13).

Presentation and workshop session on identifying lands for climate risk-responsive and well-serviced new urban development

Eric Mackres, senior manager, data and tools, WRI Ross Center for Sustainable Cities, addressed the challenges of urban growth and climate vulnerability with a focus on sub-Saharan Africa and South Asia, regions experiencing rapid urban expansion in flood-prone areas. He emphasized the growth of risky urban development as informal

FIGURE 13 | Participants calculating land needs for growing populations



Source: Timeless Motion LTD.

settlements continue to emerge in high-risk zones, driven by population pressures and the rising value of land. These dynamics put more communities at risk of disasters like floods and highlight the need for better planning and sustainable urban growth strategies.

Eric discussed how cities often fail to protect their natural assets, such as forests and other green spaces, which provide essential environmental services and are critical for resilience to extreme climate events. Removing these assets not only increases immediate risks, but also imposes long-term costs on cities and future generations. He stressed the importance of integrating natural infrastructure into urban development to avoid higher environmental and social costs. Cities like Nairobi, located in biodiversity hotspots, must balance urban expansion with the need to preserve critical environmental assets. Cities need to consider how to limit unsustainable, land-hungry growth while fostering sustainable development.

Eric introduced data-driven tools to help cities manage growth, using examples from cities like Blantyre, Malawi. He explained how historical expansion patterns and data on services like roads can inform projections of future growth, guiding planners toward more sustainable urban development. He also presented two growth scenarios—business-as-usual and risk-aware—that highlight different outcomes based on development choices. The risk-aware scenario emphasized avoiding development in high-risk areas, such as flood-prone zones and regions with significant tree cover.

Participants were asked to envision where they want their cities to grow, specifically where affordable housing could be developed, and what actions are needed to achieve this vision, focusing on avoiding precarious development that puts communities in danger. The workshop involved participation in groups, with lively discussions, and the maps were complemented with the participants' on-the-ground knowledge about current conditions, existing policies, and alternative growth paths (Figure 14).

FIGURE 14 | Participants discussing how they want their cities to grow

Source: Timeless Motion LTD.

Way forward

The discussions in the conference in Kenya highlighted critical strategies for addressing the unique challenges faced by informal settlements in Kenya, Ethiopia, and Rwanda. Participants emphasized the need to integrate climate resilience into housing policies, urban planning, and infrastructure development while ensuring community participation. Discussions also underscored the importance of mobilizing innovative financing mechanisms to support vulnerable communities in adapting to climate risks.

Based on the insights gathered from various panel discussions and workshops, the following key recommendations emerged:

1. **Enhance climate resilience in vulnerable urban informal settlements** by prioritizing the upgrading of informal settlements with resilient housing solutions that incorporate essential infrastructure, such as water, sanitation, and electricity, while accounting for localized climate risks like flooding and extreme heat.
2. **Promote community participation** in urban planning and policy processes, particularly women and youth, to ensure that interventions address local needs effectively and leverage community-led initiatives, such as participatory mapping and local adaptation plans, to inform higher level (state, national, and global) policy and financing strategies.
3. **Expand access to adaptation finance and innovative funding mechanisms**, such as blended finance models, to channel resources toward upgrading informal settlements and scaling incremental housing improvements in urban areas. Foster public-private partnerships to mobilize resources for large-scale housing and infrastructure projects, thereby ensuring alignment with climate-resilience goals.
4. **Bridge data gaps** and connect community-level data with city-level data, ensuring that relevant data is accessible to communities and key stakeholders. This will enable informed decision-making and more effective urban planning processes.

5. **Build decision-making capacity and foster collaboration** by enhancing the capacity of local and national governments to implement climate-resilient housing policies effectively, with an emphasis on cross-sectoral coordination and by collaborating with academic and technical institutions to integrate climate-resilience principles into national and local development frameworks.
6. **Use evidence-supported estimates to plan for future growth** that includes land, green space, and basic infrastructure and services for new settlements in order to avoid formation of new and expanded informal settlements while also avoiding areas of high climate and environmental risk.

For questions or comments about this piece or the REHOUSE initiative, contact Anjali Mahendra, Director of Global Research, WRI Ross Center for Sustainable Cities, or Maeve Weston, Research and Engagement Manager, WRI Ross Center for Sustainable Cities.

For more information on the initiative and how to get involved, visit REHOUSE.org.

