

Highlight on the “Future Risks and Opportunities for Adaptation in Africa” from the Summary of the IPCC AR5 WGII for the Policymaker

In recent decades, changes in climate that impact on natural and human systems are increasingly affecting Africa. Evidence of climate-change impacts is strong and more comprehensive mainly in the development sectors of the continent such as water, agriculture and health.

A- Water sector

Key Risk: The main risk factor in the water sector is the multiple *stresses on water resources* that are currently facing significant strain from overexploitation, degradation and the increased demand in the future. The risk confidence is higher under the context of drought stress esp. in the dry-prone regions of Africa.

Adaptation issues and prospects: The adaptation issues and prospects to reduce the risk have been assessed, it consists of:

- Reducing non-climate stressors on water resources
- Strengthening institutional capacities for demand management, groundwater assessment, integrated water-wastewater planning, and integrated land and water governance
- Sustainable urban development

Measuring the risk in the future: The level of risk with current adaptation is gradually increasing with decades of years starting from low in the present to

very high risk in the long-term timeframe (2080-2100) in a world of 4°C. The increase is attenuated with additional adaptation but somehow high in longer term.

Climate drivers: Monitoring the warming trend, extreme temperature, drying trend and sea level are relatively critical to control the risks assessed in the water sector and take action accordingly.

B- Agriculture Sector

Key Risk: There is currently a risk of reduction in the *crop productivity* associated with heat and drought stress, with strong adverse effects on regional, national, and livelihood and food security. The confidence is increasingly high given the increased pest and disease damage and flood impacts on food system infrastructure.

Adaptation issues and prospects: The adaptation issues and prospects were identified in the:

- Technological adaptation response (e.g. stress-tolerant crop varieties, irrigation, enhanced observation systems)

- Enhancement of smallholder access to credit and other critical production resources, diversifying livelihoods
- Strengthening of institutions at local, national, and regional levels to support agriculture (including early warning systems) and gender oriented policy.
- Agronomic adaptation responses (e.g., agroforestry, conservation agriculture)
- Vulnerability mapping and early warning systems
- Coordination across sectors
- Sustainable urban development

Measuring the risk in the future: The risk with additional adaptation is at low level until near-term (2030-2040) however the adaptation measures in this sector should be constantly strengthened and enhanced. Meanwhile the risk level with current adaptation is very high in longer term (2080-2100) and still very high with additional adaptation esp. under the scenario of global mean temperature increase 4° above preindustrial level.

Climate drivers: Monitoring the warming trend, extreme temperature and the extreme precipitation are important for reducing exposure to these risks in this particular sector and take action accordingly.

Measuring the risk in the future: The risk is now at the medium level, but the near term scenario (2030-2040) is anticipating adaptation reinforcement that will eventually reduce the health risk level in overall Africa. If the proposed adaptation measures are being adopted, it will sustain the risk at the medium level in longer-term (2080-2100) but increase the risk level very high with current adaptation.

Climate drivers: Monitoring the warming trend, precipitation and extreme precipitation are crucial to reduce the effect of climate change in health sector and take action accordingly.

C- Health sector

Key Risk: The risk factors in the health sector mainly originated from the *changes in the incidence and geographic range of vector and water-borne diseases* due to the changes in the mean and variability of temperature and precipitation, particularly along the edges of their distribution (medium confidence).

Adaptation issues and prospects: Some fundamental Adaptation issues and prospects have been identified through:

- Achieving development goals, particularly improved access to safe water and improved sanitation, and enhancement of public health functions such as surveillance

About ClimDev-Africa

The ClimDev-Africa Programme is an initiative of the African Union Commission (AUC), the United Nations Economic Commission for Africa (ECA) and the African Development Bank (AfDB). It is mandated at the highest level by African leaders (AU Summit of Heads of State and Government). The Programme was established to create a solid foundation for Africa's response to climate change and works closely with other African and non-African institutions and partners specialised in climate and development.

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