Briefing

Urban; Climate change

Reflections on knowledge gained and key lessons learnt from IIED research and action

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Project overview

Project name:
Building materials in informal settlements in Freetown and Harare

Time frame:
01/07/2023–31/05/2024

Objective:
Promote fairer and more sustainable access to building materials for housing in informal settlements by identifying and addressing key knowledge gaps compromising effective action.

Project summary:
The project investigated the governance of the value chain of building materials used for housing in informal settlements in Freetown, Sierra Leone and Harare, Zimbabwe, selecting strategic building materials and interviewing those in the value chain. It demonstrated the urgent need to integrate concerns and experiences of residents in the debate on decarbonising the building and construction industry.

Change in action

The governance of the value chain of building materials is deepening housing injustices.[1] It compromises access to affordable and resilient building materials, while also hindering efforts to decarbonise the building and construction industry. This project enhanced the capacity of civil society groups to research the value chain, to help inform decision making, generate policy and planning agendas and entry points, and to enable civil society to better participate in efforts to decarbonise the industry.

Building sustainable housing futures for all

Filling the knowledge gap on building materials in informal settlements

Housing and climate change

The construction industry plays a major role in climate change and environmental damage. Buildings account for 39% of the world's carbon emissions.[2] Most new buildings in the coming decades will house the urban poor in the global South.[3] If the construction and building industry is to reach the goal to decarbonise by 2050,[4] it needs to consider the materials used for housing in informal settlements.

Unfortunately, the lack of focus on this agenda and lack of knowledge about the factors that affect the supply chain for these materials makes it hard to take effective action. IIED's research in Sierra Leone and Zimbabwe reveals that filling this knowledge gap is crucial to improving the housing conditions of the urban poor and achieving a fair transition towards a more sustainable building and construction industry.

Governance of the value chain

IIED worked with two affiliates of Slum Dwellers International — the Centre of Dialogue on Human Settlement and Poverty Alleviation in Freetown and Dialogue on Shelter Trust in Harare — to investigate the governance of the value chain of building materials used for housing in informal settlements in the two cities.[5] This included looking at the incentives, norms and regulations exerted by different actors.

The research shows that accessing affordable and resilient building materials is a key concern for informal settlement dwellers. Poor households tend to pay high costs for goods — above their market value — and are increasingly exposed to climate events. Furthermore, they experience a series of unfair burdens associated with the access to and use of building materials, which are often fragile, not climate resilient, unaffordable and at times toxic. Often, those burdens are shaped by decisions made very far from the settlements, either at the national or international level.

Existing knowledge gaps

The stories we collected through this initiative reveal the importance of understanding the multiple social, political, cultural and environmental systems that shape the value chain of building materials in informal settlements. We identify four knowledge gaps that need to be addressed to make the design of policy responses and interventions in this field more effective:

1. The complexity of livelihoods alongside the value chain: countless people depend on livelihoods that are part of or linked to the extraction, processing, transporting, selling, storing and assembling of building materials in informal settlements. These jobs range from more to less formalised, with different degrees of safety and security. They are linked to complex processes that are dependent on factors such as fuel prices, government restrictions, extreme climate events and inflation.

More knowledge on the connections between livelihoods and the supply chains of these building materials can help policies and interventions strengthen rather than weaken people's ability to secure certain living standards. Likewise, further research needs to explore ways to recognise and address the health hazards of these occupations.

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2. Tenure security and risk thresholds: different degrees of tenure security are a key feature of informal settlements, strongly influencing household decision making around building materials. For example, sometimes residents might decide to use cheaper and less durable materials because they fear imminent eviction. In other cases, investing in more durable materials is seen as a strategy or a step to exercise pressure for regularisation, even at the risk of losing the investment if an eviction happens. These decisions and the tolerance to uncertainty and risks are informed by people's tenure status, with tenants usually having very little power against landlords operating in extremely unregulated conditions.

