Enabling research-to-policy dialogue for adaptation to climate change in Africa

Research and Policies for Climate Change Adaptation in the Central Africa Urban Areas

Context and Importance of Climate Change in Central Africa Urban Areas

Urban areas in the Central African region are highly vulnerable to climate change, which is one of the most important challenges facing cities in Africa. Climate change adaptation in urban areas in Central Africa is not only a set of actions for the future but also an immediate imperative. The urban sector in Central African countries has experienced very rapid growth. For example, it is estimated that the urban population of Central Africa has more than doubled from 23.7m in 1990 to an estimated 55.6m in 2010; the 100m mark could be reached by 2022, with further growth to 112.7m by 2030 (UN-Habitat 2010). Urban centres in Central Africa are at risk due to: (i) high density of populations; (ii) lack of adequate drainage channels; (iii) concentration of solid and liquid waste; and (iv) unplanned settlements which often lack access to basic municipal services and harbour residents compelled to live in risky sites (Bull-Kamanga et al. 2003:). Thus, increased climate hazards together with rapid urbanisation are likely to place increased strain on the already weak capacity of local governments as they attempt to respond to the vulnerabilities of urban populations, particularly the urban poor.

Uncontrolled urbanisation in the Central Africa region spreads into fragile ecosystems, including delicate or highly erodible slopes, natural drainage waterways or valleys and areas that are prone to flooding. Due to the intense competition for space in urban areas, green spaces are rapidly disappearing and areas usually deemed unsuitable for space in urban areas, green spaces are rapidly disappearing and areas usually deemed unsuitable for space in urban areas, green spaces are rapidly disappearing and areas usually deemed unsuitable for space in urban areas, green spaces are rapidly disappearing and areas usually deemed unsuitable for space in urban areas, green spaces are rapidly disappearing and areas usually deemed unsuitable for space in urban areas, green spaces are rapidly disappearing and areas usually deemed unsuitable for space in urban areas, green spaces are rapidly disappearing and areas usually deemed unsuitable for space in urban areas, green spaces are rapidly disappearing and areas usually deemed unsuitable for space in urban areas, green spaces are rapidly disappearing and areas usually deemed unsuitable for space in urban areas, green spaces are rapidly disappearing and areas usually deemed unsuitable for space in urban areas.

As Central Africa becomes more urbanised, environmental change, including climate change, is...
becoming a major and complex development challenge. The impacts of climatic variability and change on cities and urban areas are varied and complex. Addressing environmental conditions and increased attention to and integrated coastal zone management (ICZM) plans and relevant institutions to implement policy at the national level. Gabon and Congo have also designed ICZM plans to take into account issues of coastal erosion and sea level rise in every socioeconomic development coastline scheme.

There are gaps in the current policy environment. These include lack of integration among adaptation strategies in urban sector and development. The importance of improving city-dwellers’ understanding of coastal ecosystem protection to reduce pressure on mangrove forests. According to Bull-Kamanga et al. (2003), recurrent inundation in large cities across Central Africa results from multifaceted factors, such as coastal erosion that renders coastal settlements vulnerable to both droughts and flooding. Reduced agricultural productivity to provide substantial income to small-scale farmers, while protecting environment sustainability is complicated by climate variability and change. The IPCC (2007) further stresses that climate change would translate into increased incidence of climate shocks such as drought and flooding, depleting underground water, decreasing crop yield and/or crop suitability and proliferation of pests and diseases. In this scenario, semi-arid zones of Central Africa are particularly at risk and among the most vulnerable areas.

Regional Policies related to Climate Change Adaptation in Central Africa Urban Areas

In Central Africa, Chad, Central African Republic, Democratic Republic of Congo and Burundi have submitted their National Adaptation Programmes of Action (NAPA). Climate change NAPA is a mechanism designed to assist Least Developed Countries (LDCs) and Central African countries in adapting to climate change. NAPAs have so far placed emphasis on climate sensitive natural resource-based livelihoods. There are issues relating to effectively communicating what climate change actually is to different groups living in cities. Insufficient long-term perspective, aggravated by short-term funding cycles; and insufficient integration between institutions. Insufficient long-term perspective; aggravated by short-term funding cycles; and insufficient integration between institutions.

