

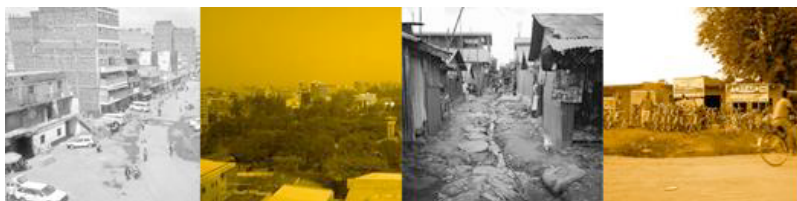


African Urbanisation and Urbanism:  
Implications for risk accumulation and reduction

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## Introduction

The purpose of this background paper is to describe recent trends in African urban centres, review potential future trajectories of these, and examine their possible implications for risk accumulation and risk reduction. There is a growing body of literature on “urbanisation” in Africa, specifically on “the shift in population from rural to urban settlements” (McGranahan and Satterthwaite 2014). There is also some work on urban population growth<sup>1</sup> and the spatial expansion of urban land cover (which, in general, is occurring more rapidly than the growth in urban populations). Yet there are myriad political, governance, economic, social, and cultural changes taking place in African towns and cities – many of which have substantial implications for the way in which risk is generated, accumulated and can be reduced. This paper examines these multiple dimensions of the changing nature of urban centres in Africa, going beyond “urbanisation” to look at the broader dimensions of Africa’s “urban revolution” (Parnell and Pieterse 2014). It focuses primarily on sub-Saharan Africa, although many of the conclusions are relevant for the entire continent – and, indeed, for urban centres in low-income countries more generally.

While there is a broad and growing literature addressing urban change in sub-Saharan Africa, there is a need to review specifically how these trends and processes shape risk accumulation, and ought therefore to influence attempts at risk reduction. The paper is intended to complement others that have been developed for Urban ARK, and in particular should be read alongside the paper on “describing and assessing the current and potential impact of the growth of sub-Saharan Africa’s major cities” (Satterthwaite 2016). Unlike that paper, this one looks at the elements of urban change apart from population growth. In other words, it is about African urbanism and African urban change, and how these shape risk through influencing exposure to hazards of various types, and creating or extending the vulnerability of individuals, households and communities.

After reviewing the reasons for concentrating on urban risk, and on African cities, the paper describes several key characteristics of African urbanisms, and explores their relationship to the production and management of risk. This is followed by a more substantial discussion of the nature of African urban societies, African urban economies, and African urban governance, and how these features shape risk. The conclusions have relevance to a wide range of current global policy processes: understanding and addressing the multiple dimensions of risk in African cities is crucial to meeting the goals of the Paris Agreement of the UNFCCC and achieving disaster risk reduction as outlined in the Sendai Framework; at the same time, the Sustainable Development Goals and the emerging New Urban Agenda (from the Habitat III conference) need to shape urban development in ways that reduce rather than accentuate risk.

## Why Urban ‘Risk’?

In an increasingly urbanized world, cities and their inhabitants are facing significant human and economic losses from disasters. Globally, disaster risk continues to rise as more vulnerable populations and assets are exposed to climate extremes. The sub-Saharan African region is predicted to experience some of the most severe impacts, with considerable variations in severity and distribution within and among urban areas: floods

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<sup>1</sup> If rural populations are growing at the same rate, urbanisation is not occurring

and mudslides in small towns in East Africa are forcing many urban residents to leave their homes, while the growth of cities like Benin City, Port Harcourt and Alexandria in mega-deltas are increasing the number of people exposed to coastal hazards, such as storm surges and sea level rise (Niang *et al.*, 2014). The impacts are likely to be exacerbated by low levels of adaptive capacity, yet existing data sets do not capture adequately the scale of deprivation in sub-Saharan urban areas, with significant gaps in understanding which groups are under- or over-represented (Potts, 2012; Turok and McGranahan, 2013; Adelekan *et al.*, 2015).

Critically, bringing a risk framing to sub-Saharan African urbanism can open scope for a reconsideration of development structures and practices, and can highlight the problematic scientific, economic and policy priorities that underlie them. There is thus an urgent need for more detailed and nuanced understandings of urban risk in sub-Saharan Africa, particularly the drivers of vulnerability, and how the nature and scale of these risks are shifting in the context of persistent poverty, urban growth and climate change (Pelling and Wisner, 2009; Adelekan *et al.*, 2015).

### Why 'African' Urbanism?

Although there is growing international awareness of the importance of the city as a unit of analysis and action, the focus on “economic agglomeration above all other expression of urbanism is... either dismissive or ignorant of most Southern urban realities [which are] characterized by economic informality, multiplicity, marginality and dispersion” (Parnell and Pieterse, 2015). Although some elements of risk accumulation in urban centres can be understood as being broadly applicable across the developing world, other aspects are shaped by the specific features of African towns and cities. In particular, within the Global South, the history, governance and rate of urban development in sub-Saharan Africa is markedly different from other regions of the world (Cohen *et al.*, 2006; Hardoy *et al.*, 2013; Fox, 2014; UN DESA, 2014), as described below.

Given their profound diversity across all variables, African countries and cities defy broad generalisations: “if there is something inherently true to ‘the African city’, it is that it resists characterization and simplification in the manner demanded by Western-based rationalities” (Castán Broto, 2014: 260). This noted, Africa’s urban transformation is characterised by some key common features and particularities which may shape the way in which risk is generated, accumulated and (potentially) reduced. One shared feature is worth highlighting from the outset: African cities are particularly distinguished by the scale and pace of the demographic, social, economic and political transitions they are experiencing (Parnell and Walwage, 2011). The movement of cities through such transitions is seldom smooth; rather, the rapid rate of urban change is likely to increase the production and reproduction of the risks identified below (Satterthwaite 2007; Pelling and Wisner 2009; Adelekan *et al.*, 2015). Yet the extensive urban growth and development anticipated in sub-Saharan Africa also offers considerable opportunity to address vulnerability and disaster risk before or as it emerges (Di Ruocco *et al.*, 2015). This will require deep understandings of structural drivers of disasters and sustained efforts to address them. How urban, national, regional and international actors and organisations respond to these challenges and opportunities will define the contours of sub-Saharan development going forward.

