Strengthening urban resilience in African cities:

Understanding and addressing urban risk

act:onaid

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Contents

Executive summary

The population of Africa's cities is growing rapidly. But as poor people cram into towns and cities characterised by limited, weak and often under-resourced infrastructure, they are increasingly relegated to marginal, inadequately serviced, informal settlements and low-cost housing areas, leaving them vulnerable to numerous livelihood, health and security risks.[1]

The impact of disasters, conflict and climate change is most severe for poor households, especially groups such as poor women and children, as they have the least access to resources to mitigate and recover from disasters. Disasters undo progress in achieving developmental goals, such as gains in education, healthcare and economic progress, and prevent vulnerable women, men and children from being able to claim their rights to basic needs such as food, shelter, work and healthcare. They also erode individual and household resources, undermining livelihoods and the realisation of human rights, which in turn increases vulnerability to disasters of all magnitudes. Climate change is compounding existing risks and creating new ones, placing additional pressure on urban poor people.

As part of its programme on *strengthening urban resilience in African cities*, ActionAid commissioned research to better understand the risks faced by urban poor people on the African continent. This exploratory research comprised a desktop review of the literature on urban risk in Africa, and fieldwork in three cities in Senegal, The Gambia and Zimbabwe. It examined hazards, vulnerabilities, local capacities, power imbalances and underlying risk drivers to identify strategies for enhancing resilience to disasters, climate change and conflict in Africa's urban environments.

Key findings:

This research shows that disaster risks in towns and cities are strongly linked to underdevelopment. Insecure livelihoods; a lack of basic infrastructure and services such as water and waste management; poor urban and land planning; inadequate oversight of urban planning, land-use and building standards; as well as low accountability for the provision of infrastructure and basic services all increase poor people's exposure to hazards, and vulnerability to their effects. Consequently, reducing risk and building resilience to disasters in urban areas requires tackling the developmental issues that underlie it. This requires improving infrastructure and services, and strengthening livelihoods, all of which are critical in reducing exposure to hazards and enhancing people's ability to cope with and recover from disasters. It is essential to facilitate and support efforts by governments to reduce risk, while at the same time holding them to account through transparent, responsive and proactive governance structures. It is equally important to involve the private sector, as business and industry often contribute to risk on the continent.

Recommendations:

Reducing risk and building resilience in towns and cities in Africa requires holistic action at the local, regional and national levels. It requires:

- **Empowering communities to identify, reduce and manage risk.** Efforts must focus on engaging communities to identify risks, and working with them to develop technically sound, community-driven and innovative projects, while also empowering them to advocate for change. Interventions should

seek to build a sense of community, in which people work together to reduce risk and respond to disasters, and identify and support the most vulnerable people. Risk assessments should seek to understand the extent to which social and other conflict has an impact on access to basic services and needs such as food, water and energy, and how these blockages can be addressed.

- **Strengthening governments' capacity to reduce risk, particularly at the local level.** Efforts should focus on ensuring that local governments have the financial resources and human and technical capacity to improve service delivery, although this must be paired with mechanisms to ensure transparency and accountability for how funding is spent. There should also be an emphasis on promoting integrated, inter-sector risk reduction across government institutions. Where they exist, efforts to enhance government capacity should tap into existing platforms such as the UN's *Making cities resilient campaign.*

- **Strengthening urban planning and regulatory frameworks.** This requires identifying and enforcing protective mechanisms, such as by-laws that prevent building and development in hazardous locations, as well as risk-aware building and infrastructure standards. ActionAid can help make these processes more inclusive, using participatory decision-making tools to inform integrated resilience plans that safeguard vulnerable people's human rights and entitlements. Platforms should also be created for women and girls to inform planning processes, to ensure that planning and implementation are gender-sensitive and responds to their needs and priorities.

- **Facilitating dialogue and collaboration to reduce risk.** Efforts to build resilience should facilitate and promote engagement between communities, governmental and non-governmental players, and the private sector. These should bring people together to identify shared challenges and responsibilities, and to get involved in planning and action to reduce risk. This should include building strategic relationships between stakeholders that leverage available capacities and resources to reduce risk.

- **Non-governmental organisations, UN agencies, civil society and community groups also need to develop strong relationships, and collaborate.** ActionAid should work to strengthen, identify and capitalise on intersecting programmes, and engage with government and other key stakeholders at different levels to inform analytical work, policy formulation and implementation.

- **Focus areas should include working with communities to identify, strengthen and diversify livelihood opportunities, especially for young women and men.** Wherever possible, these should explicitly reinforce broader risk reduction goals. An example would be developing opportunities in waste management, recycling or transforming waste materials. Efforts to address access to basic services, urban planning and land management should promote women and children's needs and safety concerns; this requires working with women and children to identify safety-related barriers to services and how to address these. ActionAid should also incorporate risk reduction and resilience into its existing *Safe cities* programme, and its *Safe schools* initiative. It should also link resilience-building to its broader efforts to challenge negative attitudes and values that endanger or disadvantage women.

1. Introduction

It is becoming increasingly recognised that disasters and conflict often intersect, and that amongst other factors, urbanisation will increasingly shape this disaster/conflict interface.[2] As part of its programme on *strengthening urban resilience in African cities,* ActionAid commissioned research to better understand the risks faced by urban poor people across the African continent. This research examined the hazards, vulnerabilities, local capacities, power imbalances and underlying risks faced by the poorest and most vulnerable people in urban areas, in order to identify holistic strategies for enhancing their resilience to disasters, climate change and conflict in Africa's urban environments.

Both slow onset disasters such as drought and sea level rise, and fast onset disasters such as cyclones and earthquakes directly undermine sustainable development gains, and further prevent vulnerable women, men and children from being able to claim their basic rights to food, shelter, work and healthcare. The impact of disasters, conflict and climate change is most severe for poor households, and vulnerable groups such as poor women and children, as they have the least access to the resources needed to reduce risks as well as recover from disasters. The *Sendai Framework for Disaster Risk Reduction 2015-2030* recognises that reducing risk and building resilience are essential to protecting people and their property, health, livelihoods and productive assets, as well as promoting and protecting all human rights, including the right to development. It prioritises tackling underlying disaster risk drivers, including unplanned and rapid urbanisation. The new *Sustainable Development Goals* (SDGs) 2015-2030 also recognise resilience and mitigating the impacts of climate change as critical to ending poverty.

ActionAid recognises that poverty, growing inequality, disaster risk and climate change are closely interlinked challenges that must be addressed together. This requires a holistic approach, which aims to build resilience to disasters, and strengthen the response to climate change in a way that fosters sustainable development. ActionAid is working to empower both urban and rural communities to reduce risks and build resilience in more than 40 countries across Asia, Africa and the Americas as a key component in the fight against poverty.

This report examines the nature and drivers of risk in Africa, and the implications for efforts to build poor people's resilience to disasters, climate change and conflict. It presents the findings of exploratory research on the urban risk environment. The research combined a desktop review of the literature on urban risk in Africa with new field research from three African countries: Senegal, The Gambia and Zimbabwe. These case studies sought to gain first-hand insight into the lives and experiences of people in poor urban communities, and the processes that undermine or build resilience to disasters, climate change and conflict.

The report begins by examining urbanisation trends in Africa, and the particular risks facing people living in poor urban communities. It then examines the key drivers of risk and the findings that emerged from the research. It concludes by identifying key themes and implications for resilience and development programming, and makes recommendations for measures to reduce and address risk in urban areas.

2. Building resilience in an increasingly urban continent

The world is undergoing the largest wave of urban growth in history. More than half of the world's population now lives in towns and cities, and by 2030 this number will swell to about 5 billion.[3] Much of this urbanisation will unfold in Africa and Asia, bringing huge social, economic and environmental transformations. With Africa's urban population rising rapidly (Figure 2.1), one out of five of the fastest-growing cities globally are in Africa, with smaller and intermediate cities experiencing the highest growth.[4] This urban growth is partly due to migration from rural areas, however it is also increasingly being driven by natural population increases.[5]

Figure 2.1. Urban population growth as a percentage of total population by geographical region (1966-2014)

Legend:
- East Asia & Pacific
- Latin America & Caribbean
- Sub-Saharan Africa
- East Asia & Pacific
- Latin America & Caribbean

Source: United Nations, World Urbanization Prospects
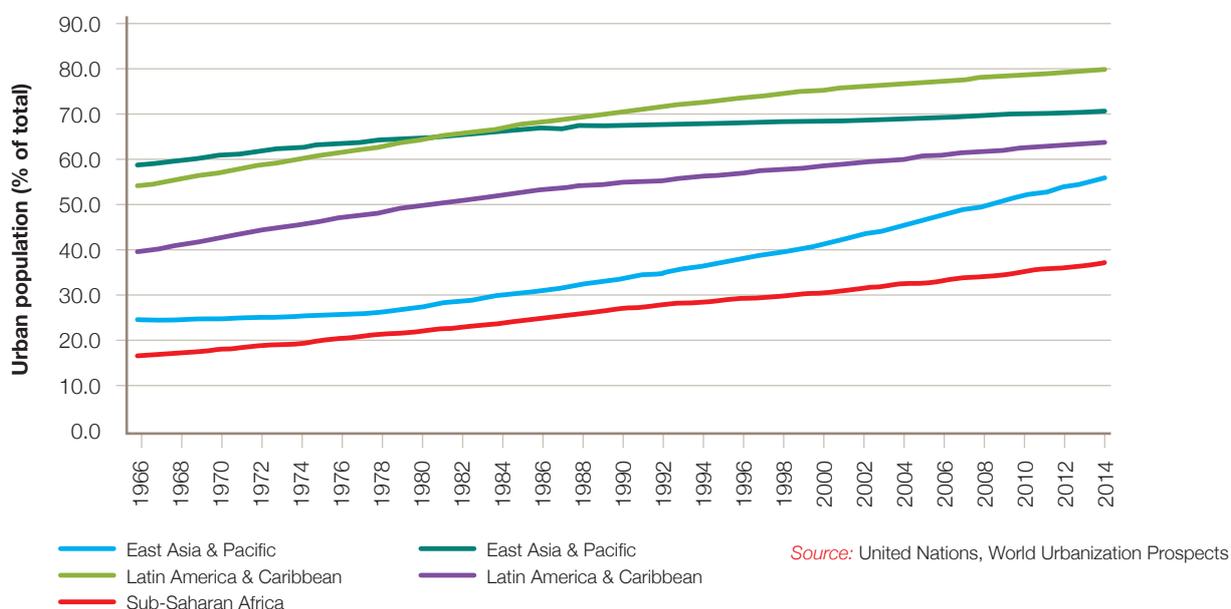
Defining urban areas:

There is no single definition of what constitutes an 'urban' area. Definitions vary from country to country, and often shift over time. In Africa, urban areas span a continuum from fledgling towns such as Juba in South Sudan to megacities such as Johannesburg, Lagos and Cairo. In their 2012 *State of the world's children* report, UNICEF notes that an urban area can be defined by:

- Administrative criteria or political boundaries (e.g. the area within the jurisdiction of a municipality or town committee).
- A threshold population size (where the minimum for an urban settlement is typically in the region of 2,000 people).
- Population density, economic function (e.g. where a significant majority of the population is not primarily engaged in agriculture, or where there is surplus employment).
- The presence of urban characteristics (e.g. paved streets, electric lighting, sewerage).

