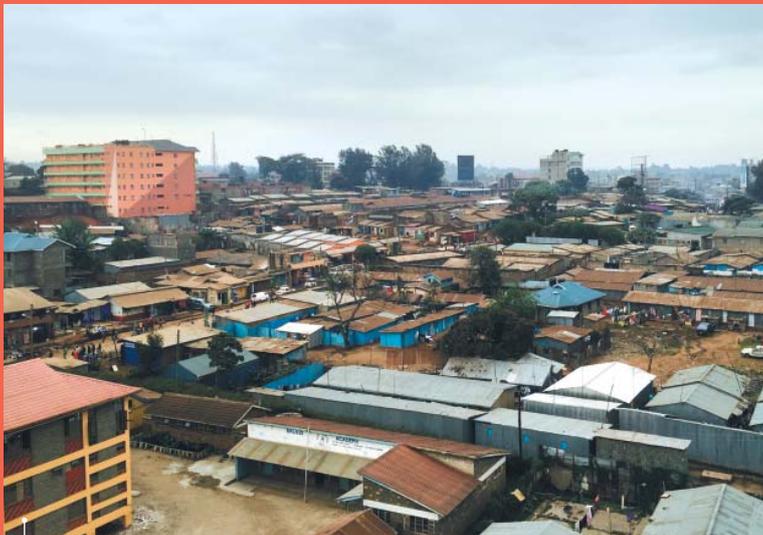# BREAKING THE CYCLE OF RISK ACCUMULATION
in Sub-Saharan Africa

By Mark Pelling,
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View of Nairobi - ©Hayley Leck

Mark Pelling is Professor of Geography at King's College London. Before this he was based at the Department of Geography, University of Liverpool, UK and the University of Guyana. His research interests are in the institutions and social relationships that shape vulnerability and adaptation to natural disasters, including those associated with climate change, and in the ways in which conflicting values and practices of development inform resilience and transformation in the face of environmental change. Mark Pelling is the Principal Investigator of research project Urban Africa: Risk Knowledge.

KEYWORDS

- **RESEARCH**
- **SOCIAL FABRIC**
- **CAPACITY BUILDING**

Urban Africa: Risk Knowledge is a three-year research and capacity building programme funded by DFID and ESRC that works in nine Sub-Saharan Africa cities. It involves academic and NGO partners from developed and developing countries and aims at breaking cycles of urban risk accumulation by bringing together science, policy and civil society actors in the production of knowledge and action. The objective of the programme is to better understand the urban processes that place families in exposure to hazard and in a lack of capacity to cope with the impact of these hazards.
Current trends are going towards increasing vulnerability since existing infrastructure and services are unable to cope with growing population and climate change is adding stress to these infrastructures. The belief that drives the programme is that for resilience to be built that meets the needs of the urban poor, the starting point is to build strong relationships that can lead to collaborations between communities and city authorities, inform decision-making, inspire populations to manage their own risk and hold government to account. In Kenya, where the research was implemented, local governance structures were created to implement a community-based risk management approach deployed by residents.

INTRODUCTION

The urban poor in Sub-Saharan Africa are in a cycle of risk accumulation and of deepening vulnerability due to continuous experience of underdevelopment and lack of infrastructure in poor neighbourhoods. Risk is a cumulative process that leads to degraded health, to social tension, fragmented community action, etc. Urban Africa: Risk Knowledge chose to build strong community networks, believing this would be the basis for improved infrastructure and significant vulnerability reduction and better coping with localised disasters.

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urban risk accumulation by bringing together science and policy actors in the production of knowledge and action. The objective is to better understand the urban processes that place families in exposure to hazard and in a lack of capacity to cope with the impact of these hazards, with the belief that vulnerability is a direct consequence of development failure.

The project uses an innovative research methodology by involving communities in the data collection. It aims at building governance structures that will enable communities to assess scientifically the risks they are exposed to and roll out that methodology in autonomy even long after the three-year research project is completed.

1. CONTEXT: RISKS AND VULNERABILITIES IN URBAN SUB-SAHARAN AFRICA

It is striking that most development efforts in Sub-Saharan Africa are focused on rural areas, where the general wisdom says the challenges are in access to water and sanitation, electricity and agricultural practices. Still, the future of Sub-Saharan Africa is urban. Urban areas grow very quickly even though infrastructures are already struggling to meet current demand. The project looked at two particular issues in its attempt to assess risks and vulnerabilities in Sub-Saharan Africa: (1) the impact of climate change and (2) the difficulty to monitor hazard through data collection.