## African Urban Forms and Risk

### African urbanism is characterised by medium-sized cities

The majority of urban Africans live in small cities and towns of fewer than 0.5 million inhabitants (Satterthwaite, 2016). Indeed, many of the settlements defined as urban would be considered rural in international contexts (Potts, 2012). Although their population growth rates are highly variable, in many cases, these small- and medium sized cities are experiencing rapid growth, which – in percentage terms – may be more significant than that experienced in larger urban centres. This makes it difficult to meet demand for infrastructure and services, particularly considering historical underinvestment. At the same time, they face many of the economic challenges of large urban areas without the commensurate benefits. There is a similar need to provide public services and infrastructure, yet local authorities are less likely to have access to the technical or financial capacities of large cities. Smaller urban economies also have smaller tax bases (both individual and business), which means that they cannot meet infrastructure investment needs without support from national governments or international actors.

Smaller urban areas also have particular challenges with weak and/or under-resourced local governments, which have neither the ability to respond adequately to current shocks and stresses, nor the capacity to plan sufficiently to reduce future risks. These factors are evident in Ibadan, Nigeria (population of approximately 1.3 million) where there are significant challenges addressing physical hazards in a context of rapid growth and weak local government (Adelekan 2012); and in Karonga, Malawi (population of approximately 50,000) where the local government all but does not exist, despite a range of natural hazards that require significant local attention (Manda 2014). Indeed, Manda concludes (2014: 387): “despite constitutional requirements, the absence of any local government since 2005 has negatively affected provision for urban planning and other services that are arguably the main tool to reduce disaster risks”.

### African cities are undergoing spatial expansion

Sub-Saharan Africa is expected to experience the highest rate of urban population growth globally in the coming decades (UN, 2015; Angel et al., 2011). Consequently, the region is undergoing rapid land use change, mostly at the urban fringes. Moreover, population growth is occurring in an expansive rather than compact form (Seto et al., 2011), resulting in falling population densities and a higher rate of land use change than more spatially efficient cities might generate. In Accra, for instance, urban land cover increased more than twice as fast as the urban population between 1985 and 2000. Overall, it is expected that in the coming decades the area in urban use in sub-Saharan Africa will increase twelvefold (Angel et al., 2011). This urban sprawl is a product of inadequate planning, compounded by the challenges of rapid population growth, deteriorating transport infrastructure and lack of financial or technical capacity to deliver large-scale transport plans and projects (Sietchiping, 2012). Of course, it is important to highlight the difficulty of planning in the presence of a large informal sector: this is the most diffused mode of land use change in sub-Saharan Africa (Harrison and Todes, 2015; Ahelrs *et al.*, 2014; Watson, 2009; Simone, 2001). Informal urban sprawl is often attributed to the inability of policymakers and practitioners regulate and control urban growth and to plan for the low-income majority (Harrison and Todes,

2015; Todes, 2012; Vermeiren *et al.*, 2012; Myers, 2011). However, informality is also viewed as a “political bargaining” or a strategy through which various assemblages of formal and informal developments are (selectively) integrated or normalised (Goodfellow, 2013: 88; Kamete, 2012; Odendaal, 2012; Roy, 2009; Roy, 2005

Whether resulting from unwillingness or inability to plan, or political bargaining, current urban trends increasingly expose urban dwellers (particularly low-income and other marginalised groups) to both everyday hazards and catastrophic events. First, recent migrants, the urban poor and otherwise vulnerable urban residents are more likely to live at the urban fringes, which are largely unserved by basic services and risk-reducing infrastructure (Parnell *et al.*, 2009). Second, urban sprawl in Africa comes with significant costs. Urbanites must spend more on transport, while suffering poorer air quality and road safety due to growing dependence on motorised options (Sietchiping, 2012; Gouldson *et al.*, 2015). In the long-term, local authorities also face higher costs from constructing and maintaining road infrastructure – and the experiences of Cairo, Johannesburg, Lagos and Luanda highlight that this only encourages car ownership (Sietchiping, 2012). Third, the need to live within commuting distance (and often cycling or walking distance) of employment hubs may mean that people settle in hazardous areas within and around the city, including floodplains, small streams, mangrove swamps and unstable hillsides. These urban dwellers are often exposed to localised floods caused by absence or inadequacy of drains, flooding of streams or major rivers, seasonal floods, and landslides (Action Aid, 2006; Dodman and Satterthwaite, 2008). Finally, urban spatial expansion exacerbates and produces new socio-economic, environmental and health risks (Linard, 2013 *et al.*, 2013). By significantly altering the natural landscape, urban growth and land use change have caused a multitude of environmental impacts, including the alteration of hydrological cycle, habitat loss and increased pressure on forests and land. These generate new hazards such as landslides and flash flooding (Seto *et al.*, 2011; Mohan *et al.*, 2011; Attua and Fisher, 2011; Pelling, 2005). Together with risks *for* the city, rapid urban land change also produces risks *from* the city to its surroundings. Land use changes have caused major losses of farmland at the border of the peri-urban fringes, increasing economic pressure on small-scale farmers and therefore the likelihood that they will migrate to the urban fringes (Haregeweyn *et al.*, 2012).

Projections for the future of these cities are not encouraging. Scenarios for Kampala, one of the fastest growing cities in sub-Saharan Africa, predict that without policy interventions the majority of the urban population will live in flood-prone areas by 2030 and suffer from epidemic diseases associated to poor sanitary conditions (Vermeiren *et al.*, 2012). This rapid peri-urban and suburban growth is particularly concerning in cities situated in areas that are more vulnerable to ecological changes (Parnell and Walawege, 2011). Urban areas in low-elevation coastal zones and mega-deltas are currently growing faster than other cities, exponentially increasing levels of exposure to climate change impacts such as storm surges and sea level rise (Seto *et al.*, 2011; Niang *et al.*, 2014). In Lagos, for instance, over 70 per cent of the population lives in slums affected by regular flooding, which is becoming more extreme and frequent, and has dire human consequences when combined with poor sanitation and drainage systems (Adelekan, 2010).

## African urban infrastructure is increasingly inadequate for the urban population

The uneven condition of African urban areas originates from colonial times and persists in the post-colonial era. Colonial governments developed sophisticated large-scale centralised water, sanitation and drainage systems exclusively for colonial elites, while indigenous majorities were systematically excluded (Letema *et al.* 2014; Letema, 2012; McFarlane, 2008; Kooy and Bakker, 2008; Nilsson, 2006, Jenkins, 2000). As a means to distance themselves from colonial predecessors, address pressing developmental needs, and (in some cases) to legitimate their authority, post-colonial governments introduced public water supply and sanitation services with the promise of universal access (Batley, 2006). Supported by the international aid sector, governments embedded urban infrastructural development plans into the modern infrastructural ideal (Graham and Marvin, 2001), which envisions a “networked city with infrastructure monopolies providing standardised and universal services” to all (Ahlers *et al.*, 2013:3; Batley, 2006).