In this report, 'urban' refers broadly to areas designated as urban by governments and/or that feature the characteristics commonly associated with towns and cities, such as larger populations paved roads, infrastructure and diverse livelihood options.

Nairobi's Kibera is the largest slum in Kenya and also on the African continent.
PHOTO: GEORGINA GOODWIN / ACTIONAID
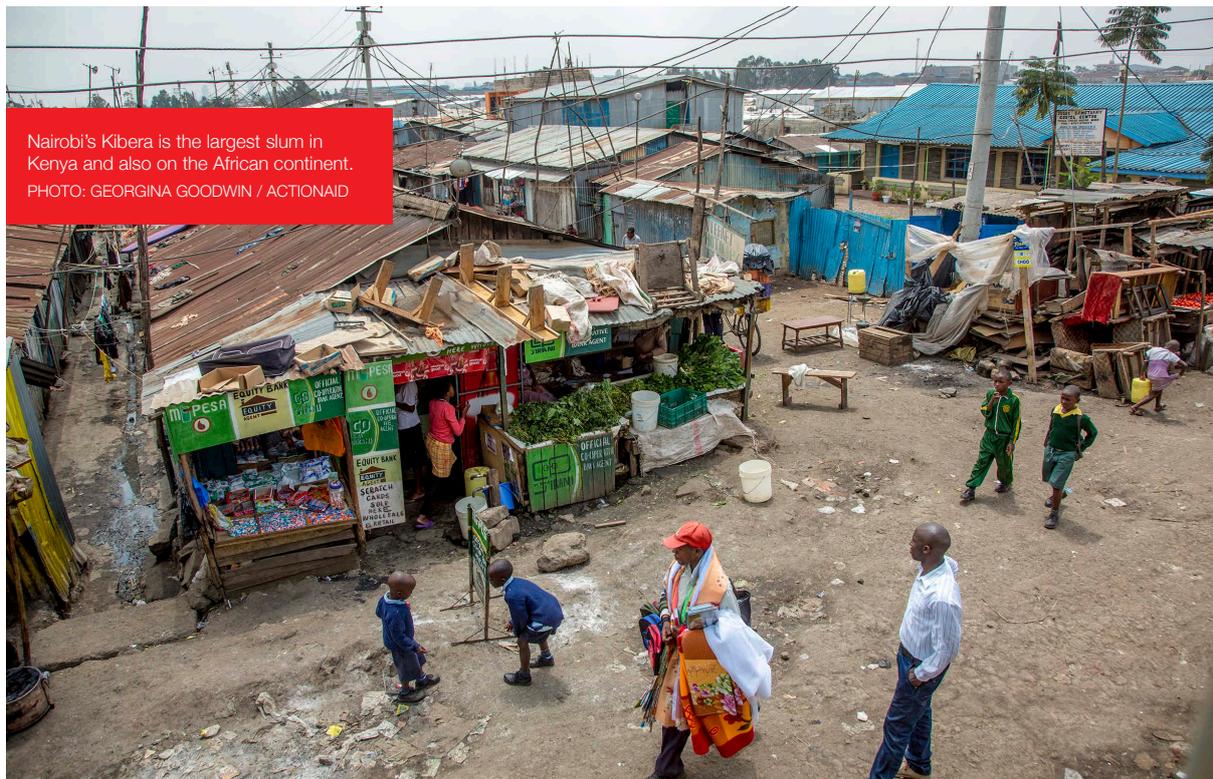
Urbanisation can amplify the likelihood of disasters, while the concentration of people and infrastructure increases exposure to hazards and the magnitude of their impact. Urban expansion alters land surfaces and disrupts natural processes and systems, aggravating flooding for example, by covering ground with hard surfaces such as roofs, roads and pavements that do not absorb rainwater as vegetation does, increasing run-off and pooling.[6] Activities such as road construction, pollution, wetland reclamation for residential and commercial use and resource extraction also diminish ecosystem services such as flood regulation and protection.[7] In rapidly expanding towns and cities, space is at a premium; in the absence of affordable, well-located land, poor households often have little choice but to live on marginal land – cheap or vacant precisely because it is unsafe.[8] In many countries, urban population growth has outpaced the capacity of the authorities to maintain and expand infrastructure and provide essential services. Shortages in affordable housing have also resulted in the growth of large unplanned informal settlements across the continent. These are characterised by a variety of livelihood, health and security risks. As UN Habitat's 2014 *State of African cities* report notes:

> "…diseases, associated with poor water and sanitation, are rife; access to adequate health and education facilities is often limited, organised policing is *ad hoc* at best; and employment is often informal, insecure and poorly paid."[9]

Women and children are particularly exposed to crime and violence in urban areas globally, with poor lighting, dark streets, dangerous public transport systems and inadequate policing increasing the risk of attacks in urban areas.[10] In Liberia, for example, 60% of all gender-based violence cases in 2012 occurred in and around the capital Monrovia.[11]

Social dynamics often increase risk in poor settlements. Urban communities tend to be less socially cohesive than rural ones, providing people with fewer social resources to draw on in reducing risk or recovering from

disasters. Poverty and marginalisation are often associated with risk-taking behaviour and psychological stress, with social conditions underlying disaster risk.[12] In South Africa, for instance, research in informal settlements in Cape Town suggests that shack fires are often linked to alcohol abuse; fires are started when people return from a night of drinking and fall asleep with candles or stoves burning or knock them over.[13]

Disasters usually impact most severely on poor and marginalised groups, and it is much harder for them to recover.[14] In African cities, as elsewhere, poor marginalised populations are often excluded from decision-making processes, and lack the assets and skills needed to reduce their risk and achieve change. They also generally have fewer resources and savings available to draw on to help them recover following disasters. Where vulnerable populations experience repeated shocks, these progressively erode people's resources and savings, leaving many poor households in a permanent state of crisis.[15] Thus, reducing poor households' vulnerability to hazards, and strengthening their capacity to prepare for, respond to and build back better from disasters, is essential for breaking the vicious cycle of urban poverty and building resilience.[16]

However, there is considerable variation within vulnerable groups, both in terms of exposure, and in their capacity to cope and adapt.[17] Disasters tend to have the greatest impact on poor women, children, the elderly and religious and ethnic minorities, as well as people living with chronic illnesses and disabilities. Women are often particularly vulnerable due to their caregiving role, their lower social and economic status, and the discrimination they face in accessing jobs and resources such as property titles and services.[18] Research also identifies other vulnerable populations. Within informal settlements, it is usually the poorest and the most recently arrived residents who live in the most marginal areas.[19] In Nairobi, for example, tenants in informal settlements are at higher risk due to both the exploitative nature of large-scale landlordism, and because tenants have less interest in risk reduction, especially when they regard their stay as temporary.[20]

3. ActionAid's resilience framework

Our thinking about disasters has changed considerably in the last twenty years. It is now recognised that on their own, hazards such as floods, earthquakes or disease do not lead to disasters. Instead, disasters result from the interaction between hazards and the vulnerability of an individual or group to their effects. Reducing the risk of disasters, or the probability of harmful consequences resulting from this interaction between hazards and vulnerability, requires reducing vulnerability. The concept of resilience overlaps that of vulnerability to some extent, but adds a further dimension: the ability to recover from disasters and adapt to changing conditions. Building resilience reduces vulnerability and involves helping people to mitigate risk before, during and after disasters.

The United Nations Programme on Disaster Risk Reduction (UNISDR) defines:

- **Hazards:** as dangerous phenomena, substances, human activities or conditions that can cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage. Hazards can be both slow-onset (such as droughts) or rapid-onset events (such as earthquakes).

- **Vulnerability:** as the characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard.

- **Resilience:** as the ability of a system, community or society exposed to hazards to resist, absorb, accommodate and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions.

ActionAid's resilience framework is grounded in a human rights-based approach. It focuses on strengthening communities' capacity to mitigate, prepare for, respond to and build back better after disasters, through participatory action and reflection programming. This requires transformational resilience to fundamentally change the power structures that are keeping people vulnerable to disasters. ActionAid emphasises women's leadership in building resilience to disasters. Resilience-orientated programming can increase women's ability to recognise, challenge and change the power structures that underlie their vulnerability.

4. ActionAid's research on resilience in Africa

The purpose of this research was to better understand the comprehensive urban risk environment in Africa and provide data-informed guidance to humanitarian and development actors on how to build resilience in urban communities. The study examined how to build the resilience of urban poor people to disasters. Specifically, it aimed to:

- identify common urban hazards
- identify and understand the underlying urban vulnerabilities that drive risk at national, metropolitan and community levels
- identify processes that enhance the resilience of those living in urban areas, which can be harnessed to enable communities to reduce their exposure to hazards and recover from disasters.

The research combined a desktop review of the literature on urban risk in Africa with the collection of primary data in selected countries, as well as data on disaster events on the continent. Case studies were developed in The Gambia, Senegal and Zimbabwe, and focused on three cities: Banjul/Kanifing (The Gambia), Kaolack (Senegal) and Harare (Zimbabwe) (Table 4.1). The study sites were chosen from either urban areas where ActionAid has a strong community presence, or is keen to work in the future on resilience building in urban areas. Figure 4.1 shows the 21 African countries in which ActionAid works, as well as the case study countries and cities.

