



Contextualising urban resilience in Ghana: Local perspectives and experiences



Rhoda Mensah Darkwah^a, Patrick Brandful Cobbinah^{a,b,*}, Prince Aboagye Anokye^a

^a Department of Planning, College of Art and Built Environment, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

^b Institute for Land Water and Society, Charles Sturt University, P.O. Box 789, 2640 Albury, New South Wales, Australia

ARTICLE INFO

Keywords:

Urban resilience
Climate change
Urban growth
Urban planning
Kumasi
Urban development

ABSTRACT

Climate change and unplanned urban growth remain two emerging environmental and health threats with widespread implications for poor countries. Yet, despite attempts by governments and international organisations at addressing these challenges, they remain unabated. Understanding the challenges through a resilience lens can support actions for addressing these impacts. Regardless of this potential, the application of urban resilience to sustainable urban environments remains a distant reality in areas most vulnerable to the impacts of these environmental and health threats. Understanding of the application of the resilience concept to urban development and its outcomes are limited in Ghana. This study fills this gap by focusing on: the extent of climate change in the city of Kumasi; local experiences of major unplanned urban growth challenges in Kumasi; local understanding of urban resilience; and efforts towards urban resilience. Using institutional interviews and household surveys, findings indicate a rising trend of temperature and unpredictable rainfall pattern in Kumasi. This situation is generating negative consequences such as flooding, destruction of ecologically sensitive areas, and related diseases such as malaria. Complicating matters further are the impacts of unplanned urban growth, including poor sanitation conditions, inadequate social services, and poor housing conditions. Unfortunately, despite these challenges, there is limited understanding of urban resilience in Kumasi, amongst both urban planning related institutions and local communities. As a consequence, institutional initiatives towards urban resilience are uncoordinated and incomprehensive.

1. Introduction

Emerging environmental and health threats, particularly climate change and unplanned urban growth, are increasingly risking the future of African cities (Intergovernmental Panel on Climate Change [IPCC], 2013). Whilst for some (Cobbinah & Anane, 2016; IPCC, 2013), ongoing and future impacts of climate change are predicted to make human survival and natural systems uncertain and difficult with African countries being the most vulnerable due to their reliance on climate-dependent sectors (e.g., hydro-electricity, rain-fed agriculture), others (Cobbinah et al., 2015; United Nations Department of Economic and Social Affairs/Population Division [UNDESA/PD], 2012) have identified unplanned urban growth as a socio-economic threat in Africa. For example, studies (e.g., Stockholm Environment Institute [SEI], 2008; United Nations [UN], 2008) suggest that climate change is already impacting on the socio-economic functionality and human survival in Africa. SEI (2008) reports widespread changing weather patterns in Africa which have resulted in stresses such as increased competition over resources and destruction of biodiversity.

Alternatively, urban growth in Africa, according to Cobbinah et al. (2015), is estimated to reach about 58% in 2050, which implies that Africa would be home to nearly quarter (1.3 billion) of the global urban population. It is, however, worth noting that this growth is not uniform across African countries or cities. In fact, the widely held notion of the African continent being characterised by rapid urban growth is hotly contested (Obeng-Odoom, 2010; Potts, 2009, 2012). Potts (2009) strongly argues that the rapid urban growth mantra is based on unreliable population data and that urban growth rates in many African countries have actually slowed with most recent census data indicating that growth rates in many cities are no higher than or even below national rates. Regardless of crevices that exist at the country level, Potts (2009) asserts that demographic process of urban growth and the relocation of population from rural to urban areas are gradually stagnating in a number of African countries. In fact, there are cases of counter urban growth (e.g. Zambia, Côte d'Ivoire and Mali), and weak in-migration towards cities (e.g. Benin and Mozambique) (Owusu & Oteng-Ababio, 2015; Potts, 2009). Yet, some cities in African countries (e.g., Tanzania, Kenya and Niger) continue to record high urban growth

* Corresponding author at: Department of Planning, College of Art and Built Environment, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana.
E-mail address: pcobbinah@csu.edu.au (P.B. Cobbinah).

(see Owusu & Oteng-Ababio, 2015; Potts, 2009).

Efforts to address and adapt to these environmental and health challenges have become urgent, tenable, and ever pressing in recent years (IPCC, 2013; UNDESA/PD, 2012). The notion of resilience has emerged over the past four decades as a strategy, when applied, will contribute to supporting actions towards responding and adapting to these challenges (Beatley & Newman, 2013; Pickett et al., 2004; Urban Land Institute [ULI], 2010). Although its origin is strongly grounded in ecological discipline where it was used to describe the capacity of a system to survive and recover from adverse events, and ensure a bounce back into a stable equilibrium state (Liao, 2012; Serre & Barroca, 2013), the concept of resilience is presently applied across multiple disciplines, including urban studies.

Research evidence indicates that many developed country cities are marching towards resilience by adopting and applying the resilience notion in urban planning practices, including Istanbul (Turkey), Edinburgh (Scotland), Manchester (England), Sydney (Australia) (ULI, 2010), Tokyo (Japan), Singapore, Makati and Albay (Philippines) (Prasad et al., 2009). However, little is known about urban resilience in African cities (United Nations Office for Disaster and Risk Reduction, [UNISDR], 2013), despite the continent being one of the most vulnerable regions in terms of climate change and unplanned urban growth impacts (Cobbinah et al., 2015; IPCC, 2013).