Key research findings to be considered for informed decision making in Climate Change Adaptation in Central Africa Urban Areas

Research on climate change in Central Africa was conducted in seven research projects at the University of Douala, University of Yaoundé I and University of Buea, all in Cameroon, with a clear focus on adaptation efforts in urban settings. The results reflect climate change impacts in large cities in Central Africa.

Scientific evidence for implications of climate change for urban areas

Washington et al. (2006) observed that Central African stream flow from Congo River gauge stations shows no long term trends. The time series is dominated by multi-decadal variability with links to the Atlantic atmospheric circulation but not to the El Niño Southern Oscillation. Other IPCC scenarios projected that sea level rise and increased vulnerability to flood and storm surges will render some of the coastal areas of Central Africa uninhabitable, displace millions of people and threaten low-lying urban areas, such as Douala in Cameroon (IPCC 2001; IPCC 1998).

In Central Africa, meeting the challenge of increased agricultural productivity to provide substantial income to small-scale farmers, while protecting environment sustainability is complicated by climate variability and change. The IPCC (2007) further stresses that climate change would translate into increased incidence of climate shocks such as drought and flooding, depleting underground water, decreasing crop yield and/or crop suitability and proliferation of pests and diseases. In this scenario, semi-arid zones of Central Africa are particularly at risk and among the most vulnerable areas.

Causes of vulnerability

Urban areas in Central Africa are confronted with increased risks from water scarcity and flooding. For the city of Douala in Cameroon, Moulla (2011) showed that coastal areas are threatened by sea level rise as urban demographic pressures mount. These findings underscored the importance of improving city-dwellers’ understanding of coastal ecosystem protection to reduce pressure on mangrove forests. According to Bull-Kamanga et al. (2003), recurrent inundation in large cities across Central Africa results from multifaceted factors, such as coastal erosion that renders coastal settlements vulnerable to both droughts and flooding. Reduced agricultural productivity to provide substantial income to small-scale farmers, while protecting environment sustainability is complicated by climate variability and change. The IPCC (2007) further stresses that climate change would translate into increased incidence of climate shocks such as drought and flooding, depleting underground water, decreasing crop yield and/or crop suitability and proliferation of pests and diseases. In this scenario, semi-arid zones of Central Africa are particularly at risk and among the most vulnerable areas.

1. Invest in research, capacity building and documenting best practices

Policy options for consideration in the Urban Areas of the Central Africa Region

Policy options to address the major challenges of direct and indirect impacts of climate change in the Central Africa Urban sector should address the following issues:

1. Invest in research, capacity building and documenting best practices

Documentation and shared learning in adaptation research and practice should be organised. To achieve this objective, investment should be increased in research in climate change adaptation and in building capacity of staff working in ministries and knowledge centres, thereby enabling them to write their work in a manner that promotes learning.

2. Improve living conditions in urban areas

Central African governments need to plan urban development and support programmes that contribute to climate change mitigation and adaptation in the context of wider development objectives. The NAPAs so far have placed emphasis on climate sensitive natural resource-based livelihoods. There are issues relating to effectively communicating what climate change actually is to different groups living in cities.

3. Provide an enabling environment for the implementation of policies and uptake of research to inform policymakers

Adaptation to climate variability and change in urban areas is a development issue which should be addressed through collaboration amongst sector ministries, researchers, educators, policymakers, urban planners, development practitioners, donors, non-governmental and community-based organisations and private sector actors.

4. Monitoring and evaluation frameworks for adaptation

Monitoring, evaluating and learning about climate change adaptation projects should be undertaken, because climate change is taking communities, local and national governments, and other stakeholders into uncertainties. All stakeholders should effectively collaborate to implement climate change adaptation projects and build upon successful strategies.

Recommended Reading