Figure 4.1. Countries covered by ActionAid in Africa and the ActionAid study countries and cities

SENEGAL
Dakar

THE GAMBIA
Banjul (Kanifing)

ZIMBABWE
Harare

Key:
ActionAid affiliates & associates
Name — Case study urban area
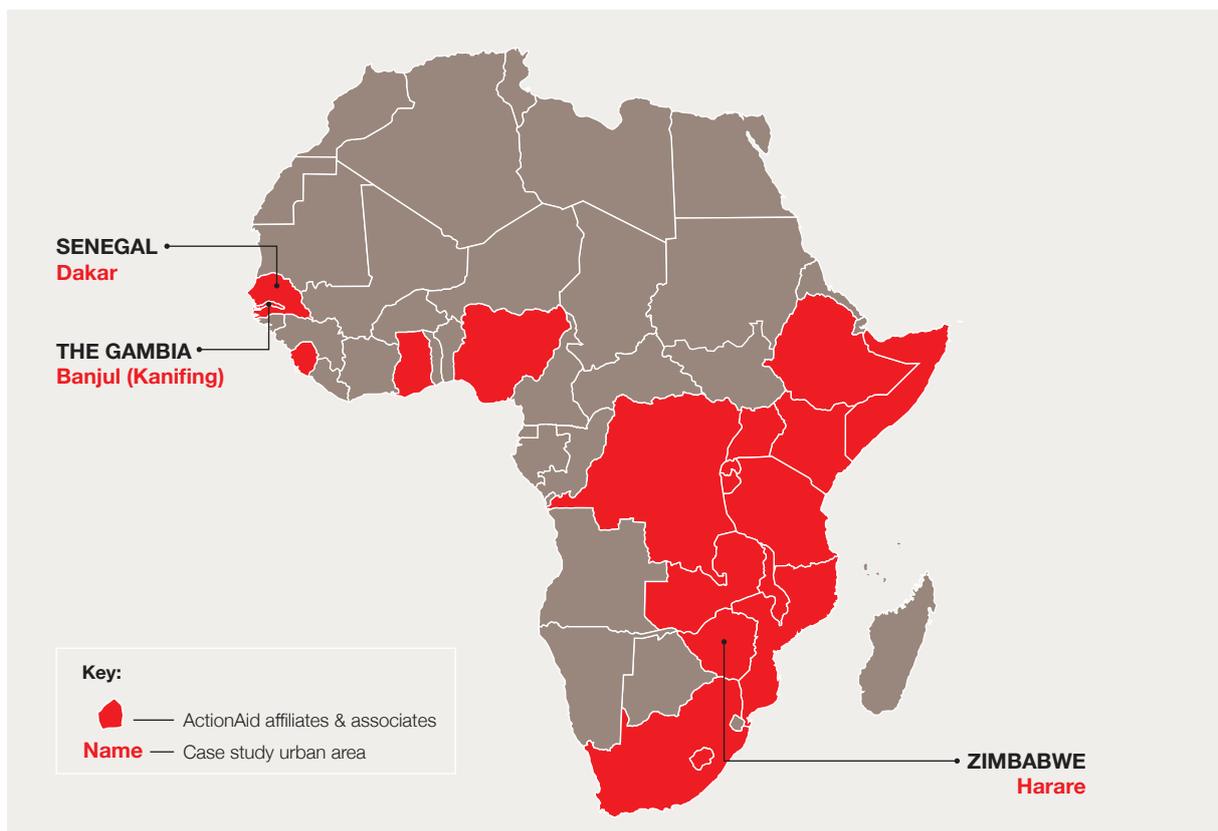
A multi-scale methodology was used to examine risk and resilience dynamics at the international, national, subnational and community level. This sought to understand both the macro- and micro-level processes that contribute to risk and undermine and strengthen resilience. It included:

- community risk assessments in one community per city
- interviews with key government, NGO and CBO stakeholders
- workshops with ActionAid staff from each country office
- interviews with international stakeholders such as UN institutions and the International Federation of the Red Cross and Red Crescent (IFRC).

The community risk assessments gathered information through participatory community workshops, a household survey and targeted focus group discussions with special interest groups such as women, children and young people (see Appendix 1 for a summary of the methods and themes focused on). A total of 177 households were surveyed (53 in The Gambia, 54 in Senegal and 70 in Zimbabwe). An effort was made to identify and incorporate different social groupings, especially in areas where there was a strong ethnic or political dimension to settlement patterns, with households chosen randomly within these locations.

Table 4.1. Towns and communities profiled in the research

Country	Town	Community
Gambia	Kanifing Municipal Council (KMC)	Ebo Town
Senegal	Kaolack Regional Capital	Darou Salam Diamaguène
Zimbabwe	Harare	Tafara

The study is limited in that it entailed fieldwork in just three countries and research sites, and the findings cannot be generalised to country or continent level. The sample size for the survey is also small, and time constraints only allowed for the collection of a statistically representative sample in Tafara (Zimbabwe), with the result that the findings do not necessarily reflect the range of experience in the other settlements. However, the case studies provide a snapshot of the concerns and everyday experiences of poor and vulnerable people in urban communities which, when read alongside the growing body of literature on urban risk in Africa, provides insight into the urban risk environment in African towns and cities.

5. The urban risk profile in Africa

Urban populations in Africa are affected by numerous disasters. These range from acute but infrequent events such as major floods, droughts and epidemics that can kill or injure large numbers of people, through to chronic and recurrent events that may affect only a few households or individuals at a time, but cumulatively have the greatest impact on poor people. While large-scale disasters often receive media and policy attention, and generate support from governments and the international humanitarian community, small events seldom receive the same level of attention, and it is usually individual households or communities that are left to cope.

The research combined a desktop review of the literature on urban risk in Africa with the collection of primary data in selected countries, as well as data on disaster events on the continent. Case studies were developed in The Gambia, Senegal and Zimbabwe, and focused on three cities: Banjul/Kanifeng (The Gambia), Dakar (Senegal) and Harare (Zimbabwe) (Table 4.1). The study sites were chosen from either urban areas where ActionAid has a strong community presence, or is keen to work in the future on resilience building in urban areas. Figure 4.1 shows the 21 African countries in which ActionAid works, as well as the case study countries and cities.

5.1 High impact disasters in urban areas

'Large' disasters on the continent are numerous and diverse. Table 5.1 shows the frequency and type of humanitarian emergencies affecting sub-Saharan Africa between January 2000 and December 2015, as reported on the ReliefWeb website and related links. The data suggests that at least 74.2 million people were affected by at least 169 rapid- and slow-onset events triggered by identified geophysical events such as floods, storms, hail, wind and drought over this period. There were at least 88 disease outbreaks, with at least 447,588 suspected or laboratory-confirmed cases reported. Complex emergencies in the Sahel and Horn of Africa, in particular, resulted in food insecurity stemming from a combination of drought and socio-political conditions, such as conflict and conflict-related displacements, economic conditions and rising food prices.

Only some reports state explicitly whether events occurred in rural or urban areas. Table 5.1 reflects the number of humanitarian emergencies in which funding appeals and bulletins referred to the impact on major towns. Nearly half of the events reported on the ReliefWeb website entirely or partially affected urban populations.[21] The Ebola outbreak of 2014-2015, for instance, was concentrated in the capitals of Guinea, Liberia and Sierra Leone, where high population densities increased the scale of infection.[22] In addition to industrial accidents and explosions, urban areas were also affected by 'rural' hazards, such as droughts and other complex emergencies resulting in food shortages and price hikes.

Poor and vulnerable people in urban areas are increasingly affected by unrest and protests stemming from political factors and socio-economic conditions. The Regional Interagency Standing Committee for Southern Africa identifies in its humanitarian trends report the emergence of fast-paced emergencies linked to protests, riots and attacks in urban areas, and national capitals in particular.[23] Examples include operation Murambatsvina ('Restore Order') in Zimbabwe in 2005-2006, which resulted in the systematic destruction of 92,460 informal homes and 32,538 businesses across the country's towns and cities;[24] xenophobic attacks against foreign nationals in South Africa in 2008, which resulted in 64 deaths and displaced more

than 50,000 people; and food riots in Maputo, Mozambique, in 2010 in response to rapidly escalating bread prices.[25] The volatile, 'wildfire' character of these urban emergencies is exemplified by the xenophobic violence in South Africa, in 2008, which began in Johannesburg and spread rapidly to other urban centres.[26]

Table 5.1. Geophysical and epidemic-related disaster events requiring external humanitarian assistance in sub-Saharan Africa (January 2000-December 2015)

	Number of events	No. Affected	Av. Affected per event	Affected urban area (s)
Flood	124	9,799,485	79,028	72
Disease outbreak	88	447,588*	5,086*	31
Storm/hail/wind	13	44,322	3,409	2
Cyclone/tropical storm	7	223,035	31,862	5
Volcanic eruption	5	140,558	28,111	1
Complex food crisis[i]	4	39,525,215	9,881,303	1
Drought[ii]	3	14,255,348	4,751,782	1
Landslide/mudslide	3	1,898	632	1
Wild fire	3	234,896	78,298	--
Earthquake	2	9,845,705	4,922,852	2
Insect infestation	2	46,220	23,110	--
Toxic pollution	2	48,118	24,059	2
Explosion	1	14,046	14,046	1
Total	**257**	**74,626,434**	**51,119**	**119**

* Cases
Source: ReliefWeb reports and links (IFRC appeals, UN bulletins and appeals, WHO data)

Population movement between rural and urban areas (and between towns and cities) means that rural events can quickly have an impact on urban environments. Disease outbreaks provide a clear example. The Ebola outbreak of 2014-2015 originated in rural Guinea, but spread rapidly to urban areas – and across borders.[27] The 2012 measles outbreak in the Central African Republic provides another example – and illustrates the links between disasters and conflict. Here large numbers of people fleeing conflict in areas hit by the epidemic migrated to the capital, Bangui, raising fears of a large-scale epidemic. Outbreaks were reported in several towns and in Bangui, but immunisation campaigns may have assisted in reducing the extent of the epidemic.[28]

In the context of rising global and continental connectivity, increasingly disasters also have international and regional dimensions. The Regional Interagency Standing Committee for Southern Africa for instance, argues that economic integration in the southern Africa region has increased exposure to global economic shocks. It links political and social violence in Southern Africa, including Mozambique, Madagascar, South Africa and Zimbabwe between 2007 and 2009 to global fuel and food price volatility and economic recession. The study also shows that migration, associated strongly with worsening economic and political conditions in Zimbabwe, had knock-on effects for the whole region, and may have contributed to the xenophobic attacks witnessed in South Africa in 2008.[29]

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i   Complex food crisis refers to food insecurity resulting from a combination of meteorological, socio-economic and/or socio-political factors. It is distinguished from drought, and related food insecurity, which is due to meteorological conditions. Numbers affected for both drought and complex food crisis reflect peak rates.

ii   Numbers affected reflect peak rates.

5.2 The importance of 'small' disasters in urban areas

In addition to these large-scale events, 'smaller' disasters play an important role in driving poverty in urban areas. Unlike the severe and widespread losses typically associated with 'disasters', these smaller events may affect only a few individuals or households at a time, but are more frequent and cumulatively injure and impoverish more people than larger events.[30] They are strongly linked to socio-economic conditions. Examples include shack fires ignited by candles and kerosene stoves used in overcrowded informal settlements without electricity; localised flooding associated with bad infrastructure and poor water management; and food insecurity, linked to an inability to buy rather than produce food. Levels of crime and violence, including violence against women and children, are also high in many cities.[31] A recent Demographic Health Survey in The Gambia, for example, shows that 41% of urban women interviewed had experienced physical violence at some point in their lives, while 4.6% had experienced sexual violence.[32]

It is critical to recognise and consider these types of events and their effects when working on resilience-building. Recurrent shocks drain the financial, social, physical and human resources available to poor and vulnerable people, simultaneously undermining their ability to realise their basic human rights, and decreasing their ability to withstand, recover from and adapt to disasters (large and small). For example, research in South Africa shows that households in informal settlements and low-cost formal housing experiencing recurrent seasonal flooding can spend between 50-60% of their monthly income on medical bills, repairs and replacing items. People are forced to draw on savings, borrow money or cut back on food or other necessities to cover the shortfall, all of which undermines their physical and economic ability to handle both immediate and future events.[33] Frequent small-scale disasters may also reduce people's willingness to mitigate the effects of hazards, as risk becomes an accepted and normalised feature of life.[34]

5.3. The implications of climate change for risk

Climate change is aggravating existing risks and creating new ones. The effects of climate change in Africa are as varied as its diverse environments and climates, but include changing temperatures, more intense storms, variable and unpredictable weather and increased occurrence of drought. UN Habitat states that climate change presents an immediate threat for African cities, as many large cities lie in coastal areas and are especially vulnerable to rising sea levels, saline penetration, storm surges, flooding and coastal erosion. Urban populations are also affected by changes in the availability and cost of food, water, energy and transport.[35] Adverse environmental conditions such as drought also increase migration to urban areas, as rural livelihoods suffer.[36]

6. Insights from the case studies

This section examines key findings emerging from the case studies. With reference to both global and African literature on urban risk, it focuses on the nature of the risk environment in the three communities, including key hazards, and the factors increasing both poor people's exposure to hazards and vulnerability to their effects.