The egalitarian promise has, however, remained largely unfulfilled (Ahlers *et al.*, 2013; Kooy & Bakker, 2008; McFarlane, 2008; Batley, 2006; Gandy, 2002). Despite many initiatives and large investments (e.g. Water and Sanitation Decade, the Millennium Development Goals, and the International Year of Sanitation), governments have been unable or unwilling to meet the demand of the growing urban population. Urban centres maintain the condition of “city of fragments” (Balbo, 1993: 24), in which only the elites enjoy “premium networked spaces” (Graham and Marvin, 2001: 249). Low-income groups suffer disproportionately from deficits in infrastructures and services (Ahlers *et al.*, 2014; Dodman *et al.*, 2013; Joshi *et al.*, 2011; Gerlach & Franceys, 2010). Disparities in access to sanitation are particularly striking: while high-income residents are served by septic tanks or sewerage systems, different types and qualities of pit latrines are the most common sanitation facilities in low-income areas (Jenkins *et al.*, 2015). Those who cannot afford improved or even unimproved pit latrines resort to disposal methods such as open defecation or ‘flying toilets’ (WSP, 2013). Sub-Saharan Africa has registered disappointing results in terms of the sanitation MDG. Governments who contributed to development of (very exclusive) sewer systems rarely committed to support the development, let alone operation and maintenance, of decentralised systems in informal settlements (UN-Habitat, 2003). As a result, urban population growth has outpaced advances in sanitation coverage by half a percentage point (JMP 2015).

Inadequate access to drinking water and improved sanitation produces extensive everyday hazards for the majority of the under-served or un-served. Most of the pathogens causing diarrhoeal diseases, which cause over 7% of all deaths on the continent (Fetrewell *et al.*, 2005; WHO, 2000), are transmitted via drinking water contaminated by faecal matter (Ashbolt, 2004). The highest risks are borne by people accessing water through unsafe and untreated water sources, such as shallow wells. In Blantyre, for instance, faecal contamination (*E.coli*) of wells was detected in 80% of the samples collected during dry season and all the ones collected during the rainy season (Pritchard *et al.* 2007). These risks are exacerbated by the poor maintenance of pit latrines, which are very rarely emptied (Tsinda *et al.*, 2013) or are emptied in unsafe manner. In Dar es Salaam, over 75% of the population living in informal settlements access informal and unsafe pit emptying services (Jenkins *et al.*, 2015). Although cheaper and readily available, these options dramatically

increase health risks compared to networked options as “untreated liquid waste is routinely deposited in open drains, sewer systems and water courses...” (Gough *et al.*, 2006: 224 - 225). These examples clearly show that one of the main risks for low-income dwellers living in high density areas is the limited physical availability and economic affordability of safe pit emptying services (Jenkins *et al.*, 2015). Additionally, the risks of exposure to faecal sludge and contamination of drinking water sources from pit latrines are increased by seasonal and flash floods or heavy rains (Jenkins *et al.*, 2015; Action Aid, 2006; Pritchard *et al.* 2007). Faecal contamination, however, does not exclusively occur in informal water supply services. Recent studies have demonstrated that microbiological contamination occurs also in the centralised water supply networks (Rossiter *et al.*, 2010; Sarpong *et al.*, 2016). Risks of microbiological contamination, thus, may also extend to the ‘served’ urban population. Similarly, in many cities, formal water supplies to low-income areas are characterised by high degrees of discontinuity, which forces urban dwellers to revert to unsafe water sources (Hunter *et al.*, 2009).

### African cities remain closely connected to their rural hinterlands

Cities exist within a large system of interconnected cities and nodes within networks (of infrastructure, flows of capital, flows of people, flows of ideas), not only as built up places (Pieterse and Simone, 2013; Parnell and Oldfield, 2014). Understood in this manner, the way in which African cities are managed has major implications beyond the physically urban sphere. One element of this is the continued importance of connections between African urban, peri-urban and rural areas. These areas share significant resources and functions relevant to risk accumulation and reduction such as ecosystem services, mutual trade and labour flows and commuting patterns (Leck and Simon, 2013).

Rural and urban areas have often been treated as separate and unrelated by both national governments and by international development actors. Yet this ignores the importance of various types of linkages between rural and urban areas (Tacoli 2006). First, the spatial distinction between rural and urban is often far from clear-cut, as a strong body of work on peri-urban areas has demonstrated (McGregor and Simon 2012). These peri-urban areas demonstrate characteristics both of cities and of rural areas, and act as important sources of food for urban residents, as well as being locations in which many people who work in towns and cities live. Second, individuals move to and from urban centres, and frequently retain ongoing connections in their home villages. This includes both rural-urban migration (Tacoli *et al.* 2015), and other more complex and circular processes (Potts 2010). Third, rural and economies are ever-more-closely intertwined, as rural residents increasingly become net purchasers of food (rather than net producers) (Tacoli *et al.* 2013). Finally, food production, storage, distribution, and consumption – including food security for low-income urban residents – relies strongly on networks that encompass both the rural and the urban (Tacoli *et al.*, 2013; Crush and Frayne, 2014).

Despite the interdependencies between rural and urban areas and livelihoods being firmly established, emerging climate change adaptation and DRR policies and interventions have often tended to focus narrowly on either rural or urban areas (Leck and Simon, 2013). Such separatist perspectives lead to fragmented initiatives and exacerbate risk accumulation. Planning for cross-border urban-rural risk reduction and adaptation will need to address issues concerning political, institutional and geographical fragmentation and entail more co-

