

# Main climate risks in the Central Africa region by the 2050s

## Environment – terrestrial forests, ecosystems and biodiversity

- Central African forests and peatlands are globally significant storers and absorbers of carbon and essential to the regional water cycle, and their loss would cause widespread droughts on the African continent and have negative implications for climate change and greenhouse gas concentrations globally.
- Reduced flowering, fruit production and mast seedings of some Central African plant species will occur due to higher temperatures and reduced water availability, with knock-on effects on the entire ecosystem. It is not currently known which species are most vulnerable to these climatic changes.
- Overall, forests of Central Africa may be more naturally resilient to climate change than those of the Amazon, but this resilience is reduced by human activities which lead to forest fragmentation and biodiversity loss.



## Agriculture and food security

- Greater rainfall variability, more extremes and rising temperatures will have broadly negative impacts on Central African agricultural yields of important staples such as maize, as well as affecting output variability, prices, and food security, including via disease vectors and rising pest populations.
- Pastoral and agro-pastoral livelihoods throughout Central Africa are vulnerable to warming temperatures and heat extremes, through heat stress to animals, and reduced pasture, fodder, and periodic water availability.
- Productivity of Central African inland fisheries will be reduced by rising water temperatures and declining water quality after heavy rainfall and flood events.



## Water resources and water dependent services

- Central Africa as a whole has abundant freshwater resources to meet present and future needs and climate change is unlikely to have negative impacts on the overall availability of water for different uses and users, though periodic water scarcity and contamination will increase.
- The Central African region has enormous hydropower potential, but planning and management for power, flood control and environmental objectives will become more difficult as rainfall and river flows become more variable.
- Climate-induced reductions in water quality, exacerbated by flooding, pose the biggest threat to drinking water and health in Central African countries with very limited access to safe water and sanitation.



## Infrastructure and settlements

- More intense rainfall events will increase flood risk in settlements across Central Africa, with densely populated, low-lying, and fast-growing informal settlements most exposed and vulnerable.
- Increasing temperatures and heat extremes, in combination with rapid urbanisation, will increase demand for water and electricity, intensifying pressure on fragile and overstretched infrastructure throughout Central Africa.
- Coastal settlements in Central Africa will be increasingly exposed to rising sea levels, intensifying risks from coastal flooding, coastal erosion, and saltwater intrusion, and damaging infrastructure and disrupting services and transport, including for strategic ports.



## Health

- The spread of communicable water-borne diseases such as cholera and diarrhoea, and the geographic range of vector-borne diseases such as malaria and dengue fever, are likely to increase across Central Africa with rising temperatures and changing rainfall patterns, with short-term and longer-term threats to health and nutrition.
- Poor air quality and days of heat stress (combination of heat and humidity) are expected to occur more often in Central Africa, and pose risks to health and reduce labour productivity, with those living in poverty, the elderly, pregnant women, children, outdoor workers and those with pre-existing health conditions most exposed.



## Coastal fisheries and the marine environment

- Over half of Central Africa's urban population live in coastal cities, increasingly exposed to sea level rise, coastal erosion, and coastal flooding.
- Marine fisheries around Central Africa may become less productive because of increases in sea surface temperatures, sea level rise, ocean acidification, changes to ocean circulation and marine heat waves.
- The Central African coastal region includes some of the largest mangrove forests in Africa (especially Cameroon) providing protection against floods and important carbon sinks, but they are threatened by rising sea levels and anthropogenic pressures.