6.1 Hazards and disasters in the case study communities

The research identifies a diverse risk environment featuring numerous hazards. Table 6.1 shows key hazards identified by focus group discssion participants. These include flash-flooding; standing water; poor environmental health due to the accumulation of rubbish and human waste; and disease. In Senegal and Zimbabwe unemployment was identified as a key hazard (as opposed to a risk driver), as it underpins a range of negative outcomes such as crime, prostitution and domestic violence, food insecurity, girls dropping out of school and psychological issues. It is noteworthy that all three of the case study communities were poor formal areas as opposed to informal settlements – although as elsewhere in Africa, the distinction between informal and formal settlements is increasingly blurred, as shacks spring up around formal dwellings. This is important, as discussions on risk in Africa (and elsewhere) tend to focus on informal settlements, while these case studies highlight the importance of also examining and addressing risk in low-income formal neighbourhoods.

Communities in the case study areas related numerous disaster events associated with the hazards they identified, most of which fall in the category of 'small' disasters. Table 6.1 summarises disaster events identified during the focus group discussions. These ranged from floods to repeated disease outbreaks. In Tafara, in Zimbabwe, they included events linked strongly to deteriorating economic and political conditions. These included the closure of local industries and shrinking job opportunities in nearby suburbs, which resulted in job losses and significantly undermined people's livelihoods in the area.

Table 6.1. Shocks and hazards prioritised during focus group discussions

Community	Disasters identified by communities	Priority hazards impacting most on well-being
Ebo Town KMC	• Major floods (1987, 2010, 2015) • Flash flooding (since 2010) • Malaria outbreak (1979 – 1985) • Chickenpox outbreak (2000, suspected 2015) • Cholera outbreak (2005)	• Flooding • Standing water (source of disease) • Poor environmental health (waste dumping and accumulation)
Tafara Harare	• Cholera (2008) • Typhoid (2009) • Diarrhoea outbreak (2014) • Closure of local industries (2006 – 2010)	• Inadequate access to water • Water and vector-borne diseases • Unemployment • Crime, drug abuse and violence
Darou Salam Diamaguène Kaolack	• Major floods (2006, 2010) • Diarrhoea outbreak (2010)	• Inadequate access to water • Flooding (resulting in isolation)

The survey highlighted a similar array of hazards in each country. Figures 6.1 to 6.3 below, show the hazards identified by those who answered the question in Ebo Town (The Gambia, Figure 6.1), Tafara (Zimbabwe, Figure 6.2) and Darou Salam Diamaguène (Senegal, Figure 6.3). In Ebo Town people were most concerned about flooding and disease, but also prioritised windstorms, which resulted in houses collapsing and unemployment. In Tafara people identified water, sanitation and hygiene (WASH) concerns stemming from a lack of services such as clean piped water, unemployment and food insecurity, while in Darou Salam Diamaguène they prioritised unemployment and flooding. Respondents in all three communities also identified crime and violence as concerns.

Figure 6.1. Hazards of greatest concern to survey participants in Ebo Town (% of responses) (n=42)*

Legend:
- Flood
- Disease
- House collapse
- Unemployment
- Loss of earner
- Other
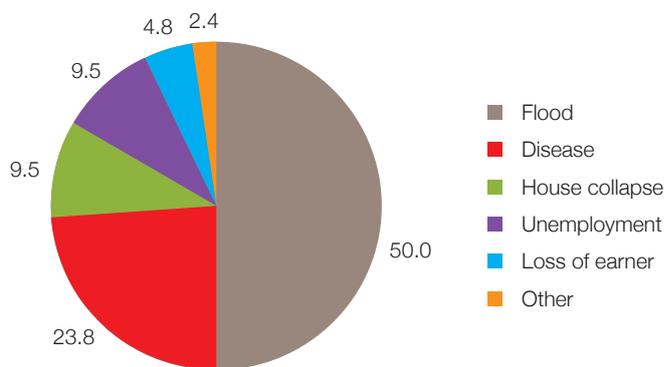
Figure 6.2. Hazards of greatest concern to survey participants in Tafara (% of responses) (n=66)*

Legend:
- WASH
- Unemployment
- Food insecurity
- Crime/conflict
- Tenure/land rights
- Loss of earner
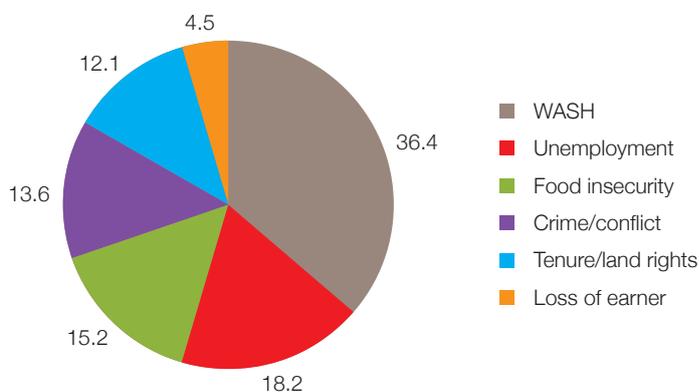
**Figure 6.3.** Hazards of greatest concern to survey participants: Darou Salam Diamaguène (% of respondents) (n=54)*

Legend:
- Unemployment
- Flood
- Disease
- Crime / conflict
- Other
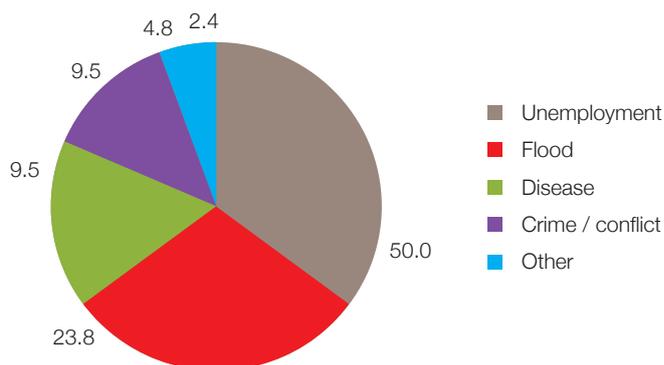
*Missing values
have been removed*

Hazards are often interrelated. In Senegal and Zimbabwe, for instance, inadequate access to clean, potable water results in the use of unsafe water, or rationing. This in turn contributes to communicable diseases, such as diarrhoeal outbreaks, by preventing basic hygiene practices such as hand washing. In both Senegal and Zimbabwe, women and children sometimes fall victim to crime while fetching water. Water collection is also a source of conflict, within the home and at communal taps. These findings demonstrate a dynamic relationship between environmental, social, infrastructure, institutional, and economic factors and impacts.

6.2. Conflict and violence in the case study areas

As noted already, crime and violence were identified as key concerns, undermining poor people's resilience in the communities studied. The survey provides additional insight into people's experiences of crime and violence in the three research sites. The survey identified water diversion and waste dumping as the main source of conflict in The Gambia's Ebo Town. This refers specifically to the problem of 'waste flushing', where people dump household and human waste into drains and waterways in the hope that it will be carried away when it rains, or the practice of (intentionally or unintentionally) diverting wastewater or sewage onto other people's property. Competition over water resources, especially at taps and boreholes, was the primary source of conflict in both Tafara in Zimbabwe and Darou Salam Diamaguène in Senegal. Domestic violence was also a key concern in all three areas, but particularly in The Gambia and Senegal.

The data indicates differences in perceptions between people living in female and male-headed households. Respondents living in male-headed households were more likely than those living in female-headed households to identify domestic violence as a concern (70% and 24% respectively in Senegal and 34% and 17% for The Gambia), suggesting that male household heads were often responsible for domestic violence. In Senegal, people living in female-headed households were also more likely to prioritise water conflict as a key problem (76.5% as opposed to 29.6% in male-headed households). In The Gambia, respondents from female-headed households were also more likely to identify conflict over waste flushing and diversion as problems (83% versus 63% of those in male-headed households (see Appendix 3 for demographic information).

Table 6.2. Types of conflict identified by survey respondents*

	The Gambia		Senegal		Zimbabwe		Total	
	Count	%	Count	%	Count	%	Count	%
Water conflict	0	-	21	47.7	34	75.6	55	39,6
Domestic violence	14	28.0	23	52.3	5	11.1	42	30,2
Water diversion/ dumping	35	70.0	0	-	0	-	35	25,2
Sexual Abuse	0	-	0	-	2	4.4	2	1,4
Other	1	2.0	-	-	4	8.9	5	3,6
Total	**50**	**100**	**44**	**100**	**45**	**100**	**139**	**100,0**

* Missing values have been removed

Other studies also highlight the rise of conflict over water sources. A recent report by Human Rights Watch on water and sanitation in Harare, Zimbabwe, identifies violence at water sources as a significant barrier to accessing water.[37] Tensions erupt as people stand in line for water, which often results in physical altercations, sometimes involving weapons. The report suggests that although the fights are generally between men, they particularly prevent women and children from collecting clean water. In order to avoid violence, women

reported that they avoid going to boreholes and instead use poor-quality tap water, or walk to more distant sources in the hope of finding a shorter queue. This exposes poor households to the risk of water-borne diseases. It also increases the burden on women and children, with knock-on implications for their health and activities such as schooling – all of which has an effect on their ability to withstand future hazards and disasters.

Women and children often have to collect water in poor urban areas.
PHOTO: TINE HARDEN / ACTIONAID

6.3. Factors driving risk in the case study areas

In keeping with experience elsewhere in Africa, a range of structural, institutional and economic factors serve to increase risk for people in the case study communities. These include limited access to basic services; little governmental capacity, poor planning and oversight; and high levels of unemployment. There are also social factors, or practices and attitudes that amplify risk.