In this sense, research into urban resilience in African cities is timely and necessary. This paper explores urban resilience in Africa, using Kumasi as a case study from Ghana. From the foregoing analysis, the study finds answers to the following questions: (i) What is the state and extent of climate change in Kumasi? (ii) What are the key unplanned urban growth challenges facing Kumasi? (iii) What does urban resilience concept mean to local agencies and communities in Kumasi? and (iv) How are local agencies supporting and promoting urban resilience in Kumasi?

2. Urban resilience in Africa: conceptual framework

Urban planners and researchers have had a long-standing engagement with trying to understand the interplay of environmental, socio-cultural, economic and political processes that shape urban vulnerability – i.e. “the state of susceptibility to harm from exposure to stresses associated with environmental and social change, and from the absence of capacity to adapt” (Adger, 2006, p. 268) – to climate change and urban growth (e.g., Blakely, 2007; Bulkeley et al., 2009; Ogato et al., 2017). A key approach in this regard is urban resilience – broadly understood as the capability and preparedness of cities to withstand and respond to severe shock, and make necessary adjustments for continuing functioning while their inhabitants strive irrespective of the severity of the shock (Ove Arup & Partners International Limited [OAPIL], 2014; ULI, 2010). Among other issues, urban resilience posits that any approach to urban development in these changing times must seriously confront questions linked to vulnerability of urban residents and communities to the upsurge in economic and environmental pressures and instabilities related to globalisation, rapid urban growth, climate change, poverty and resource depletion (e.g., Prasad et al., 2009; Seeliger & Turok, 2013). Much of the work rooted in this approach has critically contributed to shaping how urban environmental problems are appreciated, solutions conceptualised, and intervening ideas advocated particularly in developed countries such as Australia, Canada, Sweden, Turkey, Portugal and the Netherlands (Planning Institute Australia, 2016; Schmitt, 2013; Walisser et al., 2005).

In this paper, the authors draw on the urban resilience concept to understand the preparedness of African cities to adapt to climate change and unplanned urban growth, and their associated impacts. Works on urban resilience in city-wide contexts range widely in terms of geographical settings and extent of vulnerability. For example, while the application of urban resilience in some United States cities, such as New Orleans, is in response to major natural disasters such as

hurricanes and tornados (Campanella, 2006), in the Netherlands cities (e.g., Rotterdam), it is applied in spatial planning in response to rising sea level and associated flood events (Lu & Stead, 2013). Although within the cities of developing countries in Africa, urban resilience has not fully been integrated and applied in planning efforts, research (e.g., Cobbinah & Darkwah, 2016a) indicates that the concept is relevant to planning practice, and that its application can lead to a restoration of depleted urban greenery. To varying degrees, the aforementioned studies conceive urban resilience as a new urban planning agenda that, when applied, has the potential to aid cities and residents to withstand shocks associated with major global environmental and health issues relating to climate change, urban growth and poverty (UNISDR, 2013). This is also consistent with the UN Sustainable Development Goals particularly goal 11 on sustainable cities and human settlements (UN, 2016). This goal, according to Cobbinah (2017), encourages national governments to pursue economically and socially sound, as well as environmentally friendly interventions (e.g. through urban policy) for making cities inclusive, safe, resilient and sustainable. In this regard, the UNISDR (2013) identifies nine key tenets of how urban planning can contribute to urban resilience especially in Africa:

1. Working with multiple stakeholders throughout the planning process to identify known risks, needs and potential solutions, realising the potential of communities to contribute to risk reduction.
2. Incorporating risk assessment – considering exposure, vulnerability and hazards, urban settlements development and services – in all urban development designs, projects and programmes.
3. Making safe land available for urban development, avoiding construction in disaster prone areas, leaving buffers and providing recreational areas.
4. Ensuring that public space for streets, infrastructure and parks is identified and protected.
5. Upgrading informal settlements, with attention to access roads, flood-risk, and other safety measures.
6. Installing risk-reducing infrastructure, including drainage and sewerage systems.
7. Assessing how urban development contributes to improving the lives of the poorest or most vulnerable people in a city.
8. Developing good information on risk and communicating risk information widely.
9. Protecting ecosystems to allow proper storm water drainage, avoid extensive erosion, and protect against storms and tidal waves.

For the purpose of this article, three core issues within the African context make urban resilience relevant. The first relates to evidence of climate change and its associated actual and potential impacts on the functionality of African cities. Scholarly opinion (e.g., Amos-Abanyie, 2011; Moshia, 2011) suggests that Africa’s climate has been altered considerably over the past half a century in terms of average weather patterns. The tragedy of extreme weather events (e.g., flood, droughts, and warming temperatures) continues to cause extraordinary human suffering (e.g., increased poverty) in Africa (Cobbinah & Anane, 2016; IPCC, 2007). As a result, there is a growing concern regarding how to deal with the repercussions of climate change in Africa where majority of urban populations are vulnerable to climate-related disturbances (Tyler & Moench, 2012; UN-Habitat, 2011). The United Nations Environment Programme [UNEP] and United Nations Development Programme [UNDP] (2010) believe that unless strategies are cautiously and methodically introduced to achieve resilience and alleviate susceptibility, climate change may threaten African countries efforts towards realising the sustainable development goals. Similarly, Tyler and Moench (2012, p. 312) encourage “practitioners to consider innovation and changes to aid recovery from stresses and shocks that may or may not be predictable”. Consequently, this article seeks to examine evidence of climate change in Africa using Ghana as a case study, and the preparedness of Ghanaian cities in dealing with climate change. Here,

Download English Version:

<https://daneshyari.com/en/article/7353350>

Download Persian Version:

<https://daneshyari.com/article/7353350>

[Daneshyari.com](https://daneshyari.com)