1.1. CLIMATE CHANGE: AMPLIFYING CHRONIC STRESSES

Resilience is often described as the ability to bounce back after shocks or in the face of chronic stresses. In Sub-Saharan Africa, populations are already facing chronic stresses due to the failure of current infrastructure and climate change is amplifying those stresses. The impact of climate change in Sub-Saharan African cities is therefore very different than in South East Asia or Latin America. In those regions, cities are vulnerable to hurricane. Climate change there increases the frequency and strength of catastrophic weather events. In Sub-Saharan Africa, populations are highly vulnerable due to unmet development needs and each small perturbation in climate leading to flooding or else has a strong impact on populations, leading to worsening of livelihood conditions and even higher vulnerability. With climate change, current weather problems will be more persistent, and vulnerability of population will deepen. Climate change projections show increasing heat and rainfall but that the primary driver for risk will be rooted in development failure.

Current trends are going towards increasing vulnerability because existing infrastructure and services are unable to cope with growing population under current climate change. Adaptation will not be about coping with new shocks as much as solving current development issues.

1.2. STARTING FROM THE BEGINNING: HAZARD MONITORING

Most countries in Sub-Saharan Africa do not have systematic data collection so there is no single source of data to know for example the number of deaths associated with a hazard event. That data needs to be built and on a timeline that makes it relevant.

This gap in data limits the understanding of the nature and scale of urban risks and how urbanisation is influencing its social distribution, and future urbanisation will provoke the same vulnerability issues.

One data collection methodology, called Desinventar, is gaining momentum among governments and donor agencies. It consists in looking at everyday newspapers to identify events and cross-reference them with existing reports from NGOs or government. The methodology has been used for the Urban Africa: Risk Knowledge research programme in three cities (Ibadan, Niamey and Nairobi) in partnership with the Red Cross and universities. This methodology is highly dependent on what media decide to profile. So on top of that methodology, the University of Ibadan convened, in Ibadan, households across the city to interview them to report on their experience and observations in the area of what were the most frequent hazards.

The three main hazards reported in the newspaper methodology and the household interviews were the same: traffic accidents, flooding and violent crimes, but the ranking was different. Violent crimes were first in newspaper and last in the household interviews. It is quite easy to understand why newspapers would profile violent crimes more, but it shows the importance of being careful with this data collection methodology, even more so as it is being used by a wider range of actors.

"URBAN AFRICA: RISK KNOWLEDGE IS A RESEARCH AND CAPACITY BUILDING PROGRAMME TO BREAK THE CYCLE OF URBAN RISK ACCUMULATION IN AFRICAN CITIES."

2. BUILDING RESILIENCE: THE IMPORTANCE OF SOCIAL FABRIC

2.1. ISSUES WITH CURRENT RISK MANAGEMENT STRATEGY

The work of the Urban Africa: Risk Knowledge programme is based on two overarching concepts:

- The first is that resilience rests on relationships between actors. Those pre-existing relationships are what will make them collaborate, build a common vision of what the real obstacles are for service provision and how to reduce exposure to risks.

- The second belief is that local governments and community groups can make improvements in places where the poor live when they work together. Though incremental gains will not solve the structural weaknesses of city infrastructures, they are transformative in that they break the cumulative process of risk and strengthen relationships between actors. But risk management is mainly about engineering in its current form and misses the social context that builds vulnerability as part of this process. Engineering is no less important, but is only part of the solution for long-term and pro-poor resilience building in cities.

What makes the Urban Africa: Risk Knowledge research programme innovative is that it was not about investigating how hazard can be technically controlled. Instead, the programme tried to understand the urban processes that place families in exposure to hazard and in a lack of capacity to cope with the impacts of those hazards. This approach aimed to focus on one of the root causes of vulnerability or resilience, which is the social fabric and the relationships that allow for strong governance structure.

2.2. NAIROBI'S APPROACH TO BUILDING RESILIENCE

One collaboration within Urban Africa: Risk Knowledge was undertaken in the Mukuru Special Planning area in Nairobi, Kenya: 100,000 households live in this area, mainly renting places from private landlords. It is exposed to fire outbreaks, flooding, poor air quality and soil pollution as the land is reclaimed industrial land.

The Nairobi City County Government designated this area as a Special Planning Area, and after a long discussion they formed a partnership with a local trust of Slum Dwellers International (SDI), a network of community-based organisations of the urban poor. Together they identified a number of key planning issues. One of them

THE EXAMPLE OF SOLID WASTE MANAGEMENT

Urban Africa: Risk Knowledge did specific work on solid waste management because some infrastructure are core drivers of vulnerability, and solid waste management is one of them. Improving Solid Waste Management is for instance key to reduce flooding from blocked drainage as well as impacting directly on the health impact of local flooding.