6.3.1. Inadequate access to basic services and infrastructure

Inadequate investment in infrastructure and basic services heightens the risks faced by poor and vulnerable people in many towns and cities.[38] Government institutions are often under-resourced, particularly locally, where inadequate human and financial resources prevent authorities from expanding, maintaining and upgrading critical infrastructure, and providing adequate basic services. Services such as reliable waste management are largely absent, with solid waste accumulating within settlements and around rivers and streams.[39] Water and sanitation infrastructure is limited, with only 42% of the urban population in sub-Saharan Africa having access to sanitation facilities.[40] Drainage systems are frequently inadequate, and in more than half of informal settlements on the continent, residents are not connected to electricity networks and have to rely on expensive and environmentally unsustainable energy sources such as gas, paraffin, diesel, coal and wood.[41]

This lack of basic infrastructure increases poor people's exposure to hazards in a number of ways. For example inadequate, poorly maintained or non-functioning stormwater and drainage systems increase the potential for flooding, while insufficient sanitation infrastructure and the accumulation of solid waste increases the risk of harmful contamination of floodwater. Denuding forested areas for firewood can also increase the risk of flooding, as vegetation absorbs rainwater runoff that could otherwise result in flooding.[42] Inadequate access to other essential services, such as primary healthcare, also makes communities more vulnerable – making even treatable illnesses such as diarrhoea lethal.

Poor rubbish and waste management

Poor solid waste management was identified as a critical risk driver in both Senegal and The Gambia. In Ebo Town, The Gambia, the dumping and accumulation of household waste poses a key risk to health, wellbeing and the environment. Some better off members of the community employ waste carriers to take their waste to dumpsites, but poorer residents' coping strategies sometimes increase risk. These can include burying or burning rubbish, and 'waste flushing'. As noted already, the latter is a source of conflict between those flushing waste and those living close to drains and watersheds, especially where people dump sewage.

In addition to increasing the risk of flooding and flood-associated health effects, the accumulation of waste increases the risk of diseases carried by flies and rodents. Illness not only drains financial resources as people have to pay medical expenses and miss work, it also reduces their physical resilience to disasters. It is more difficult for sick people to evacuate their home in an emergency, for example, and they may lack the strength to cope, for example, with floods and their effects. Chronic illness also has a negative effect on schooling, and in the long term, livelihoods.

Inadequate access to clean water and sanitation

Inadequate access to water is also a key issue in all three communities. In Darou Salam Diamaguène, Senegal, a community of over 4,000 people share just three communal standpipes, with the water supply only lasting for a few hours each day. To ensure sufficient water for household use, women and children begin queuing from as early as 4am. Water supply in Harare, Zimbabwe, is also severely lacking. It is estimated that Harare requires 1.2 billion litres of water daily, but the city only has the capacity to provide roughly half of that, or 620 million litres.[43] A study conducted by the Harare Residents' Trust in Tafara and other suburbs indicates that taps frequently run dry, and water is often contaminated with sewage and pollutants, forcing residents to use borehole water and unprotected wells.[44] In another study, women in some suburbs of Harare report having not had access to piped drinking water for weeks.[45]

The case studies in Senegal and Zimbabwe also highlight the consequences of water problems for school children. In Darou Salam Damaguène, Senegal, the local school has neither piped water nor toilets. Children are sent to collect water for their school, missing out on hours of class time. Children also reported that they sometimes avoid drinking at school due to the lack of toilets. In Tafara, Zimbabwe, some schools depend on poor quality water, exposing children to both erratic water supply and contamination. Research by Human Rights Watch in another suburb found that girls were particularly affected by inadequate access to clean water and toilets. It found that menstruating girls face numerous challenges. These include difficulties in disposing of sanitary pads, a lack of toilet facilities and little provision for hand washing, all of which undermine both their dignity and health – and sometimes prevents girls from going to school at all.[46]

Woman doing washing in the
streets of Kibera in Nairobi, Kenya
PHOTO: ACTIONAID

Poorly designed and maintained infrastructure

The case study in The Gambia showed that poorly designed infrastructure can also increase the risk of flooding. The Ebo Town Highway, for instance, does not have an adequate drainage system, with the result that rainwater flows off the road surface and into surrounding houses. This damages homes and property, incurring financial costs for affected families. Households living along the highway report that flooding emerged as a problem only after the road was built. Poor drainage infrastructure is also a more general problem in Ebo Town. Water tends to accumulate and stagnate in shallow, uncovered and poorly maintained gutters, heightening the risk of malaria and water-borne communicable diseases.

6.3.2. Governance constraints and limitations

An important underlying cause of disaster risks in many towns and cities is often weak governance. This is often linked to a failure by governments and international agencies to support the policy frameworks and systems necessary to improve service delivery (as well as resources for preparedness and response).[47] Weak governance also increases people's risk in other ways. While building codes, zoning and land use planning are critical to addressing urban risk,[48] research in Tanzania, for instance, shows that regulations aimed at preventing development in hazard-prone areas are poorly enforced, while weak communication and coordination mechanisms within the government system encourage non-compliance with provisions and plans.[49] The lines of communication, responsibility and accountability among key actors are also weak, with ward-level and local government actors often disregarding policies, procedures and directives. Attitudes on the legitimacy of informal settlements also discourage action. Informal settlements are frequently considered illegal, or the landowners' problem, and there may not be the political will to address risk in these areas.[50]

Weak risk governance

In Senegal, government officials highlighted non-recovery of taxes, and the resulting loss of revenue, as a particular barrier to service delivery. In Harare, officials attributed the huge water deficit primarily to inadequate resources and poor management. This was attributed to high levels of illegal use and non-payment for services, which reduces revenue, as well as a failure to ring-fence water revenue in council accounts, which results in money for water-related services being spent elsewhere. Other factors include leaks due to poor maintenance and ageing infrastructure, as well as corruption and a lack of political will to address problems.[51]

Given the numerous and interrelated risks faced by communities in African countries, reducing risk requires a holistic approach that integrates action across sectors, but there is often weak inter-sector coordination and collaboration. This issue is seen most overtly in Zimbabwe, where competition between political parties at the ward level is preventing collaboration to reduce risk. Risk reduction is also not always understood or prioritised in some countries, squandering opportunities to build people's resilience. For example, although participative local governance structures in The Gambia provide entry points for lobbying and action on risk reduction and resilience-building, in practice there is little recognition of the urgency of risk reduction at this level.[52] Despite pressure from the community, councillors have also failed to lobby for improvements.

Insufficient urban planning and oversight

The Gambian and Zimbabwean case studies also highlight the role of inadequate urban planning in increasing poor people's exposure to hazards. In The Gambia, for example, much of Ebo Town is built on a swamp. The area is, unsurprisingly, flood-prone, and flooding in 2002, 2005, 2006 and 2007 resulted in the loss of lives and property, and contributed to food insecurity.[53] The research findings on building collapses also suggest poor building standards and regulation. In Tafara, in Zimbabwe, private developers and housing cooperatives have built new formal housing in dried riverbeds and wetlands, as well as on land set aside for in-fills, exposing these new developments to flooding. The proliferation of unsanctioned, unprotected wells has also contributed to the threat of waterborne diseases, as the water is often contaminated by wastewater from pit latrines.
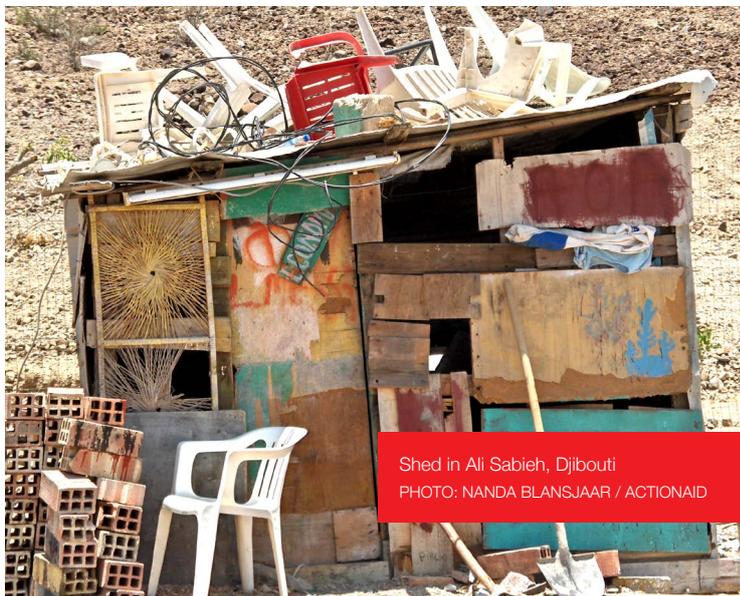
Shed in Ali Sabieh, Djibouti
PHOTO: NANDA BLANSJAAR / ACTIONAID

The Zimbabwean case study also highlights weaknesses in governmental oversight of private developers and housing cooperatives. In addition to the obvious failure in applying planning laws in the location of private housing developments, developers have not been held accountable for pollution released into nearby rivers during construction. Pollution and over-exploitation of water resources by industry have also gone unchecked, with one factory reportedly extracting so much water that groundwater levels dropped. Inadequate oversight of the environmental consequences of

urbanisation is a challenge throughout the continent. In Uganda, for example, the reclamation of wetlands by commercial property developers and industry has disrupted natural drainage systems and polluted surface and groundwater.[54] In Dar es Salaam, Tanzania, toxins from a disused solid waste dump in one area have leached into the groundwater on which the local community depends.[55]

The implications of 'urban' definitions for service delivery planning and delivery

Zimbabwe's urbanisation trends have shown a slight decrease in urban population (from 35% in 2002 to 33% in 2013).[56] However, these changes can be largely attributed to issues around definition. The majority of the growth in the urban population has occurred on the periphery of towns and cities, in areas not officially recognised as urban. This growth in peri-urban areas leads to an underestimation of the number of people making use of urban services and resources, with implications for planning and service delivery.

6.3.3. Unemployment and limited livelihood opportunities

Insufficient livelihood opportunities, and unemployment in particular, hamper people's ability to protect themselves, their homes and possessions against the effects of hazards in both the short and long term. Although poor people from urban areas sometimes engage in subsistence agriculture or exploit natural resources, most depend primarily on purchasing food and necessities. A loss of income, or a lack of earning opportunities, can have immediate implications for food security, health and access to services, education and healthcare. In 2009, for example, Zimbabwe's Vulnerability Assessment Committee noted that 33% of urban households were food insecure. This insecurity was driven largely by the macro-economic situation in Zimbabwe, with major stressors including: unemployment, reduced salary or the sickness or death of a household member, as well as low cash withdrawal limits, high utility bills and high food prices.[57]

Unemployment represents a particular challenge for young people. In South Africa, for instance, the International Labour Organisation estimates that more than half (57%) of females and slightly less than half (49%) of males between the ages of 15 and 24 are unemployed.[58] Young people in African cities are also more likely to work in the informal sector, and are less likely to be wage-employed or self-employed, especially those living in informal settlements.[59] Women tend to earn less than men, and are more likely to work in semi-skilled, short-term and insecure jobs.[60] There is very little data on unemployment rates in urban areas, but the African Development Bank estimates that on average, unemployment levels are as much as three times higher in urban areas than rural ones.[61]

Unemployment and the 'youth bulge' in Africa

Age structures in African countries show large numbers of young people, with a significant 'youth bulge' in the 15-24 year age group, particularly in sub-Saharan Africa. While recent research finds only mixed support for the frequently cited link between this bulge and levels of unemployment (and increasing political unrest), the continued growth of the population below the 24-year age group will be a challenge as African countries attempt to improve economic outcomes for young people.[62] UN Habitat's 2014 *State of African Cities* report argues that while the youth bulge presents challenges, it also provides an opportunity for the sub-region, as it provides a labour pool for growth and a potential base for political transition towards stronger democratic practices.