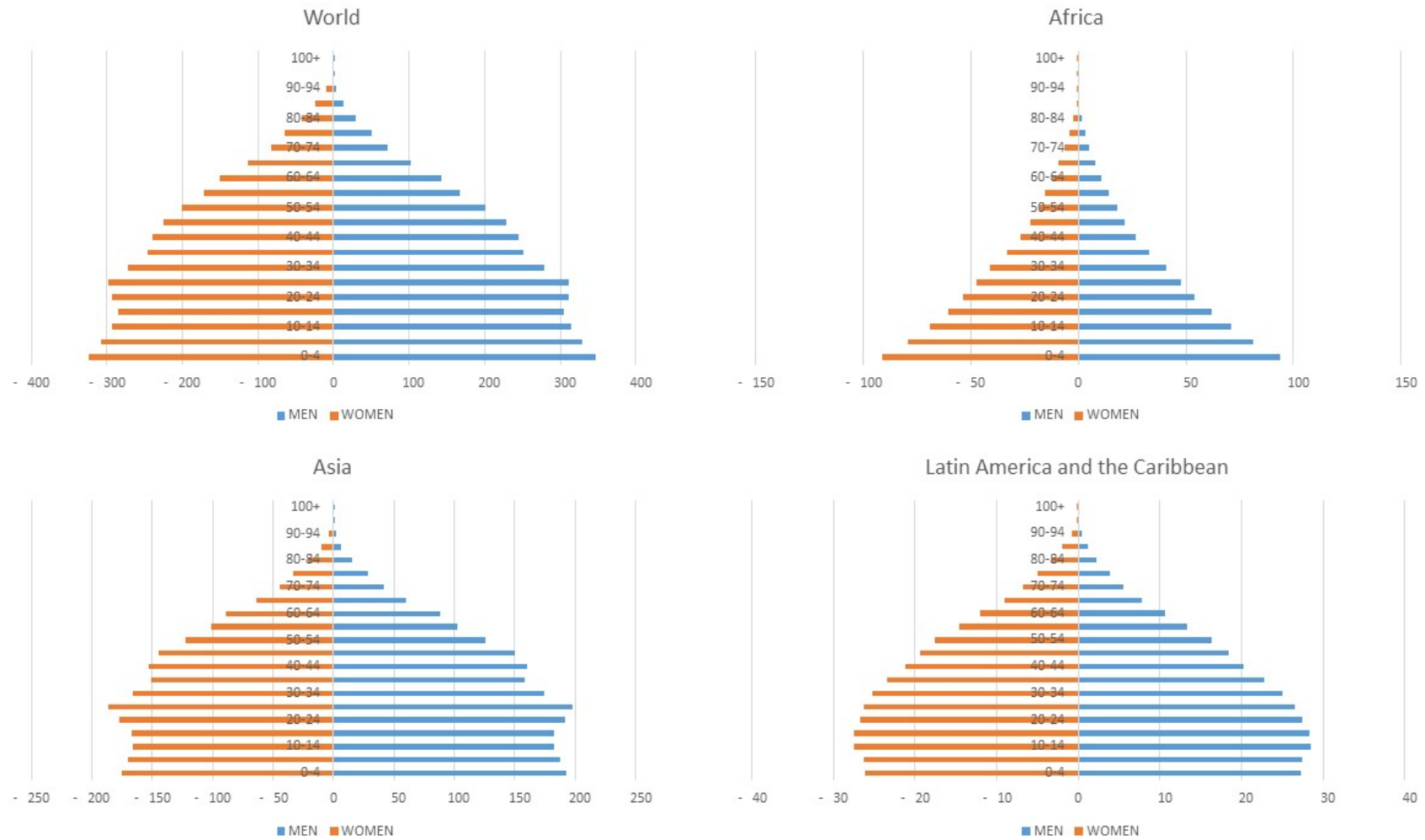
ordinated and programmatic approaches (Steele *et al.*, 2013; Leck and Crick, 2015). For example, several South African metropolitan municipalities such as Cape Town and eThekweni (which includes the city of Durban) have recently started to take more integrated approaches to climate change adaptation and DRR through collaboration and knowledge sharing with neighbouring and more distant municipalities (Roberts and O'Donoghue, 2013; Cartwright *et al.*, 2012). This is particularly important in sub-Saharan Africa where large and well capacitated cities are emerging as climate adaptation and DRR leaders, but are surrounded by smaller urban and rural municipalities that often lack the financial resources or the capacity to do the same (Roberts and O'Donoghue, 2013; Leck and Simon, 2013).

## African Urban Societies and Risk

### African cities are young

One feature of African cities which is rarely highlighted, but which has important implications both for long-term development and for risk and resilience, is their distinctive age profile, with a high predominance of young people. Although disaggregated figures for urban areas are hard to come by, for Africa as a whole children under age 15 accounted for 41 per cent of the population in 2015, and young persons aged 15 to 24 account for a further 19 per cent. By way of contrast, Latin America and the Caribbean and Asia, which have seen greater declines in fertility, have smaller percentages of children (26 and 24 per cent, respectively) and similar percentages of youth (17 and 16 per cent, respectively) (UN-DESA 2015) (Figure 1). This age profile also has important implications both for risk and resilience. Children and young people face particular risks from disaster and climate change (Bartlett 2008, Brown and Dodman 2014). They are both physiologically and psychologically vulnerable to a range of shocks and stresses, with girls and boys who live and work on the streets or in low-income informal settlements being particularly susceptible to harm.





**Figure 1. Comparison of demographic structures globally, in Africa, Asia and Latin America and the Caribbean (data from UN-DESA, 2015). Although not referring solely to urban populations, this pattern emphasises the pronounced youth bulge in Africa relative to other regions.**

The financial costs of providing this large young population with adequate education and healthcare are significant. Yet there is the potential for African economies and societies to enjoy a 'demographic dividend', as this youth bulge progresses into the economically active age range. This youthful population also presents a potential base for political and social transition towards more democratic processes and modern economic activities. As Sommers (2010: 317) notes:

"African youth stand far ahead of nearly all government and non-government institutions in their urban orientation, and not just those living in cities and towns; in their clothes, their interests, their slang, many if not most village youth are leaning towards cities as well."

Therefore, there is considerable potential for young people to drive a cultural and economic shift in Africa, through their emerging urban identity and associated behavioural, value and expectation changes. However, the extent to which these opportunities will be realised in Africa has been questioned (Bloom *et al.* 2007). In some cases, the youth bulge has led to a crisis of youth unemployment and underemployment. Scholars have long suggested that this creates a possibility of youths "becoming impoverished forces of radicalization and conflict" (SOAC, 2014: 19; see also Shoumatoff, 1988; El-Kenz, 1996; Kaplan, 1996). On the other hand, Sommers (2010) questions the connection between the youth bulge, urbanisation and instability, highlighting that nearly all recent civil wars in Africa originated in rural areas. Certainly, appropriate economic and social policies will be a major determining factor in determining whether sub-Saharan Africa's demographic dividend will become a keystone of Africa's urban development trajectory or a major socio-political risk (SOAC, 2014).