In Dakar, Mombassa and Nairobi, the research programme looked at the political economy of solid waste management to understand why the city was underprovided. The first thing was to identify technical solutions to improve service provision. As solutions existed, but were not implemented, political dynamics were investigated as well. In Nairobi, ownership of the solid waste management collection system, ownership of land and dumpsites are vested interests. Those interests are so powerful that any alternative processes are very hard to achieve. This is an indication that vulnerability and access to service provision is not only a matter of technical solutions but also political dynamics and social fabrics.

was environment. Urban Africa: Risk Knowledge was asked to join the partnership at this stage on environmental monitoring. The research on mapping and monitoring hazard was a way to involve communities in projects dedicated to improving their living environment. The objective for our research programme was to build the governance structures and methodologies that will enable communities to assess scientifically the risks they are exposed to and roll out that methodology more widely, without our support.

What has been done was facilitating the building of saving groups, who pool their money to save money and invest in members' projects. Members of each saving group are elected to participate in the neighbourhood committee and from these committees, representatives join the Mukuru Special Planning Area governance board. Our intervention was in forming the saving circles to allow seven of these neighbourhood groups to be formed to feed into that governance structure. It is only once this structure is in place that there will be an effective base to engage with the methods and data generated by research.

Once the groups were formed, together with the University of Mzuzu in Malawi we trained slumdwellers in a community-based risk assessment methodology designed by the University. The residents then went out to deploy that methodology. Even though this is unusual for an academic research project, it was worth the investment. First to prove the Mzuzu University methodology has an impact and second because, once trained, the governance structure remains. Even when people have forgotten about this risk assessment project, they are still able to intervene in the governance process.

A very positive outcome is that the local SDI trust has managed to raise money on its own to roll out that methodology in other places

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"RESILIENCE RESTS ON RELATIONSHIPS BETWEEN ACTORS. THOSE PRE-EXISTING RELATIONSHIPS ARE WHAT WILL MAKE THEM COLLABORATE AND BUILD A COMMON VISION ON HOW TO REDUCE EXPOSURE TO RISKS."

across Mukuru. This means the programme is now independent and running on its own.

In this Nairobi example, two main reasons explain why the project was a success.

First of all, the Nairobi City County Government was involved as a partner and so supported our joint research so we were able to do that project, asking for training and support for the community group. Our intervention fits in at a very early stage in a project. It seems important to be involved from the beginning, whereas local governments often do not ask for support at that stage. They will rather ask for support from donors once the risk reduction project is already decided. If projects are tightly tied to local governments or communities, both can be quite protective of their methodologies and then our work would be solely to provide support. In Mukuru we were able to influence the methodology and the governance structure.

Second, it was striking that networks of community groups such as SDI have impressive capacity. In some places we thought that as academics we could provide technical support in Geographic Information System (GIS) and vulnerability mapping, but they had already been doing it for a while. This is very encouraging because this means civil society has enough maturity to fill the gaps that local authorities leave in terms of measuring risk, census data and measuring people's living conditions and their exposure to risks such as air pollution. While we globally understand the risks well, mapping them locally and understanding local vulnerability is a different story.

3. LESSON LEARNT:
MAIN CHALLENGES TO BUILDING RESILIENCE

3.1. FRAGMENTED NATURE OF GOVERNANCE

While in the case of Mukuru there was strong support at the highest level, the fragmented nature of governance meant it took a long time to implement the project. For example, the city initially requested that we facilitate the Nairobi risk partnership, an initiative for different departments to talk together around risk management.

Recognising that disaster is really an outcome of failing infrastructure, the idea was that all agencies needed to work together. We offered to organise workshops and meetings and to set up the first meeting, which took over 18 months due to changing government and more generally the fragmented nature of local government. The fragmented nature of governance is unfortunately quite common in emerging countries.

3.2. POLITICAL INVISIBILITY OF CAPACITY BUILDING

While relationships are at the core of reducing vulnerability, they are much harder to track than built infrastructure and they can disappear very quickly, so cities find it politically easier to invest in infrastructure than relationships. You can borrow money to build infrastructure but to maintain relationships, the township needs to dedicate human resources. You need city workers to go in the field and work with communities. But human resources are a current expenditure issue and resource-constrained governments have trouble finding the financial resources to fund that.

But in comparison with the amounts invested in big projects, money required to maintain those relationships with community groups is very small. So, for mayors, it may be a matter of framing the projects in terms that make sense for government and donors, showing how such investments are necessary to building infrastructure in an inclusive manner.

CONCLUSION

City planners are faced with the challenge of providing services for newcomers even though infrastructure is already overstretched. The social infrastructure is what will determine newcomers' access to opportunities and services.

One way to deal with that is to prepare people from their childhood to be active community members and role models. There is an opportunity to educate them in a culture of relationships and networks so that the social fabric is strong enough to take in a big increase in population.