

## Strengthening community-based adaptation for urban transformation: Managing flood risk in informal settlements in Cape Town

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### RESEARCH OVERVIEW

More than half the world's population lives in urban areas, with about thirty percent of these urban dwellers residing in informal settlements. These communities often lack basic services, livelihood opportunities and resources for political mobilization. Everyday stressors are exacerbated when these settlements are located in areas that are exposed to environmental risks, such as flooding, low water quality and poor waste management.

Given the vulnerability to environmental risks in many informal settlements, the effects of climate change are likely to have a disproportionate impact in these areas. While governments are beginning to take climate adaptation seriously at the city level, *community-based* adaptation (CBA) has received less attention. CBA has tended to be used in rural areas, where communities work together to adapt to climate impacts, often through natural resource management and livelihood changes. CBA has not yet been well established as a strategy for urban, low-income communities.

This brief reviews the practice of CBA along with the particular dynamics of informal settlements in Cape Town. It looks at the opportunities for urban governments to engage with local communities and better enable CBA in informal, urban settlements. It is based on research undertaken in 2017 by Ashley Fox as part of her Masters dissertation for the African Climate and Development Initiative (ACDI) Climate Change and Sustainable Development Program. The research focused on a case study of a community-based organization (CBO) working in an informal settlement in Cape Town. Interviews were conducted with non-government organisation (NGO) staff members that support the CBO, informal settlement residents (mainly in Philippi) who are members of the CBO, ward councillors, and City of Cape Town staff involved with disaster risk reduction, housing, informal settlement management, and the transport and urban development authority.



Above | Marikana informal settlement outside of Cape Town (Photo: Ashraf Hendricks)

### KEY FINDINGS

CBA is a context driven process and approaches should be tailored to each informal settlement.

City and community representatives need to work together directly, rather than relying solely on NGOs.

Consistent communication (including meetings) between dedicated City staff, NGOs and communities is key to CBA.

Incentivise community work and experimentation with direct funding.

Establish protocols and procedures for communities to share their own solutions and challenges.

Promote exchanges, with the support of NGOs, to encourage idea sharing across settlements and internationally.

Encourage NGOs and community groups to incorporate climate change into community development work, including profiling, enumeration and mapping.

#### Full paper:

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#### Keywords:

community-based adaptation; climate change; Cape Town; informal settlements

## UNDERSTANDING COMMUNITY-BASED ADAPTATION

Community-based development grew out of a shift from top-down to bottom-up practices that ensure greater acknowledgement and use of local knowledge and experience. CBA takes the same approach, acknowledging the strength of communities to take charge of their own development, as they best understand local needs and context. In cities, increasing urbanisation leads to resource scarcity and crowding that complicates efforts to reduce climate risks. In Cape Town, many communities are engaged in participatory processes, but there are limited examples of climate adaptation responses that are driven from the ground-up, particularly in informal settlements. It is important to note that “adaptation” to reduce the impacts of climate change often requires changes in social, economic and political factors, and not only engineering and technological fixes. This idea, dubbed “adaptation as development” aligns climate adaptation with broader development goals. For example, a successful case of CBA that emerged in this research is reblocking (described in the box). Reblocking is not defined by the community or the City as climate adaptation, despite its transformational impact on reducing flood risk in communities and improving the standard of living through the adaptation-development nexus.



**REBLOCKING** | Reblocking is a strategy created by informal settlement residents to improve living standards. It involves reconfiguring shacks in dense settlements according to a community-designed spatial framework to provide access for emergency vehicles and municipal service provision. Reconfiguring settlements also allows for proper drainage to be established to prevent flooding and reduces the risk of fires spreading. The Informal Settlement Network (ISN) was able to convince the City of Cape Town of the merits of this strategy, and the City has now adopted reblocking as an official policy. However, very few settlements have been reblocked due to the challenges sited in this brief.

