



Covenant of Mayors
in Sub-Saharan Africa



CoM SSA SEACAP Toolbox

Module 1.3: Climate change and
cities in Africa

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What you will learn in this module:

- Introduction to climate change
- Global impacts of climate change
- Climate change in the African context
- The link between climate change and urban development



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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 Change (UNFCCC), Fact Sheet, 2011



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What is climate change?

- Greenhouse gases are increasing in the Earth's atmosphere as a result of human activity, resulting in an overall increase in the Earth's average temperature.
- As the Earth becomes warmer, it impacts regional climate systems.
- Some regions may experience an increase in temperature combined with an overall drying resulting in a decrease in rainfall, increases in incidences of drought and increases in heat waves fires.



What is climate change?

- Other areas may also experience an increase in temperature but it could be combined with an overall increase in moisture resulting in increases in incidences of rainfall, storms and flooding.



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Impacts of climate change at a global scale

- Shifts in the global climate manifest differently in various regions around the world. However, there are common trends which are experienced throughout the world regardless of location.



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Impacts of climate change at a global scale

Common global trends associated with climate change:

1. Increase in average temperatures
2. Melting of polar ice resulting in sea-level rise
3. Disrupted rainfall patterns in the form of shifts in timing, seasonality, intensity and frequency.
4. Increase in the intensity and frequency of the occurrence of extreme weather.



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



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Africa will be the continent hardest hit by the impacts of climate change

Climate hazards in Africa include:

- Rising temperatures
- Heatwaves
- Rainfall variability, seasonal shifts
- Flooding
- Water scarcity and droughts
- Increase in extreme events
- Sea level rise
- Coastal erosion



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Impacts of climate change on African societies

Ecological risks in Africa include:

- Increased water stress
- Reduction in fish shoals and a negative impact on fisheries
- Shrink in croplands by as much as 90% resulting in impacts on what crops can be cultivated and a reduction in crop yields.



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Impacts of climate change on African societies

Economic risks in Africa include:

- Sharp drop in GDPs
- Strain in access to goods and services
- Job losses
- Negative impact on ability to generate income and on livelihoods
- Economic collapse



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Impacts of climate change on African societies

Societal risks in Africa include:

- Health risks due to increases in certain air-bourne and water-bourne diseases (e.g. cholera, malaria)
- Increased hunger and malnutrition
- Climate migration
- Governance instability
- Increased risk to vulnerable communities, particularly women and children



Climate change places a disproportionate burden on the developing world

“Along with the economic costs of the climate crisis, a rise in displacement, and forced migration, poverty and insecurity will have a disproportionate impact on women and girls.”

UN Report on Gender Equality: Women's Rights in Review 25 Years After Beijing



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Climate change places a disproportionate burden on the developing world

“Women and girls in the world’s poorest and most marginalized communities have contributed the least to the climate emergency but are suffering the brunt of its catastrophic effects...Food and water shortages, polluted air and increasingly severe climate-related disasters such as droughts, floods or wildfires are taking a disproportionate toll on their health and rights.”

Gender Equality: Women’s Rights in Review 25 Years After Beijing



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Gender equality is integral for climate resilience



Women's and girls' systemic marginalisation can be worsened by climate change hazards and risks

Example: Concentration of women's employment in climate-exposed jobs (e.g. agriculture employs 39% of employed women) puts them at a higher risk of the impacts of climate change

Climate risks can be addressed by measures that empower women

Example: Climate and environmental conservation projects that specifically include women have been shown to have better overall outcomes. Additionally, new technologies, jobs and service delivery can specifically target women.