As discussed already, unemployment was identified as a key risk in both Senegal and Zimbabwe. Communities argued that this makes them more vulnerable to any increase in the frequency or intensity of adverse weather conditions, disease prevalence, reduced water supplies or food price rises. In Senegal, young people attributed high unemployment to inadequate education and training and limited job opportunities (Table 6.3). In Zimbabwe, unemployed young people and women have largely turned to petty trading and vending to earn an income. However, a lack of dedicated spaces for trade means that businesses spring up wherever there is room. This contributes to overcrowding, and traders and vendors run the risk of being arrested for illegally occupying space.[63] People often store their goods in drainpipes and culverts, which can also contribute to flooding. It also exposes traders and vendors to hazards. For example, women traders with small children often have little choice but to work in areas where their children could be injured by vehicles, and they must play and eat in unclean environments, increasing their risk of contracting diseases and infections. Traders and their children also often suffer from respiratory problems associated with traffic-related pollution. Women and children sometimes experience crime and violence. Street vendors in Ethiopia, for instance, report living in fear of robbery, theft and sexual assault.[64]

Table 6.3. Measures to reduce unemployment identified by youth in Darou Salam Diamaguène (Senegal)

Interest group	Solution
Students	• Scholarships • Solar panels for lighting to read at night • Extra lessons/after school classes • Bicycles (for transport to school)
Workers	• Sourcing additional financing of or investment in the income generating activities • Capacity development • Expansion of income generating activities
Both	• Awareness raising about sexual transmitted diseases, violence against women, drugs and local development. • Establishment of youth organization. • Development of sports and recreation facilities

6.3.4. Attitudes and values

Beliefs, values and attitudes play an important role in shaping both risk and how people understand and respond to disasters. They can increase and decrease both exposure and vulnerability, and serve to make some groups more resilient than others. This is particularly so where beliefs and behaviours are embedded in power systems that allocate risk unequally between different groups of people.[65] For example, beliefs regarding the roles of men and women in society often afford women less access to risk-reducing knowledge, resources, skills and services, while women looking after children may be less mobile during emergencies. Women often tend to have less voice than men, and as a result, their needs and priorities are rarely considered or addressed in temporary or resettlement accommodation.[66]

In Ebo Town, waste disposal practices such as 'waste flushing' contribute to the hazardous accumulation of refuse and waste. This endangering behaviour can be partly attributed to inadequate facilities and poor enforcement of laws against littering and dumping. The research also highlights a lack of knowledge on how to manage waste at the community level, suggesting that more can be done to empower people in the area to deal with waste more effectively. However, this practice also suggests that people prioritise their own immediate needs rather than working collectively to reduce risk in the area as a whole. This is a particular challenge in urban areas, where 'communities' are especially fluid and fragmented, but profound and sustainable risk reduction is only possible where individuals and communities hold each other to account.

The research also highlights other practices shaping the risk environment. In Senegal, for instance, male water-carriers tend to monopolise water sources to the disadvantage of women (and children). Taps are also some distance from settlements and one another, suggesting inadequate sensitivity to the needs of women in planning and resource allocations. Both these challenges impact negatively on women's ability to collect sufficient water for their families, and put them at high risk of violence.

Waste dumping in Ebo Town in Banjul, The Gambia.
PHOTO: VIMBAI CHASI / ACTIONAID

7. Resilience initiatives and innovation

While there are numerous risk drivers in African towns and cities, there are also numerous initiatives to support resilience-building throughout the continent. At the governmental level, these include a growing commitment to, and capacity for, disaster risk reduction and response, as well as social protection mechanisms aimed at supporting vulnerable groups. Examples include the Child Grants Programme in Lesotho, the Social Cash Transfer Programme in Malawi, expansion of Social Welfare Grants in Namibia and a School Bursary Scheme in Swaziland.[67] As will be shown in this chapter, individuals and households are also implementing strategies to reduce their vulnerability, particularly to economic shocks and stresses.[68]

7.1. Governmental programmes and capacities

Institutional capacity represents a serious challenge to resilience in African countries, but governments are increasingly acknowledging the importance of risk reduction to enhance resilience. An increasing number of countries have established and funded national disaster management authorities, indicating a national commitment to disaster risk reduction and adaptation.[69] Universities are also helping to build local capacity. In Ethiopia, for instance, Bahir Dar University's Institute of Disaster Risk Management and Food Security Studies has trained over 451 students since 2005, most of whom (62%) now work in government.[70] Many local authorities, including those in Cape Town, Durban (South Africa), St. Louis (Senegal), Maputo (Mozambique), Dar es Salaam and Arusha (Tanzania), Kisumu and Nairobi, (Kenya), Bujumbura (Burundi) and Kigali (Rwanda), have also joined the United Nations Office on Disaster Risk Reduction's (UNISDR's) *Making cities resilient: "My city is getting ready"* campaign, which holds mayors accountable for strengthening their city's resilience to climate change.[71] These efforts to strengthen risk reduction and adaptation provide entry points for tackling the governance aspects of risk.

7.2. Community-level strategies

At the individual and household levels, research identifies petty and cross-border trade as important in building resilience to economic shocks and stresses. While discussions on employment often identify work in the informal sector as a risk, the Regional Interagency Standing Committee for Southern Africa argues in its humanitarian trends study that informal trade networks at regional and sub-regional levels are essential in buffering poor households in southern Africa against shocks and stressors.[72] This is illustrated in Tafara, Zimbabwe, where the research identified informal and cross-border trade as an important coping strategy in the face of diminishing job opportunities. In both Senegal and Zimbabwe, the research also identified small-scale urban agriculture as an important livelihood strategy. Supporting informal sector growth is likely to empower women and young people in particular, who are more likely to work in these areas.[73]

However, the expansion of informal activities also poses challenges in terms of protection. As noted already, a lack of safe, designated spaces for trade increases the risk of negative consequences for women and young people involved in informal trade. Community-based research by the Resilient Africa Network in Tamale informal settlement, in greater Accra, Ghana, also shows that children are sometimes drawn

into petty trade in order to supplement household incomes,[74] preventing them from going to school and exposing them to dangers such as traffic and crime. This highlights the importance of creating an enabling environment for informal sector activities that provides safe spaces for trade, while also supporting poor households to keep their children in school.

There are also community-based initiatives supporting risk reduction and resilience-building. In Tamale, for example, residents form neighbourhood watch committees and exchange telephone numbers so they can contact each other easily in times of distress. Community members have also organised communal labour efforts to clean up rubbish and waste in an effort to improve environmental health conditions. In Kampala and other urban areas in Uganda, the National Slum Dwellers Federation of Uganda (an affiliate of Slum/Shack Dwellers International) has mobilised community resources to upgrade sanitation infrastructure and to leverage funding from other partners, including the government. They have also mobilised communities to identify and address key risks, as well as implementing projects aimed at supporting livelihoods and climate change adaptation. These include the manufacturing of briquettes from banana peels to provide a sustainable fuel source (rather than cutting down trees for wood), developing innovative building materials, and implementing strategies to use water more efficiently in informal settlements.[75]

ActionAid is also working to improve the safety of women and girls in urban areas. Its *Safe cities* initiative seeks to address violence against women and girls on the streets, in public transport, at school or work, and in markets and other public spaces. In Liberia, for instance, ActionAid is implementing a programme to improve the safety of women attending university, after research showed that female students in Monrovia experienced numerous forms of violence travelling to and from university and on campuses. Measures include establishing and strengthening women's forums in universities and communities; supporting advocacy efforts with government ministries and other stakeholders; strengthening the national taskforce against Sexual and Gender-Based Violence to address issues relating to sexual violence against women in public spaces; as well as local and national awareness campaigns.[76]

PHOTO: SØREN BJERREGAARD / ACTIONAID

7.3. Mobile phones as a tool for resilience building

The rapid expansion of mobile phone use and other information and communication technologies (ICT) presents opportunities for resilience-building. The mobile industry in sub-Saharan Africa is scaling up rapidly. It is estimated that there were 367 million subscribers in mid-2015, with mobile phone ownership highest in urban areas. Figures published by the International Telecommunication Union suggest rates of 71.1 mobile subscriptions per 100 people in sub-Saharan Africa (Figure 7.1), with several countries showing well over 100, including The Gambia (119.6). Tech innovations have gained momentum, and Kenya, in particular, has led innovations in areas such as mobile money (M-Pesa) and crowdsourcing.[77] Unfortunately, there are few statistics on the uptake of cellular technology by women, although research suggests that women are 13% less likely to own mobile phones than men, largely because they are less able to afford them.[78] Nonetheless mobile

phones represent a resource for trade and information, as well as cash, and for mobilising social networks in times of duress.[79] In South Africa, for example, banks offer an "e-wallet" service that allows users to instantly transfer money, with recipients using a pin number to withdraw money at an ATM (even if they do not have a bank account).

