CoM SSA SEACAP Toolbox

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For more information contact: helpdesk@comssa.org
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Author: ICLEI Africa
The full SEACAP Toolbox is found here: https://comssa.org/
This chapter is one component of the SEACAP Toolbox. For the full Toolbox, please visit: https://comssa.org/

What you will learn in this chapter:
• Introduction to Climate change in the African context
• The link between climate change and urban development

This chapter has been designed for Local Government Officials and partners completing a SEACAP
What is climate change?

Climate change is defined as “a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.”

United Nations Framework Convention on Climate Chang (UNFCCC), Fact Sheet, 2011
Climate change places a disproportionate burden on the developing world

“Climate change threatens to undo the last 50 years of progress in development, global health, and poverty reduction. It could push more than 120 million more people into poverty by 2030 and will have the most severe impact in poor countries, regions, and the places poor people live and work.”

UN Special Rapporteur on Human Rights, June 2019
Africa will be hit hardest by climate change

- Linkages to climate system
- Understudied, complex climate system
- Large degree of changes expected

Source: Fig. SPM2 Intergovernmental Panel on Climate Change, WGII, 2014
Africa is the continent most affected by climate change

Main impacts include:

Main hazards in Africa:
- Sea level rise
- Coastal erosion
- Increase of rainfalls
- Extreme temperatures
- Water scarcity and drought

Main risks for African societies:
- Water stress
- Health issues
- Decrease in crop productivity
- Negative impacts on fisheries
- Climate migration
- Collapse of the economy
- Negative impacts on livelihoods
- Governance instability
Africa is the continent most affected by climate change

**World Bank Projections**

**Climate projections for Africa by 2100**
- Temperature increase by 4°C
- 40% less rainfall

**Anticipated climate risks**
- Increased drought
- High winds
- Flooding

**Examples of economic consequences**
- Drop in GDPs
- Social relations will suffer
- Shrink in croplands by 90%
- Air and water-borne diseases

Africa is the continent most affected by climate change.
Example: Bobo Dioulasso

Climate projections

Rainfall:
- extension of the rainy season // less rain during the season
- increase of the seasonal intensity

Temperature:
- average maximum temperature of 37.2°C in 2025 (+0.9°C/1961-1990) and 37.8°C horizon 2050 (+1.5°C)

Anticipated climate hazards:
- extension of the drought period;
- strong variability of the rain from one year to another;
- increase in the potential evapotranspiration

Sectors and populations possibly impacted:
- -73% in water volumes of the Mohoun river in 2050 (/1961-1990)
- hydraulic diseases, respiratory and cardiovascular diseases linked to pollution
- ex: If +5.6% rainfalls in 2025, Bobo would only cover 32% of the maize needs of the country, and only 23.5% in 2050 (cf graph)

Why cities are critical to addressing climate change

56% African population in cities by 2050: increased concentration of climate risks, threatening:
- People and communities
- Physical assets
- Large built infrastructure
- Loci of economic activity

Implications for broader regions and ability of certain key services to reach rural areas:
- national/provincial government
- telecoms/financial centres
- transport and trade hubs
Why cities are critical to addressing climate change

- Often account for the most emissions
- A multitude of risks across diverse sectors (food, water, infrastructure, transport, services, business, health) often occurring in parallel
  - Demand careful management to avoid maladaptation
- Rapid population growth in African cities, stretching limited resources
- Population growth largely happening in informal settlements
  - More than 1/2b in informal settlements by 2050 without services/adequate structures
Urban factors leading to climate vulnerability

- **Exposure:**
  - E.g. informal settlements located near wetlands/bodies of water; mudslide-prone hills; eroding coastal areas

- **Sensitivity:**
  - Lack of access to adequate water / sanitation
    - Implications for livelihoods / small business

- **Capacity:**
  - Financial resource, employment, human capital, information and healthcare
Urban factors leading to climate vulnerability

- Given population growth, without dedicated action, emissions for transport, waste, and energy are likely to grow rapidly, with several cross-cutting negative impacts:
  - Air pollution and consistent demand on public healthcare system
  - Congestion, degraded roads and resultant loss to GDP
  - Compromise of ecosystem services and related tourism-driven income
Cities are also engines of opportunity to address climate change

- Cities are home to significant proportions of GDP and population
- Making decisions for increased climate resilience in cities can have a big impact nationally
- Cities are hubs of innovation where new solutions to climate challenges can be created
- Higher urban densities found in cities can promote increased resource efficiency and make low emission transport more viable
Responding to climate change is thus an urgent consideration for many African cities.

The fight against climate change will be won or lost in cities, which are also likely to be the epicentres of its impacts.

As key actors in the fight of climate change, cities’ contribution is crucial to reach climate targets. For this reason, there is the need for a flexible framework, in which local authorities can develop and build their strategy according to distinctive opportunities and challenges.
Emissions are rising in many African cities

Potential annual passenger-related emissions in Bobo-Dioulasso

Bobo-Dioulasso biogenic emissions (CO2b)

Source: ICLEI Africa own production
CoM SSA
SEACAP Toolbox

1.1: Climate change and cities in Africa

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• The link between climate change and the urban realm

The next chapter is Session 1.2: CoM SSA’s response to the challenges of climate change
CoM SSA programme is jointly implemented by:

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