How climate change can affect African cities:

Case study:
Bobo Dioulasso, Burkina Faso

Rainfall:

- Projected to experience a shift of the rainy season to later in the year and overall less rain during the season
- Projected to experience an increase of rainfall intensity when it does rain

Temperature:

- Average maximum temperatures are currently 32°C
- Average maximum temperatures are expected to rise to 37.2°C by 2025 and 37.8°C by 2050



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How climate change can affect African cities:

Case study:
Bobo Dioulasso, Burkina Faso

Multiple climate hazards are currently affecting Bobo-Dioulasso. These are expected to worsen with time:

- Extreme heat
- Heavy precipitation, lightening and rainstorms
- River floods
- Droughts and water scarcity
- Extreme wind and sandstorms
- Forest fires, land fires
- Erosion



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How climate change can affect African cities:

Case study:
Bobo Dioulasso, Burkina Faso

Current and future impacts of climate hazards on the population of Bobo-Dioulasso include:

- Water stress
- Decreasing agricultural and livestock productivity
- Increasing water-borne diseases
- Infrastructure destruction (e.g. roads and buildings)



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How climate change can affect African cities:

Case study:
Bobo Dioulasso, Burkina Faso

Sectors most at risk to the impacts of climate change:

- Land use management
- Agriculture and forestry
- Energy
- Food
- Housing and urbanism
- Health sectors



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Cities are critical to addressing climate change

- As a result of rural – urban migration and population growth, 50% of the African population will live in African cities by 2030.
- Rapid population growth in African cities puts strain on finite resources. This means sustainable planning needs to happen now.
- Cities account for the highest proportion of emissions within a country.



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Residents of informal settlements are particularly vulnerable

- Informal settlements are challenging contexts for local governments
- Residents of informal settlements are disproportionately affected by climate hazards due to a lack of infrastructure and their location (typically they live in unplanned houses which are sub-optimally located, e.g. in a floodplain).



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Residents of informal settlements are particularly vulnerable

Additional challenge for local governments:

“The environmental risks faced by informal-settlement dwellers intersect with social drivers of vulnerability, such as low-income and gender discrimination. Informal-settlement residents usually have difficulties engaging with the local governments whose support they need.”



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Urban factors leading to enhanced climate vulnerability

Exposure:

- Example: settlements located near wetlands/bodies of water; mudslide-prone hills; eroding coastal areas

Sensitivity:

- Example: Lack of access to adequate water / sanitation

Capacity:

Example: Lack of access to adequate financial resource, employment, human capital, information and healthcare



Where/how will local governments be impacted?

Pressure on local
government revenues

Urban infrastructure and
service delivery risks: e.g.
damage to infrastructure
and service delivery
disruptions

Increased vulnerability of
local populations
(affecting marginalised
groups in unique ways):
e.g. increased
multidimensional poverty
(food, income, etc.)



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Cities provide an opportunity to address climate change challenges and capitalise on potential co-benefits

- Cities are home to significant proportions of the population compared to rural areas
- Cities are hubs of innovation where new solutions to climate challenges can be created
- Revenue to address climate challenges can more easily be generated in cities
- Making decisions for increased climate resilience in cities can have a significant impact locally as well as nationally



Cities provide an opportunity to address climate change challenges and capitalise on potential co-benefits

- Climate action at the city level offers opportunities to address inequality, poverty reduction, housing and sanitation challenges and gender equality
- It has been shown that by actively engaging women in disaster risk management, it can be beneficial in climate project implementation (e.g. more effective community mobilisation).



Cities provide an opportunity to address climate change challenges and capitalise on potential co-benefits

“...It is in metropolitan areas that the battle for human rights, and for many of the principles enshrined in the Global Charter-Agenda for Human Rights in the City, is being fought. These principles include combatting inequalities and marginalization, universal access to decent housing, basic services and culture, and the protection of human rights, gender equality and equal opportunities for all.”

Co-Creating the Urban Future: the Agenda of Metropolises, Cities and Territories



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Responding to climate change is urgent for African cities

As key actors in the fight of climate change, cities' contribution is crucial to reach reduce the impacts of climate change both locally and nationally.

For this reason, there is the need for cities to undertake climate action planning within a flexible framework, in which local authorities can develop and build their strategy according to distinctive opportunities and challenges.



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Please note:

This module has been designed for local government officials and partners who are developing their SEACAP.

This module is one component of the SEACAP Toolbox. For the full Toolbox, please visit: <https://comssa.org/>



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Thank you



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Find out more: <http://comssa.org>

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