Top | A community member explains the reblocking plan for her settlement  
Below | Before and After the reblocking of Flamingo informal settlement (Photo: SDI Alliance, 2015)



## INFORMAL SETTLEMENT DYNAMICS

Informal settlements are not homogenous. It is important to understand the varying circumstances (both social and physical) between and within informal settlements when considering how to support CBA. Physical vulnerability to environmental risks may vary substantially. Some settlements are vulnerable to flooding because they are built in detention ponds that are meant to store excess flood water during heavy rains, such as Mshini Wam in Cape Town prior to reblocking. Other settlements are located in flood plains or along rivers, such as Sopokama informal settlement. Some risks relate to the density of settlements, while others relate to infrastructural or service provision challenges. In certain informal settlements in Philippi, recurring flooding near community toilets, coupled with dumping and unmaintained drainage infrastructure, has created hygiene and sanitation challenges for community members.

Social dynamics in settlements differ depending on community politics, economic opportunities, and power dynamics. For example, powerful “landlords” may resist CBA activities if it means they can no longer collect rent. Others are concerned that any type of relocation will break up their community or lengthen the distance to job opportunities. Yet, as climate and environmental risks intensify along with urbanization, it is imperative to explore the potential of CBA. A major reason why CBA can be an effective strategy is because communities themselves understand local dynamics and therefore recognize what type of interventions are the most likely to be sustainable and accepted by the community. The Informal Settlement Network (ISN) is a good example of how bottom-up knowledge and leadership is used to drive community-led, inclusive development that helps to reduce climate and environmental risk.

## PROFILING, ENUMERATION AND MAPPING

The City, NGOs and community members who were interviewed all recognize the importance of understanding the layout and demographics of a community *before* engaging in community projects. For this reason, it is important that community members participate in profiling, enumeration and mapping exercises to compile data on each informal settlement that can be used by decision makers, whether it is community groups, NGOs, or the City. Depending on how they are initiated, these exercises have the potential to empower communities and equip them with the tools they need to envision their own adaptation interventions. For example, the City's local government has paid community members in the past through the Expanded Public Works Program to undertake profiling and enumeration of settlements. In other instances, community members are expected to do this work without payment. This inconsistency has created tension among community leaders, who recognize the need for the data, but struggle to find the time to do unpaid work. Nonetheless, profiling, enumeration and mapping work allows community members to better understand the layout of their settlements and identify major concerns. This type of engagement can be crucial for identifying areas with heightened environmental risks, such as flooding.

## EMPOWERING COMMUNITY MOVEMENTS

This research found that current efforts to work with communities in informal settlements in Cape Town mostly involve “participatory” approaches where communities are consulted, but only *after* the design phase of development projects. While there are small ways for community members to influence project selection at ward level through their councillor, there are no mechanisms for community members to easily present their *own* solutions to City officials. Currently, NGOs and communities use ad-hoc methods to present their ideas. These methods are lengthy, inefficient, and difficult to replicate due to their improvised nature. In the case of reblocking, which the City has already endorsed, approval from the City is still required before reblocking projects can occur. Communities can organize and implement reblocking projects on their own with the support of NGOs, but obtaining City approval can delay projects indefinitely.

NGOs can help play a community-City liaison role and add specialized skills to development projects in informal settlements. However, it is important for the City to work directly with communities, ideally with dedicated staff, in order to build trust and improve communication. A shift in thinking is needed to recognize that vulnerabilities in settlements are not only physical, and that techno-managerial solutions, while effective in some cases, are not always the answer. Communities in informal settlements experience daily, socio-economic stresses that result in a baseline of vulnerability regardless of environmental risk. To truly engage in CBA that seeks to reduce climate and other risks, a comprehensive approach is needed.

The City-level climate change policy acknowledges the risks informal settlements face, yet there is limited evidence around prioritizing adaptation responses. In addition, the CBO and NGO involved in this research have not engaged with climate change knowledge or planning directly. Cities need to engage in climate change awareness and explore innovative ways to support adaptation strategies in informal settlements that align with broader social development goals. This requires engaging with organisations that support informal settlement residents, regardless of sector, given the cross-cutting nature of climate change impacts. If community groups and NGOs incorporate climate change considerations into development planning, informal settlements will be better prepared to face climate change risks, be more aware of potential maladaptation risks, and better-equipped to develop CBA strategies.

## FURTHER READING

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