Figure 7.1. **Number of mobile subscriptions (per 100 people) by geographical region (2001-2014)**

- Central Europe & Baltics
- East ASia & Pacific
- Europe & Central Asia
- Latin America & Caribbean
- Middle East & North Africa
- Pacific island small states
- Sub-Saharan Africa

Source: International Telecommunication Union, World Telecommunication/ICT Development Report and database
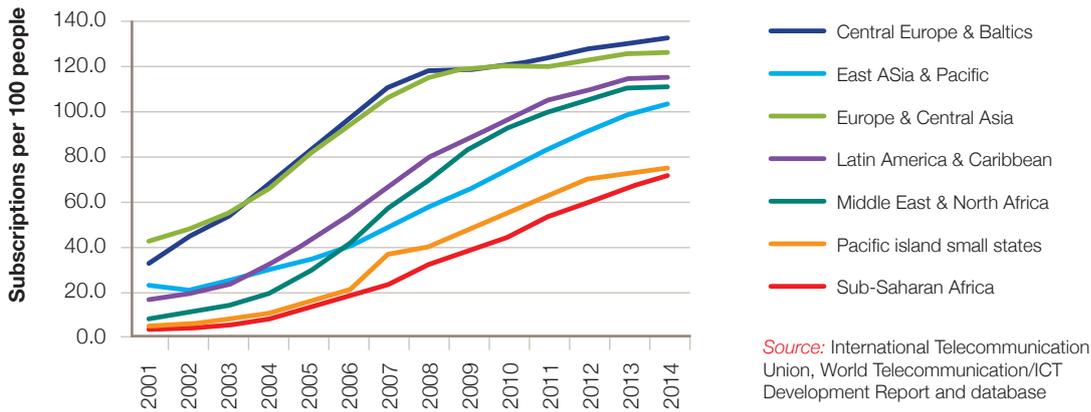
Mobile phones and other ICTs are increasingly used to support disaster risk reduction and response globally. In Kenya, the Ushahidi initiative uses posts by members of the public to map and report violence, and was developed after the post-election violence outbreak in 2008. In Madagascar, the government is piloting an SMS early warning system where messages are sent to local leaders and telecom providers to warn of impending cyclones. In Zimbabwe and Uganda, Taarifa, a smart phone-based tool, allows citizens to inform the authorities of local sanitation and drainage concerns, while the Map Tandale initiative in Tanzania provides local residents with GPS devices to map their communities.[80]

Mobile telephones are also being harnessed in other ways. In Madagascar, for example, the free on-demand 3-2-1 service provides information on a range of topics, including a module on gender-based violence. This toll-free service provides legal advice and identifies sources of help, and is available 24 hours.[81] In Ghana and Nigeria, the Grameen Foundation initiated a free Mobile Midwife service, which uses SMS or voice messages to provide women with relevant information throughout pregnancy and the first year after birth.[82] Offering a voice option makes the service accessible to women with low literacy levels. In The Gambia, ActionAid organised smallholder farmers in an early warning system committee and provided them with mobile top up funds to communicate their early warning observations regarding changing weather patterns to other farmers in the area. Also in Kenya, ActionAid has used mobile phones to share vital information on food and livestock prices and food distribution during and after the 2011 drought crisis, which opened up possibilities for communities to communicate with ActionAid on a more equal footing.[83]

8. Conclusion and recommendations

The risk environment in African cities and towns is complex and diverse. As this report begins to show, poor urban communities in Africa encounter a range of hazards, from floods to epidemics to crime and violence, and the poorest and most vulnerable people must cope with both acute, large-scale disasters and recurrent 'small' events. These erode resources and undermine efforts to end poverty and injustice on the continent. Disaster risk in urban areas is strongly linked to developmental conditions. Insecure livelihoods; a lack of basic infrastructure and services; poor urban and land use planning; and inadequate oversight and low accountability for the provision of infrastructure and basic services increase exposure to hazards, and vulnerability to their effects. A monetised economy leaves poor households particularly vulnerable to changes in the availability and cost of food, water, energy and transport.

These constraints mean that most governments in Africa and developing countries, and poor people in urban areas, have very little capacity to adapt to climate change.[84] Governments that lack the resources or political will to provide even basic services, for instance, are unlikely to upgrade infrastructure to make settlements more resilient to variable and changing weather. They are also unlikely to have the capacity to assess and respond to the long-term impacts of climate change.[85] Inadequate incomes also hamper poor people's ability to protect themselves, their homes and possessions against adverse environmental conditions in both the short and long term. This makes them very vulnerable to any increase in the frequency or intensity of storms, disease prevalence, reduced water supplies or food price rises.[86]

Reducing risk and building resilience to disasters in urban areas requires tackling the deficits that underlie it. Addressing existing risk drivers, particularly inadequate service delivery, unemployment and governance failures, are critical in improving resilience in both the short and long term.[87] People must have reliable and well-maintained infrastructure and services, which protects them, and enhances their ability to cope with and recover from disasters. Boosting household incomes also provides people with more resources to address risk. Interventions aimed at building the resilience of poor urban communities to disasters must not only seek to build the resilience of populations exposed to hazards, but also to facilitate and support efforts by governments to reduce risk. It is equally important that governments are held to account through transparent, responsive and proactive governance structures.[88] Efforts to build resilience must also include the private sector, as practices by businesses and developers can contribute to risk, through pollution for example. The expertise and resources can also contribute to risk reduction through public-private partnerships.

Population densities, and the complexity of the urban environments, create both obstacles and opportunities for risk reduction and resilience building. For example, working in urban areas requires engaging a wide range of stakeholders, including diverse government institutions and communities, the private sector, and NGOs and CBOs. As illustrated in Ebo Town, a high concentration of people also places a premium on good citizenship, but this is especially difficult to achieve in urban areas, where communities tend to be fragmented and fluid, making it harder to hold people to account. But the concentration of people also reduces the cost of measures, as well as the reach of interventions.[89] The connectivity of urban populations, including greater access to mobile phones and other ICTs, also provides opportunities for reaching and mobilising vulnerable people.

This section draws together the findings of the research and literature and suggests measures to reduce risk and increase the resilience of the urban poor to disasters on the African continent. The recommendations aim to enhance resilience-building actions by a broad range of role-players. These include humanitarian and development actors like ActionAid.

8.1. Empowering communities to identify, reduce and manage risk

Addressing risk at the community level requires empowering communities to identify risks and risk-drivers, as well as their own capacity – what they can do to reduce their exposure to hazards and vulnerability to their effects. In The Gambia, for example, this could include exploring ways of reducing the amount of household waste generated, and guidance on how to dispose of waste safely. Establishing democratic institutions, such as waste pickers' associations, savings and investment clubs, art clubs, community safety forums and recycling co-operatives, could also encourage active citizenship, and facilitate networking across social and economic divides.[90]

Relatively simple interventions provide opportunities for addressing a wide spectrum of issues. In Accra, for example, the University of Ghana initiated a project with Nigerian refugees that simultaneously addresses flood risk, creates livelihoods and empowers marginalised people. In the context of water vendors and their customers discarding plastic water bags in drains and gutters, they formed a women's group to collect and recycle plastic, improving the functioning of the drainage system, while also providing an income for vulnerable refugee women.[91] Similarly, given warming temperatures, for instance, improving informal food vendors' capacity to refrigerate and store fresh food could also provide an entry-point for providing information on food safety, nutrition and health.[92]

This requires:

- Engaging communities to better understand the risk landscape, and working with them to develop technically sound, community-driven and innovative projects to address hazards and risk drivers. Risk assessments should seek to understand the extent to which social and other conflict affects poor people's access to basic services and needs such as food, water and energy, and how these blockages can be addressed.

- Empowering communities to advocate for change. These processes should seek to ensure that vulnerable groups are identified, engaged and supported to address the drivers of risk. They should also strike a balance between mobilising communities to find their own solutions, and putting pressure on governments to provide basic services.

- Promoting values of good citizenship. Alongside efforts to realise the rights of poor communities, NGOs, CBOs and governments should focus on helping people to understand how individual actions can negatively affect the larger community. This includes building a stronger sense of community, in which people work together to reduce risk and respond to disasters, and identify and support the most vulnerable people.

8.2. Supporting governments to reduce risk

Governments have a responsibility to provide services and infrastructure, support and protect vulnerable people, and build resilience. But local governments in particular often have limited human, financial and

technical resources. Building resilience requires building the capacity of governments, especially local governments, to identify and address risk drivers, both in the short and long term. Universities provide a valuable resource for deepening capacity, and many tertiary institutions in African countries are developing degree and short-course programmes on risk identification, reduction and management informed by local risk conditions. Tackling risk holistically and developmentally requires work across government institutions, including departments responsible for basic services, and planning and technical functions. This, in turn, requires generating awareness and ownership of risk reduction strategies, and promoting coordination across sectors.

It is necessary too, to strengthen the capacity of local authorities to provide services and infrastructure, while at the same time addressing constraints such as weak accountability and poor management of resources. Social audits provide a mechanism for improving oversight of how funding is used. They are like participatory monitoring processes, and have been used globally to improve accountability at a range of levels, including of governments. In Ghana, for example, social audits involving communities and advocacy groups have helped to monitor school feeding schemes, and improve access to water, toilet facilities, and health and education services. In South Africa, NGOs and communities in Cape Town have used social audits to highlight serious inadequacies in sanitation infrastructure, with city authorities now acknowledging that their sanitation plans need to be improved and monitored better. Social audits have also been used to monitor spending on HIV and AIDS.[93] ICTs provide opportunities for social auditing; the Sinar Project in Malaysia, for instance, runs an Open Spending website that examines how government funds allocated for disaster relief and recovery are being used.[94]

Strengthening capacity to reduce risk requires:

- Identifying and tapping existing capacities, commitments and efforts by national, regional and local authorities to reduce risk and build resilience, such as the UNISDR's *Making cities resilient* campaign.

- Engaging government departments and other institutions to raise awareness of the cross-cutting nature of risk, and strengthening policy frameworks to support multi-sectorial risk reduction across government institutions.

- Providing technical support to government institutions to identify and implement measures aimed at reducing risk and building capacity at local, regional and national levels.

- Ensuring that local governments have the financial and human resources they need to improve service delivery, while also making them accountable for how funding is used. This includes the use of tools such as social auditing of budgets to ensure transparency and accountability for spending.

8.3. Strengthening urban planning and regulatory frameworks

The research findings suggest that strengthening urban and land use planning, and enforcement of appropriate building standards, could contribute significantly to resilience building. Improving urban and land use planning can help to reduce exposure to hazards, by preventing settlement and development in hazardous areas. These processes need to be accompanied by efforts to strengthen the accountability of government institutions and private developers for poorly located, illegal or low-quality buildings.

It is essential that planning processes safeguard human rights and entitlements. People living in high-risk locations generally live there because they have no alternative. Consequently, reducing risk while

simultaneously protecting the rights of the most vulnerable people requires identifying feasible, fair and equitable solutions to poor people's housing needs. Urban planning and land use management are also political processes that should involve different stakeholders and seek to empower poorer and vulnerable citizens, for example, through inclusive and participatory forms of planning.[95] In Mumbai, for instance, government, business and civil society groups worked together to relocate 60,000 low-income squatters to make way for a new railway. Affected households and their representative groups were involved in all aspects of the project and decision-making, and while there were hiccups, the process avoided disadvantaging and impoverishing the households involved.[96] It is also essential to identify and address women's safety, needs and requirements, as these are rarely reflected in urban planning.[97] Service and infrastructure planning should explicitly incorporate women's safety concerns, and women should be involved in the design processes.[98]

Similarly, effective risk reduction necessitates acknowledging the needs and realities of poor urban populations and working with them to reduce risk. Accepting informality, including both informal settlements and the informal sector, as an integral part of towns and cities is central to this.[99] While upgrading and providing services for informal settlements is widely acknowledged as essential in reducing risk in the long term, informal settlements provide affordable housing opportunities for poor households, and will remain an integral part of the urban landscape for the foreseeable future. Likewise, informal businesses represent a critical source of income in the absence of jobs in the formal sector. Sensitivity to these realities requires thinking differently about how spatial planning, regulation, economic growth, infrastructure and public services can be delivered to support informal settlements and local economies.[100] Instead of clamping down on informal traders operating in unauthorised locations, for instance, local governments and other actors should identify and provide serviced, well located spaces where small-scale traders and vendors can safely sell their goods. Such an approach would also help to address gender concerns, as these entrepreneurs are often women.