#### African urbanism and urbanisation is driving changes in gender dynamics

While there is an extensive literature that focuses on the interaction between urbanisation processes and gender, addressing issues such as health and migration (e.g. Tacoli, 2012, Tacoli and Satterthwaite, 2013) the interlinkages between climate change, DRR and gender in relation to urban settlements remains underexplored (Alber, 2010; Alber and Cahoon, 2015). Moreover, there are still very few gender-sensitive city-scale climate and disaster management policies, let alone measures in place that account for differential needs and vulnerabilities of men and women in relation to unequal power relations, societal roles and labour divisions (Alber and Cahoon, 2015). This gap persists despite the fact that urbanisation in Africa is increasingly feminised (Chant, 2013).

Women's experiences in urban areas are highly varied and context specific, shaped by a number of inter-related factors such as location, education levels, household profiles and wealth which impact vulnerabilities to unexpected events and shocks (Pozarny, 2016). Typically, however, gender norms and discrimination mean that in general women in African cities are more vulnerable than men. In many sub-Saharan contexts, the majority of urban households remain dependent on biomass for fuels, such as wood, straw and charcoal (UN-Habitat, 2009), while many also have no on-site water access. In peri-urban and smaller urban areas, the burden of collecting such resources falls on women and girls due to deeply embedded cultural norms and traditions (Alber, 2015) – and the spatial expansion of urban areas can make this task much more time-consuming and arduous.

Similarly, women's traditional responsibility for domestic work means that they bear most of the health risks associated with using traditional fuels, particularly burns and indoor air pollution (Clough, 2012). These gender norms around family care, household tasks and other responsibilities can mean that a woman's working day can be double a man's (Clough, 2012). Although these factors are likely to mean that women have poorer health, their access to health care is often deprioritised relative to that of male family members, and women also face discrimination within health care systems (again, mediated by factors such as income, religion and ethnicity) (Mackintosh and Tibandebage, 2006; Govender and Penn-Kekana, 2007). Notably, in twelve sub-Saharan African countries, low-income women in urban areas are more likely than low-income women in rural areas to have unmet need for family planning. These women most live in informal settlements, and are excluded from a wide range of public services (Ezeh *et al.*, 2010). Finally but critically, although men are more likely to be killed in urban areas, women in urban areas are twice as likely to experience violence as men (UN-Habitat, 2006; in Chant, 2013). These diverse and often overlapping factors mean that women are likely to have more exposure to particular types of risk (for example, natural resource scarcity and sexual abuse) and lower adaptive capacity, particularly in terms of health.

Due to limited access to productive factors such as land, technology and credit, women's earnings across both the formal and informal sectors tends to be about half the value of men's (UNECA, 2009). A large proportion of women in urban sub-Saharan Africa work in the informal sector: one estimate suggests that 84 per cent of women in non-agricultural sectors are informally employed, in comparison to 63 per cent of men (WIEGO and Realizing Rights, 2009; Alber, 2015). The particular risks associated with poverty and informality are detailed below, and their gendered nature should be borne in mind when reading these sections. Gender-based violence can also inhibit women's access to and productivity in the public space in urban areas, particularly the poorest and most marginalized (Alber, 2015; Nesbitt-Ahmed, 2015). This can constrain their participation in and influence over decision-making processes (including those that shape risk), as well as their capacity to generate income and accumulate assets.

With this noted, urban environments can offer new and empowering opportunities for women such as engaging in business. Women in African cities and towns are more likely to be able to secure property than their counterparts in rural areas, both because of their greater socio-economic freedoms and because property can be acquired through the market rather than through inheritance, where it is customarily passed to male relatives (Chant, 2013). The emergence and evolution of urban cultures also create scope for the reconsideration of traditional practices and values (Parnell and Pieterse, 2014; Tacoli and Chant, 2014). For example, the recent Peoples' Plans into Practice (PPP) initiative revealed that women living in Kisumu, Kenya had considerably better access to community support networks and mechanisms such as self-help groups (*chamas*) than women living in rural areas. This was attributed to women in the Kisumu being more informed, aware of rights and feeling empowered to share knowledge and information freely (Kratzer and Le Masson, 2016). Therefore, although gender inequality persists in urban areas in Africa and indeed, although living in urban areas can create new risks and pressures for women, African urbanisms may also offer opportunities to shift these power relations. In particular,

gendered approaches to addressing disaster risk and development are central to uncovering the vulnerabilities of urban dwellers (Kratzer and Le Masson, 2016), and to developing gender-sensitive risk reduction strategies.

### African cities are often, but not always, violent

Sub-Saharan Africa has recently seen an “urbanisation of violence” (Urdal and Hoeshler, 2012; Bulhaug and Urdal, 2013). The highest levels of urban violence are during times of political unrest in countries which face political instability. Raleigh (2015) particularly identifies elections as a time of risk, offering the examples of Côte d’Ivoire (2010-2011), Kenya (2002, 2007, 2008), Nigeria (2011) and Zimbabwe (2008). Unlike rural violence in Africa, which predominately involves rebel and insurgent groups, she observes that urban violence is characterised by political militias, communal violence and riots by civil society (Raleigh, 2015). Yet a focus on large-scale violence and disturbance can distract from endemic interpersonal violence, such as murders, assaults and gang violence (Fox and Hoelscher, 2012).

“[S]ocial unrest, conflict, and violence are not inevitable symptoms of Africa’s urban transition. Rather, they are associated with material deprivation, vertical and horizontal inequalities, and political marginalisation” (Fox and Beall, 2012: p 968). Political violence in many urban areas can be attributed to changing institutions and practices across the continent – in particular, a growing tendency to privilege rural voters – that have excluded large segments of the urban population (Raleigh, 2015). Recently, xenophobia and anti-migrant sentiments have further fuelled conflict, violence and unrest in Sub-Saharan cities, particularly in South Africa where clashes with migrants from Nigeria and Zimbabwe (among other countries) have been particularly violent. Whether violence is political or personal violence, it affects political legitimacy, social cohesion and economic productivity, threatening human development and security in African cities (Fox and Hoelscher, 2012).

In some cases, interventions in urban planning and governance have significantly increased the safety, and reduced particular types of risk, in African cities. The provision of street lighting and improved transport systems, for example, can significantly reduce the opportunity for and incidence of violence (Fox and Beall, 2012), as demonstrated by Kigali. In other cases, particularly in the absence of effective or accountable formal policing, many urban households rely on community provision or private security to reduce the risk of violence and social unrest. The quality of these patchwork arrangements varies greatly: neighbourhood-based security organisations register with the police in Lusaka (Zambia) and protect local homes without inciting further violence, while the Bakassi boys in south-eastern Nigeria or PAGAD in Cape Town (South Africa) are little more than political militia (Fox and Beall, 2012). In many parts of urban Africa, the uncertainty, informality or even outright brutality of policing systems create significant additional risks for vulnerable and marginalised groups.