Appendix A. List of participants

NAME	ORGANIZATION
Loise Ndaka	U.O.N
Michael Wera	SDI Kenya
Gavin Malika	U.O.N
Isaie Uwambajimana	Community representative, Rwanda
Humphrey Omukuti	Ghetto Farmers
Victor Ojoo	Muumgano
Kennedy Comba	Vemric (TAC)
Karan Jandu	ARUP
John Kimani	Muongano Wa Wanaujiji
Caroline Kabaria	APHRC
Milton Okeno	Muongano Wa Wanaujiji
Joyce Kabiru	WRI
Kilion Nyambuga	SDI Kenya
Clementina Asago	SDI Kenya
Sophia Nthuku	Habitat for Humanity
George Mwaniki	WRI Africa
Joseph Kimani	SDI Kenya
Ariana Karamallis	Build Change
Anita Wakuza Plan	S.D.L.P.P
Patrick Mutat	S.D.L.P.P
Jane Weru	A. MT
Obadiah Mungai	WRI
Muchiri R. W.	Komb Green Sol.
Sarah Tomno	Eco Manyatta
Etta Madete	Zima
Robert Ndugwa	UN Habitat
Tsegaye Moshe	Ministry of Urban and Infrastructure
Bizuaalem Admasu	MUI Ethiopia
Joe Muturi	SDI
Yves Hategekimana	Rwanda Space Agency
Nancy Njoki	SDI
Hiroto Yanaka	UN Habitat
Daniel Maitano	L.I.F.
Eva Kies	UN Habitat
Carlos Lopez	Cornell University
Marion Rono	AFD
Alex Bekunda	BRAC International

Moses Munuve	GIZ
Ann Awino	GIZ
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Seeta Shah	FSO Kenya
Keziah Mwanga	World Bank
Eurallyah Akinyi	ARIN
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George Arwa	Kenya Informal Settlements Improvement Program (KISIP)
Carolyn Mutuku	KISIP
Baraka Mwau	UN Habitat
Wanjira Mathai	WRI
Melanie Robinson	WRI
Hellen Wanjohi-Opil	WRI
Marc Manyifika	WRI
Charity Mwangi	WRI
Reynolds Kihura	WRI
Maeve Weston	WRI
Aklilu Fikresilassie	WRI
Lilian Nyangweso	WRI
Robin King	WRI
Anjali Mahendra	WRI
Eric Mackres	WRI

Acknowledgments

We extend sincere gratitude to all the stakeholders who participated in the REHOUSE and Atlas of Urban Growth Africa conference and contributed their valuable insights and experience. It has deepened our understanding of the ecosystem working on climate adaptation, financing, urban growth, and access to adequate housing that is integrated with essential urban services for communities in informal settlements. We extend our thanks to the Danish International Development Agency, whose support made this conference possible. We gratefully acknowledge the cooperation and participation of our REHOUSE partners at BRAC, SDI, MHT, Habitat for Humanity International, and Build Change. We deeply appreciate the role played by all of WRI Africa in organizing, coordinating and moderating the discussions and participating in the conference. We also extend our special thanks to our colleagues in WRI Ross Center for Sustainable Cities and WRI Africa for their assistance in documenting and finalizing the proceedings and to the communications team for their help with the editing and design.

About WRI Ross Center for Sustainable Cities

WRI Ross Center for Sustainable Cities is WRI's program dedicated to shaping a future where cities work better for everyone. Together with partners around the world, we help create resilient, inclusive, low-carbon places that are better for people and the planet. Our network of more than 500 experts from Brazil, China, Colombia, Ethiopia, India, Indonesia, Kenya, the Netherlands, Mexico, Turkey and the United States combine research excellence with on-the-ground impact to make cities around the world better places to live. More information can be found at wri.org/cities or on X @WRIRossCities.

About REHOUSE

REHOUSE (Resilient, Equitable Housing, Opportunities and Urban Services) is a diverse coalition of community groups, advocates and researchers working to accelerate progress towards more equitable and climate-ready cities through resilient and affordable housing — integrated with basic services in informal settlements. REHOUSE partners include influential organizations focusing on the most vulnerable communities in cities with proven approaches ready to scale. Together, we are able to work at the global, national, and local levels in ways that each organization cannot do alone, demonstrating how to connect global ambition to country and local action.

To learn more about REHOUSE, visit REHOUSE.org or contact us at info@rehouse.org.



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