URBAN RESILIENCE

Building urban resilience in slums and informal settlements

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1. PROBLEM DEFINITION

Low urban resilience in slums and informal settlements in a context of growing natural disasters due to climate change.[1] Across Sub-Saharan Africa, 62% of families live in slums and informal settlements with inadequate drainage, waste management and sewage systems, according to the World Bank and GFDRR (2016). Poor infrastructure reduces urban resilience and exacerbates the suffering from natural disasters which, in turn, are being made worse by climate change (Pelling and Wisner, 2009). Flooding is one of the most critical natural disasters faced by Sub-Saharan cities (Ziervogel et al., 2017). For instance, in the Greater Accra Region, 60% of the population live in the Odaw river basin, a vulnerable location to floods (World Bank and GFDRR, 2017). But these urban areas are also likely to suffer from cyclones, earthquakes and landslides (World Bank and GFDRR, 2017). Moreover, the population in these slums is growing fast due to out-of-control migratory movements. Migrants are usually forced to live in hazard-prone areas because of their vicinity to jobs and the lack of urban land, creating food insecurity and unhealthy living conditions (Campos and Nagar, 2020)..

[1] Informal settlements can be defined as 1. areas where groups of housing units have been constructed on land that the occupants have no legal claim to, or occupy illegally; 2. unplanned settlements and areas where housing is not in compliance with current planning and building regulations (unauthorized housing) (OECD, 2001).

2. WHEN AND WHERE DOES IT OCCUR?

Since the '70s, Sub-Saharan Africa has suffered more than 2,000 natural disasters, half of which occurred in the last decade (Fraser, et al., 2017). The increased risk posed by disasters has largely been a result of the increased number of people and economic assets exposed to hazards. Urban areas typically have the highest economic losses due to the high density of economic assets. For example, in the city of Kampala, from 1991-2018 there were 153 natural disasters where 40% were flooding. The results were catastrophic: more than 4,000 deaths, over 114,000 injured and 2,194 buildings were damaged according to the UN Office for Disaster Risk Reduction. Additionally, poor infrastructure and emergency response systems mean the recovery from these disasters is lengthy and costly. The frequency and harshness of natural disasters due to climate change are projected to grow.

3. WHO IS IMPACTED BY THE PROBLEM? WHAT ARE THEIR NEEDS?

All citizens are impacted by the problem but those living in unplanned urban settlements are disproportionately affected by natural hazards and subsequent diseases, such as cholera (Lumbroso, 2020), as they typically have limited access to various physical, financial and social resources to cope during or after a disaster event. For example, in Ghana, informal settlements represent 40% of the urban area and house almost half of the population (World Bank and GFDRR, 2017). Other groups that are more vulnerable to disasters are women, often experiencing higher rates of mortality, morbidity and reductions in life expectancy. These populations need decent, affordable housing; adequate and smart infrastructure to handle drainage and pollution; and appropriate information and implementation of basic rules and guidelines to deal with the disasters as they affect the climate (Adelekan et al., 2014).

4. ROOT CAUSES

- The growing absence of tangible economic and social opportunities in rural areas increases rates of rural-urban migration and the resulting pressure on infrastructure.
- Low levels of urban planning, outdated land use plans, and inadequate metropolitan coordination on urban issues and law enforcement.
- Growing strength of natural disasters due to climate change.
- Shortage of affordable housing that creates the necessity of constructing houses with inadequate materials.
- Limited public resources for providing infrastructure at scale and lack of proper public-private collaboration mechanisms.

5. WHY DO YOU THINK THE PROBLEM IS OCCURRING AND HOW HAS THIS NOT BEEN SOLVED YET?

Unplanned and fast urbanisation processes present various infrastructure challenges concerning environmental sanitation, waste management, housing, water supply, etc.; while the inability to provide such infrastructure leads to problems of flooding, waste generation, illegal settlements, blocked drainage systems, and inappropriate environmental practices. The level of public investment in disaster risk reduction in most Sub-Saharan African countries remains insufficient (World Bank and GFDRR, 2017). Lack of building standards, insufficient attention to ground permeability, inadequate law enforcement, and the incomplete implementation of a drainage plan undermine the public capacity to solve these problems. All of these issues result from a lack of long term planning and data collection and produces reactive, instead of proactive, responses. Lack of contingency funding or risk insurance have been also crucial to maintaining the problem as unsolved (World Bank and GFDRR, 2017).

Additionally, informal settlers usually do not have legal rights to land and cannot get affordable housing (World Bank and GFDRR, 2017). The constant threat of eviction increases the vulnerability for citizens living in slums (Grasham, Korzenevica, Charles, 2019), as it discourages these populations from investing in their residences to be protected against natural disasters.

6. CALL FOR ACTION

Across Sub-Saharan Africa 62% of families live in slums and informal settlements (World Bank and GFDRR, 2016) and natural disasters are growing due to climate change. To address this problem, we need to find innovative strategies to build urban resilience. Rapid urbanisation and limited investment to upgrade critical infrastructure of cities have contributed to the proliferation of slums and informal settlements. Due to the lack of infrastructure, these communities cannot absorb socio-economic and climatic shocks, further eroding the already dilapidated infrastructure. Climate change increases the probability of a natural disaster impacting poor urban infrastructure and magnifying the damage and consequences. As cities continue to grow in size, the number of people and economic assets exposed to these hazards will continue to increase. Governments will be expected to address this need and provide resilient and smart infrastructure.

In this multi-city challenge we want the public to share innovative ideas about:

- How to deal with high levels of rainfall and avoid the risk of flooding.
- Data sharing strategies to allow local authorities to get more data about the situation on the ground to improve urban resilience.
- Public-private collaboration strategies to implement effective prevention and mitigation strategies against natural disasters.
- Successful, innovative, and sustainable solutions from other places in the world to build resilience in the participating cities.

7. THE SOCIAL IMPACT OF YOUR IDEAS

Building urban resilience in slums and informal settlements in African cities is a wicked problem in the sense that it is interdependent, complex, systemic and urgent. The public sector cannot solve the problem on its own and, in this sense, gathering ideas from the public is key. On the one hand, engaging the stakeholders brings the best collective intelligence from the community into the policy-making process. On the other hand, better solutions tend to be produced when those receiving the interventions are involved in designing them. If implemented well, community-led responses can reduce the risk of disasters in these cities, protecting lives and the economy.

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