## African Urban Economies and Risk

African urban dwellers are largely poor – and African urban areas are expensive

There are several ways in which the specific nature of urban poverty in Africa contributes to risk. First, the extent of urban poverty in Africa is frequently under-recognised because most assessments fail to take into account the non-food costs associated with living in urban areas. Mitlin and Satterthwaite (2013: 21) describe the situation thus:

“The proportion of urban dwellers living in poverty (i.e. in poor quality, overcrowded and often insecure housing lacking adequate provision for water, sanitation, drainage, etc.) and exposed to very high levels of environmental health risk is higher than the proportion defined as poor by poverty lines in sub-Saharan Africa.”

This under-recognition of poverty – and a frequently held attitude that urbanisation is undesirable and should be prevented (Pieterse 2014, McGranahan and Martine 2014) – means that policies and priorities are not set in ways that build the adaptive capacity of low-income groups in cities. Rather, formal interventions and frameworks often drive the creation of un- or under-served settlements. Indeed, Pieterse (2014: 200) notes “in most African cities and towns, slum life is the norm.” These informal settlements are frequently in locations that are exposed to hazards (Huq *et al.*, 2007), as formal development in these spaces is either prohibited or undesirable.

Poverty additionally and perversely increases the cost of meeting basic needs, particularly food and water. Urban food insecurity is a considerable problem, as low-income residents often having to purchase food from informal vendors at higher costs and more variable quality (Ahmed *et al.* 2014). Similarly, residents of low-income and informal settlements frequently have to purchase water at high cost: studies in four cities show that buying sufficient municipal water can cost between 11 per cent and a theoretical 112 per cent of typical household incomes (Mitlin and Walnycki, 2016). The high costs and poor quality of food and water mean that low-income urban residents have relatively poor health (Battersby, 2012), and are therefore likely to be more susceptible to face other environmental shocks and stresses.

While poverty increases the cost of meeting basic needs, the cost of living is also actually higher in urban Africa than in cities in other low-and middle-income countries. A conservative estimate suggests that, controlling for per capita GDP and other factors, urban dwellers in sub-Saharan Africa pay 11-18% more overall than comparable cities worldwide (Gelb and Diofasi, 2015); another analysis of the same data suggested that price levels in African cities are 20-31% more expensive (Chuhan-Pole *et al.*, 2016). The increment varies among different kinds of goods and services: Nakamura *et al.* (2016) find that food and non-alcoholic beverages cost 35% more than in other countries, while rent (55%), communications (46%) and transport (42%) – although a smaller part of most household

budgets – are also considerably more expensive. Of course, there is considerable discrepancy within the continent: cities in Angola, Chad, the Democratic Republic of the Congo, Malawi and Mozambique have higher price levels, while those in Gambia, Mauritania, Madagascar and Tanzania remain relatively affordable (Nakamura *et al.*, 2016).

The higher cost of living means that urban residents in sub-Saharan Africa have to spend a larger proportion of their income to achieve the same quality of life as urban dwellers in other low- and middle-income countries. This also reduces the resources available to them to spend on risk reduction strategies such as upgrading their homes, purchasing insurance or investing in preventative health care. This is particularly true for low-income groups which already spend a larger share of their income on meeting basic needs. For example, household surveys suggest that the average urban household in Africa spends 39-59% of its budget on food; for households in the poorest quintile, the share of food expenditure reaches 44-68% (Nakamura *et al.*, 2016). Similarly, the high cost of vehicular transport is prohibitive for many low-income groups. Their dependence on non-motorised forms of transport limits their mobility in the event of shocks or stresses, increasing their exposure and sensitivity to risk.

Finally, and as described elsewhere in this paper, due to persistent intra-urban inequalities poverty is experienced unevenly by different groups within African cities, with it having particularly detrimental effects on women, the elderly, and children. In turn, this can shape the vulnerability of these groups – that is, their susceptibility to harm from environmental shocks and stresses of various kinds.

#### African urban economies have small industrial sectors

Urbanisation often raises expectations of an “urban dividend”, whereby the increasing proximity of people, goods and services in cities fosters economic activity. Urban economies certainly benefit from a large labour force concentrated in the same geographic space, relatively cost-effective delivery of housing, services and amenities, and agglomeration effects, such as knowledge and technological spillovers (Puga, 2010; Satterthwaite, 2011; Cartwright, 2015). The urban dividend has been strongly associated with industrialisation, an alignment historically observed in OECD and Asian countries. Yet with rare exceptions (notably Johannesburg), Africa’s urbanisation has not been coupled with industrialisation (Fox, 2014).

A range of hypotheses have been put forward to explain this phenomenon. A common explanation is that the higher living costs of African cities, documented above, mean that Africa’s urban labour force requires higher nominal wages than that of other low- and middle-income countries (Chuhan-Pole *et al.*, 2016). From the perspective of multinational businesses, this translates to additional operating costs without any gains in productivity. It is therefore difficult for African cities to attract international capital to finance the development of domestic industry. Other researchers critique the assumption that urbanisation is necessarily driven by industrialisation. Fox (2012) proposes that improved agricultural production, energy supply and disease control removed natural restrictions on urban population growth, allowing urbanisation. He suggests that Africa’s late urbanisation is a result of region-specific barriers, such as particularly high rates of infectious and parasitic diseases, a scarcity of navigable rivers and active constraints on rural-urban

migration in the colonial era. Alternatively, Gollin *et al.* (2012) propose that urbanisation is a function of income rather than industrialisation. Resource-extracting countries such as Angola, Nigeria and Libya have therefore seen rapid urbanisation without the expected growth in manufacturing output, as the export of minerals, oil and other commodities generated higher average incomes.

Whatever the cause, the breakdown in the relationship between urbanisation and industrialisation significantly increases the urban population's susceptibility to risk in Africa. "Consumption cities" with a small industrial base tend to have a larger share of workers in non-tradable services like transport, commerce and personal services (rather than manufacturing or tradable services such as finance). (Gollin *et al.*, 2016). These sectors do not generate the same economy-wide productivity gains and specialisation benefits as industrial activity (Rodrik, 2014; Chuhan-Pole *et al.*, 2016), and are correlated with much higher rates of poverty and inequality than have been observed in "production cities" (Gollin *et al.*, 2016). Moreover, cities that depend even indirectly on exporting resources and commodities are vulnerable to volatile international markets, with price shocks leading to dramatic increases in unemployment and cuts in public spending. The diversification associated with industrialisation therefore leads to a much more resilient economy. The absence of well-developed industrial sectors is likely to affect the inclusivity and prosperity of African cities in the longer term and, with this, urban dwellers' susceptibility to risk.