Governments need more grounded evidence to design interventions that recognise that advancing security of tenure is at the core of promoting a fairer and more sustainable use of building materials in informal settlements. As existing studies show,[6] individual titling is not necessarily a solution to tenure insecurity and more research is needed to explore how diverse instruments to advance tenure security influence the use of building materials.

3. Fairer distribution of climate change burdens and responsibilities: poor communities and residents of informal settlements are not the main people responsible for climate change. But they are encountering most of its consequences daily. Decisions around 'durable' and 'strong' materials are shaped by the experience of periodic flooding, storms, extreme heat, mudslides and other extreme weather events, as well as the materials' cultural significance and symbolic value.[7]

Interventions and regulations need to be informed by the importance of reducing the vulnerability of people bearing the burdens of climate change. This includes the need to decarbonise the global building materials sector by reducing its carbon emissions. Further research is needed on local to global dynamics in the value chain of building materials, in order to explore ways that responses can have a more equitable and fairer distribution of burdens, responsibilities and benefits.

4. Governance over technology solutions: ensuring the production and use of affordable and sustainable building materials is not only about developing adequate technological solutions. It is about transforming the governance, incentives, regulations, markets and spaces of decision making around building materials. Incentives promoting the production and distribution of more polluting building materials can create challenges for the uptake of more sustainable alternatives. At the same time, the affordability of sustainable alternatives is critical. This includes recognising the 'poverty penalties' that settlement households usually pay, but also the issues of livelihoods, security of tenure and cultural uptake.[8]

Safeguarding the affordability of and access to building materials, while at the same time protecting safe livelihoods and increasing resilience, requires more knowledge about the trade-offs involved. There are success stories about the capacity of organised communities to access and store materials in collective ways and enhance the power of communities to negotiate with providers, builders and authorities.[9] These offer positive examples of how the governance of building materials can be transformed to advance access to sustainable housing futures for all.

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Key lessons & innovations

- The project has led to the co-design of a methodology that can be used by civil society and grassroots groups to carry out their own analysis of the value chain of building materials.
- Diverse visualisations of the value chain are critical to communicate findings, engaging and representing different types of knowledge and experience.
- More work is needed to examine how global regulatory frameworks affect access to building materials in informal settlements.

Partners' view

For us, the issue of building materials was not something that we were actively discussing before this project. It was more or less in passing or something incidental. So, this project brought this discussion to the fore.

— Patience Mudimu
Dialogue on Shelter, Zimbabwe

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Notes

[1] Cociña, C and Frediani, AA (2024) Towards housing justice: four propositions to transform policy and practice. IIED, London. www.iied.org/22321iied / [2] Adams, M, Burrows, V and Richardson, S (2019) Bringing embodied carbon upfront: coordinated action for the building and construction sector to tackle embodied carbon. World Green Building Council, London. www.worldgbc.org/article/bringing-embodied-carbon-upfront / [3] Munro, G (6 December 2023) Sustainable construction will help those living in the world's many informal settlements. https://bit.ly/3RxuIBj / [4] United Nations Environment Programme (2022) 2022 global status report for buildings and construction: towards a zero-emissions, efficient and resilient buildings and construction sector. www.unep.org/resources/publication/2022-global-status-report-buildings-and-construction / [5] Cociña, C, Mardon, M and Frediani, AA (25 June 2024) Building resilient homes in informal settlements: understanding access to building materials in Freetown and Harare. www.iied.org/building-resilient-homes-informal-settlements / [6] Rigon, A (2016) Collective or individual titles? Conflict over tenure regularisation in a Kenyan informal settlement. *Urban Studies*, 53(13) 2758–2778. doi:10.1177/0042098015602658. / [7] Celentano, G and Habert, G (2021) Beyond materials: the construction process in space, time and culture in the informal settlement of Mathare, Nairobi. *Development Engineering*, 6 100071. doi: 10.1016/j.deveng.2021.100071. / [8] Maina, M et al. (4 January 2023) Rising costs and worsening housing conditions in Africa's informal settlements. https://bit.ly/4b5GjhY / [9] See for example: Celentano, G and Habert, G (2021). Op.cit.

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