Supporting governments to improve planning and regulation requires:

- The identification and enforcement of protective mechanisms such as by-laws that prevent settlement, and the development of formal housing, other buildings and infrastructure in hazard-exposed locations. This must be paired with efforts to provide safe and livelihood-sensitive land and/or housing for poor households. ActionAid can help to make these processes more inclusive, using participatory decision-making tools such as community-based risk assessments and values assessments to inform integrated resilience plans.

- Working with local governments to strengthen accountability, including the accountability of private developers that flout regulations, as well as officials overseeing planning and development processes.

- Working with governments to develop and enforce building and infrastructure standards that are appropriate to local conditions, and ensure that buildings and infrastructure are able to withstand severe weather and other hazards, both now and in the future.

- Urban planners, local governments and city authorities creating platforms for women and girls to inform planning processes, and rollout services to ensure that they are gender-sensitive and respond to the needs of women.

8.4. Facilitating dialogue and collaboration to reduce risk

Nurturing productive relationships between local authorities, vulnerable groups and the private and NGO sector can support both immediate risk reduction and longer-term adaptation – especially where governmental capacity is weak. This includes building institutional capacity within governments to identify and leverage critical linkages that enable adaptation.[101] For example, acting on its commitments to the *Making cities resilient* campaign, under-resourced local authorities in Moshi, Tanzania, are working to encourage residents in flood-prone areas to take responsibility for keeping drains in front of their houses clean.[102] There are also opportunities to build capacity and relationships from the ground up. The work by Slum/ Shack Dwellers International and its affiliates, for instance, develops skills and management capacity within communities, while also fostering partnerships between poor communities, local authorities and the private sector.[103] However, mainstreaming these community-led approaches more broadly requires that funding agencies and local authorities use the learning and momentum created by such projects to broaden the scope of participatory governance in African cities.[104]

Facilitating collaboration and exploiting synergies requires:

- Facilitating strategic connections between communities and both governmental and non-governmental role-players that foster dialogue engagement. This should also include partnering with communities, local authorities and other agencies to develop risk reduction and contingency plans. Processes should also engage local traders, workers and their associations to assess risks and get involved in planning for a resilient city.

- Developing training programmes aimed at empowering disaster management authorities and other government departments to engage and work with communities to support risk reduction.

8.5. Supporting holistic risk reduction across sectors

Risk reduction will be most effective where NGOs, UN agencies, civil society organisations and community groups also develop strong relationships, identify gaps and capitalise on overlapping interests. This should include bringing humanitarian, human rights, development and disaster risk practitioners together to identify best practices and innovation, and support shared learning. One of ActionAid's strengths is that the organisation's operational and programming scope transcends development, disaster risk reduction and humanitarian assistance. This makes it well positioned to strengthen, identify and leverage points of convergence, and engage with government and other key stakeholders at different levels to inform analytical work and policy formulation and implementation.

The findings suggest two areas with particular potential for synergies: strengthening livelihoods and improving safety, particularly for women. This requires:

8.5.1. Creating and supporting urban livelihoods

- Working with communities to identify, strengthen and diversify livelihood opportunities in urban centres, while at the same time ensuring appropriate working conditions and protection for community members, as well as sustainable natural resource management. As noted already, this could include creating safe, serviced, well-positioned spaces for small-scale traders and vendors, or expanding opportunities in urban agriculture.

- Seeking to identify, protect and develop livelihood opportunities for young women and men. These should build technical and vocational skills, and encourage innovation.

- Linking the creation of livelihood opportunities to risk reduction imperatives by, for example, developing opportunities in waste management, recycling or transforming waste materials, or supporting urban agriculture to improve food security. Livelihood opportunities should seek to incorporate and build adaptive capacities.

8.5.2. Promoting urban safety and rights to safety

- Working with women and children to identify unsafe areas in their communities where they are most vulnerable, and how public (and private) spaces can be made safer for women. These processes should be integrated with broader efforts to improve access to basic services such as access to clean water and sanitation, as well as urban planning and management.

- Ensuring that efforts to improve livelihoods follow the principle of do no harm, through the active engagement of women in project design, and ensuring their safety and needs are met accordingly, by for example, ensuring trading spaces are safe and child friendly.

- Exploiting synergies within ActionAid's programming to holistically reduce risk. Risk reduction and resilience should be incorporated into its existing *Safe city* programme, while resilience building should be integrated into the *Safe schools* initiative.

- Challenging negative attitudes and values that endanger or disadvantage women through, for example, public education and behaviour change campaigns that challenge sexist attitudes, and encourage women to report abuse.

Appendix 1: **Institutional stakeholders consulted at the national, municipal and local level**

Country	Role players		
	National government	**Local/municipal government**	**Civil society/international agencies/NGOs**
Senegal	• Executive Secretariat for Food Security • Agence Régionale de Développement (ARD)	• Brigade des Sapeurs Pompiers • Agence Nationale de la Statistique et de la Démographie (ANDS)	• Association pour la Promotion de la Femme Sénégalaise (APROFES) • Association Senegalaise pour un Developpement Equitable et Solidaire (ASDES) • Enda Tiers Monde (ENDA) • World Food Programme (Programme Alimentaire Mondial (PAM)) • Japan International Cooperation Agency (JICA) • Plan International
The Gambia	• National Disaster Management Agency (Administration) • National Environment Agency	• Gambia Fire and Rescue Service • Department of State for Health (Public Health) • KMC Department of Services • The Gambia Association of Local Government Authorities • Regional Health (Welfare Directorate)	• Concern Universal (Resilience Programme) • Gambia Red Cross Society (Disaster management and food security)
Zimbabwe	• Ministry of Women Affairs, Gender and Community Development (Community Development Department) • Ministry of Local Government (Department of Civil Protection)	• Inadequate access to water • Flooding (isolation)	• United Nations Development Programme (UNDP) • United Nations Children's Fund (UNICEF) • Embassy of the Australian Government (Australian Department of Foreign Affairs and Trade) • Zimbabwe Red Cross • Shingirai Trust • Mavambo

Appendix 2: Research methods and focus

Table 1: Research tools and orientation of research amongst Municipal and Metropolitan role-players

Method	Focus/thematic areas
Stakeholder interviews Workshops	• Priority hazards and adverse events/processes • Existing institutional mechanisms • Flagship projects in urban areas • Key role players in urban resilience • Resilience projects in urban areas • Gaps in resilience thinking/ approaches in urban areas
Secondary data collection	• Disaster records • Reports and notes on resilience programming

Table 2: Research tools and orientation of research at the community level

Method	Focus/thematic areas
Community risk assessment	• Introducing concepts and project • Hazard identification and prioritisation • The nature and drivers of risk • Solutions to reduce risk and build resilience • Identification of key role players at the local level • Feedback to stakeholders
Survey	• Understanding households • Understanding livelihoods • Identification and understanding of hazards • Understanding conflict
Focus group discussions	• A focus on children • A focus on youth • A focus on women

Appendix 3: Demographic data for surveyed households

Table: Demographic characteristic of surveyed households in the three case study communities*

	Darou Salam Diamaguène (Senegal)		Ebo Town (The Gambia)		Tafara (Zimbabwe)	
Gender of the household head	**Count**	**%**	**Count**	**%**	**Count**	**%**
Female	16	36.4	18	34.0	30	42.9
Male	28	63.6	35	66.0	40	57.1
Total	**44**	**100.0**	**53**	**100.0**	**70**	**100.0**
Age of the household head	**Count**	**%**	**Count**	**%**	**Count**	**%**
16-25	-	0.0	1	1.9	1	1.4
26-30	1	2.3	-	0.0	6	8.7
31-35	3	6.8	2	3.8	8	11.6
36-40	3	6.8	10	18.9	10	14.5
41-45	10	22.7	3	5.7	12	17.4
46-50	7	15.9	6	11.3	7	10.1
51-55	6	13.6	9	17.0	3	4.3
56-60	7	15.9	5	9.4	5	7.2
61-65	3	6.8	7	13.2	1	1.4
66 plus	4	9.1	10	18.9	16	23.2
Total	**44**	**100.0**	**53**	**100.0**	**69**	**100.0**
Household size (no. people)	**Count**	**%**	**Count**	**%**	**Count**	**%**
1	3	6.8	3	5.7	18	25.7
2 to 4	11	25.0	22	41.5	43	61.4
5 to 6	16	36.4	12	22.6	7	10.1
7 plus	14	31.8	16	30.2	2	2.9
Total	**44**	**100.0**	**53**	**100.0**	**70**	**100.0**
Gender of household members	**Count**	**%**	**Count**	**%**	**Count**	**%**
Female	142	58.7	163	54.8	115	62.8
Male	100	41.3	134	45.1	68	37.1
Total	**297**	**100.0**	**297**	**100.0**	**183**	**100.0**
Children under 16 in household	**Count**	**%**	**Count**	**%**	**Count**	**%**
1	115	47.3	12	22.6	23	32.9
2	0	0	10	18.8	14	20.0
3	0	0	5	9.4	4	5.7
4	0	0	4	7.5	0	0
5	0	0	2	3.7	1	1.4
6	0	0	1	1.8	0	0
7	0	0	0	0	0	0
0	128	52.7	19	35.8	28	40.0
Total	**243**	**100**	**53**	**100**	**70**	**100.0**

Missing values have been removed

Table: Livelihoods of all adults in household over the age of 18 in Darou Salam Diamaguène (Senegal)

	Count	%
Unemployed	57	36,1
Self-employed small business	33	20,9
Agriculture/pastoralism	21	13,3
Trade/vending/shop	18	11,4
Student	12	7,6
Domestic work/gardening	7	4,4
Service	4	2,5
Driver	3	1,9
Government	2	1,3
Other	1	0,6
Total	158	100,0

Table: Livelihoods of all adults in household over the age of 18 in Tafara (Zimbabwe)

	Count	%
Unemployed	49	30,4
Trade/vending/shop	34	21,1
Government	13	8,1
Student	13	8,1
Administrative work	12	7,5
Other	10	6,2
Domestic worker/gardening	9	5,6
Service	8	5,0
Remittance	8	5,0
Tout	3	1,9
Subsistence farming	2	1,2
Total	161	100,0

Table: Livelihoods of all adults in household over the age of 18 in Ebo Town (The Gambia)

	Count	%
Student	37	15,7
Trade/vending/shop	34	14,5
Unemployed	26	11,1
Service	22	9,4
Domestic work/gardening	19	8,1
Employed (private)	16	6,8
Employed unspecified	15	6,4
Not working	14	6,0
Other	13	5,5
Government	13	5,5
Self-employed	11	4,7
Pension	6	2,6
Agriculture	3	1,3
Occasional work	2	0,9
Driver	2	0,9
Remittance	2	0,9
Total	235	100,0

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We believe people in poverty have the power within them
to create change for themselves, their families and communities.
ActionAid is a catalyst for that change.