#### African urban economies have a large informal sector

The "informal sector" has been portrayed in myriad ways over time. Over the past two decades, perceptions of the sector have shifted from the disparaging "disadvantaged residual of segmented labour markets" to the celebratory "unregulated micro entrepreneurial sector" (Maloney, 2004: 1159; see also Eales, 2008; Solo, 2003; Conan, 2003). What is celebrated in these portrayals are the private sector characteristics of informal providers (Ahlers *et al.*, 2014), often associated with competition, innovation, flexibility, willingness to invest and ability to recover cost without government subsidies (Plummer, 2002; Njiru, 2004; Kjellén and McGranahan, 2006).

The situation is hugely complex, with the informal sector having the potential to exacerbate environmental degradation and other sources of risk – yet also to respond flexibly and contribute solutions to a range of challenges (Brown *et al.* 2014). The fact that informal providers operate 'in the shadows' means that they lack formal state oversight and it is difficult to enforce regulation, such as water treatment standards or minimum wages (Devereux and Sabates-Wheeler, 2004; Dovey and King, 2011). This creates risks for urban residents as prospective consumers and workers. Yet a vibrant informal sector also allows urban residents to find alternative livelihoods in the absence or decline of formal employment opportunities. This is particularly important where informal sectors are larger and/or more dynamic than the formal economy, as seen in much of West Africa (Benjamin *et al.*, 2012). Informal businesses and networks also frequently assume responsibility for risk mitigation and management, for example through savings groups that act as informal insurance schemes (Devereux and Sabates-Wheeler, 2004).

This complexity is effectively illustrated by focusing on water and sanitation. Small-scale informal providers have been increasingly regarded as a viable option for expanding services

in this sector, and thereby reducing risks for low-income dwellers. Implementation of this strategy has typically presumed that formalisation of these myriad small-scale operators is both necessary and desirable. Informal providers, the argument goes, will benefit from formalisation by gaining access to formal markets, stability and recognition (Njiru, 2004; Sansom, 2006; ADB, 2008; Schaub-Jones, 2008; Ahlers et al., 2013b). This, in turn, is expected to benefit their consumers (World Bank, 2009). Formalisation is also expected to ensure more effective enforcement of regulation on water quality and environmental protection (Ahlers et al., 2014; Brown *et al.* 2014; Devereux and Sabates-Wheeler, 2004). However, recent studies question this assumption. First, as indicated above, formal service provision does not always entail good water quality for all. Second, it is questionable whether governments would be able to regulate and control myriad small-scale water and sanitation providers without jeopardising their feasibility through taxation, corruption or simply the costs of compliance. In Maputo, for instance, over 40% of the urban population is served by approximately 800 water providers, and it is unclear whether formalisation can monitor and enforce water quality effectively across multiple, diverse and spatially scattered providers. Yet even where reliability is poor and price high, there can be little doubt that informal provision of this essential service is better than no provision at all. As the water and sanitation sector illustrates, despite its potential to reduce vulnerability, informality typically operates in an unrecognised and 'hostile' environment (Njiru, 2004). Successful risk reduction strategies must recognise the significance of the informal sector in African cities, and collaborate with informal operators in sensitive sectors such as food, water and housing.

## African Urban Governance and Risk

### Governance challenges and the creation of risk

African planning systems are relics of the colonial era and the long-standing political-economic and socio-cultural impacts of colonial rule continue to affect the current urban order (Robinson, 2008; Myers, 2016). Governance conditions and government effectiveness remain weak and in many cases continue to deteriorate in sub-Saharan Africa (Buckley and Kallergis, 2014). This hinders the establishment of effective governance structures and supportive institutional frameworks necessary for city level institutions and actors to help address urban risk and break cycles of risk accumulation. Adding to the complexity of formal and informal urban governance landscapes is that much rural, peri-urban and even urban land in Africa remains under tribal authority with traditional leaders having significant power over key natural and human resources as well as the direction of local development paths and livelihood opportunities and ultimately in shaping urban risk patterns (Beall, 2005). However, the roles and responsibilities between local government and traditional authorities are often ambiguous, thus leading to power disputes and tense relations with adverse implications for urban risk management (Goldman and Reynolds, 2008).

Sub-Saharan Africa's urban areas are also being shaped by mounting internal and external and often rapid "disruptive changes" such as emerging technologies and geopolitical shifts, which are accompanied by new actors and funding structures that upset "the very conceptualisation of development as well as existing methods of achieving it" (Buckley and



Ward, 2015: 7). These developments mean that African decision-makers face very different challenges and opportunities than their counterparts in other parts of the world did at an equivalent stage of urbanisation. The rapidity of sub-Saharan Africa's urban transition has put considerable strain on urban leaders and policymakers and their ability to manage change (Parnell and Pieterse, 2014). For example, weak institutional capacities have resulted in much urban development occurring outside of official legal frameworks of land-use transactions and regulations and building codes (Di Ruocco *et al.*, 2015). As such, the interplay between formal and informal land use and planning lie at the heart of urban risk management. Engaging with this challenge requires a frank assessment of how urban land-use is governed (or not), including an analysis of tensions between key actors and pressures, including traditional authorities, the private sector, public-private partnerships, civil society groups or informal processes. The onset of private sector-led fiscal arrangements for urban construction and management during the late 20th and early 21st centuries have arguably further compounded some of these challenges, reducing the power of local decision-makers to finance and manage large infrastructure projects in ways that balance social and private returns (Pieterse and Parnell, 2014).

There is also a growing tendency for activities taking place in African cities to be governed by 'projects' rather than by 'planning'. This is as a result of several reinforcing factors. First, inadequate revenue bases means that large investments tend to be shaped by the availability of funds from other sources, including development finance and loans from international development banks. The nature of these activities is therefore shaped by the priorities of these organisations, rather than those that may be identified by the city itself. Second, local governments are often under-resourced in terms of technical staff, including those who would perform the planning function. This means that plans – where they do exist – are significantly out-of-date. Third, the data generation and manipulation capacities at the sub-national level are rarely sufficiently well-developed or sophisticated to provide the necessary information for long-term planning. The absence of plans, or the inability to implement them when they do exist creates a vacuum in which other actors initiate projects – which in turn, further weakens the ability of local actors to do this effectively. In turn this increasingly pervasive 'governing by project' trend further exacerbates long standing spatial fragmentation and unequal risk-scapes characteristic of urban Sub-Saharan Africa. For example, without strategic oversight and being driven by actual city priorities such projects risk further distorting the mismatch between supply and demand for liveable urban spaces and housing, increase competition for urban space and force more poor and vulnerable urban dwellers into risk-prone and hazardous sites such as flood prone land, factory and waste site fringes and road reserves. While strategic regional and city scale plans and policies may exist on paper it is at the project level that key decisions are often made and where complex power relations lie, which has significant implications for the way risk is shaped and potentially addressed in the city.

### Governance for risk reduction

Specifically in relation to risk, Adelekan *et al.* (2014: 39) explain that, while the reasons for the ineffectiveness of many local governments and their planning systems in post-colonial African cities are well established, good practices and approaches in urban planning and governance in reducing risk and building resilience are not. Ineffective governance can turn urban centres into risk hotspots: a large part of the challenge in reducing urban risk rests in

governance (Pelling and Wisner, 2009). Local authorities play a major role in shaping urban vulnerability and hazard profiles through their decisions and actions around disaster preparedness, infrastructure and service provision, land management and other urban functions (Allman et al, 2004; Castán Broto, 2014). This noted, the evidence base for local government-led coordinated disaster risk reduction is limited and lack of local governance capacity is a critical concern for risk accumulation in urban sub-Saharan Africa (ActionAid, 2006; Pelling and Wisner, 2009).

Given the diverse and multilayered nature of disaster risk, integrating disaster risk reduction across all governance scales is critical to building long-term resilience and reducing disaster losses (Vedeld et al, 2015). However, governing urban risk assessment and action across institutional boundaries and mandates is highly complex. Urban planning and governance in African cities is underpinned by a diverse and fragmented set of actors and processes across the public sector, private sector, civil society groups, traditional governments and individuals. This has led to the development of highly complex institutions that are navigated by actors with varying degrees of power and whose actions and inter-relations influence urban risk accumulation and the potential reduction thereof. Institutional actors develop relationships and networks under formal and informal/shadow systems both within and between institutions and many alliances and progressive institutional plans and activities are developed at the blurred intersection of formal and informal systems. As Leck and Roberts (2015) explain, several aspects of Durban's climate and linked DRR agenda and its sustained momentum has been drive by informal or shadow networks within and beyond the municipal institutions. These aspects remain underexplored in relation to urban risk reduction.

In their attempts to overcome risk of various types, local authorities are increasingly acting in partnership or through the combined interventions of multiple actors at multiple scales (Castán Broto, 2014). For example, Durban and Cape Town in South Africa have joined national and transnational networks of cities, who have supported the development of their own urban climate agenda (Simon and Leck, 2014). Such networked governance arrangements have considerable implications for relationships between municipal and national governments. Shared responsibilities and partnership or collaborative arrangements between state and non-state actors for risk management can unlock opportunities for innovation and change, yet remain underexplored. Moreover, there is a growing need to develop systems that can accommodate multiple urban and other actors with often competing interests and a lack of shared understandings of disaster risks, drivers thereof and how they might be managed to promote appropriate disaster risk reduction and adaptation compatible with local development.

## Conclusion

In an overview of this type, it is obviously impossible to cover all the characteristics of urban experiences in a varied sub-continent at a significant level of depth. However, the discussion presented above demonstrates how many of the key characteristics of towns and cities in sub-Saharan Africa – some of which are unique to these urban centres, others of which are shared with cities elsewhere – play a significant role in shaping the creation of risk, the consequences of this, and the potential for addressing it. These features include the broad

features of urbanism (demographic, spatial, connectivity), the social dimensions (including those shaped by gender and age), the economic dimensions, and the over-arching governance processes that both reflect and shape these other elements.

Taken together, what might this body of material indicate in relation to understanding and addressing risk in these cities? First, it shows that risk production in urban centres is complex. It takes us beyond looking only at hazards and vulnerability, to looking at the multiple ways in which hazards are created (e.g. through urban expansion into exposed locations, through failures in provision of infrastructure), and the multiple ways in which vulnerability is shaped (e.g. through economic processes, but also through individual characteristics of age and gender). Second, it shows that there is a need for policy makers at multiple scales to engage with both the proximate and ultimate drivers of risk. While it is inappropriate to ignore the surface manifestations of risk with the excuse that structural forces are the main drivers, at the same time the intransigent nature of these drivers means that some level of amelioration of the immediate expression of risk is necessary.

Engaging with this in practice is tricky, and there are few strong African urban examples of either how addressing broad urban challenges has also reduced risk, or how risk reduction activities have sought to reshape urban politics more broadly. Indications of how this might be successful can be seen in certain specific examples that have used neighbourhood based responses to particular hazards as the basis for re-shaping citizen-state relationships – although few of these can be found in sub-Saharan Africa, there are strong examples from south-east Asia (e.g. Reed *et al.* 2014, Dodman *et al.* 2010). Other promising directions include the integration of risk reducing activities in community sanitation (e.g. through the use of rainwater harvesting in community sanitation blocks) and shelter (e.g. through the use of more resilient and energy-efficient building materials) demonstrated in Uganda (Dobson *et al.* 2015); and the creation of space for joint action by civil society and governments (despite significant conflicts in many other areas of activity) around issues of climate change in Zimbabwe (Dodman and Mitlin 2014).

Moreover, it is important to focus on the opportunities and potential for resilience building in emerging urban centres, as well as the actual subjectivities and everyday life that define much of the urban condition. As Myers (2016: 90) contends, conceptualising urban physical environments “merely as sites of risk misses seeing cities as wellsprings of environmental opportunities”. Pieterse (2013: 12) employs the term ‘rogue urbanism’ to characterise what constitutes ‘cityness’ in the current African urban era: “Dynamics that are so unruly, unpredictable, surprising, confounding, and yet pregnant with possibility, invoking a rogue sensibility”. For Pieterse, African rogue urbanism holds immense possibilities and potential for positive contributions, particularly at the grassroots, that can address development concerns of African cities. However, rogue urbanism also embodies immense challenges and potential adversities through the possibilities of going “rogue” in a negative sense, whether led by rogue states, elites or grassroots: “the uncivil society that runs parallel to the civil society” (Myers, 2016: 142). The outcomes of this “rogue sensibility” for urban risk accumulation and risk reduction remain uncertain and underexplored.

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