

Concept note Session 2

Climate change and agricultural transformation in Africa

How do African countries increase food production and eradicate hunger and malnutrition in the face of fast demographic growth, while at the same time reducing emissions and combating climate change? Solving that complex equation requires swift action to promote agricultural transformation and adapt to climate change. With both its challenges and opportunities, such transformation can lead to increased productivity as well as low-carbon, climate resilient socio-economic development.

The Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) confirmed that climate change – for which humankind is principally responsible - is threatening to undo major development achievements. To shield this and future generations from such negative effects, the international community has a dual agenda: (i) mitigation: climate change can only be kept within manageable limits if we consistently reduce emissions of greenhouse gases; and (ii) adaptation: building resilience through the ability to absorb and recover from climatic shocks and stresses, whilst adapting and transforming structures and means for living in the face of long-term change and uncertainty.

More than any other economic sector, the agricultural sector faces this dual challenge. According to the IPCC, agriculture, forests and land-use account for about a quarter of global greenhouse gas emissions (24%), exceeded only by the energy sector (35% of total emissions). Meanwhile, climate change is projected to reduce water availability and supply, food security, agricultural productivity and incomes. The risks are particularly acute in Africa, where agriculture is often the main source of income and employment, requiring immediate action. In sub-Saharan Africa, for instance, climate change is expected to reduce the productivity of land by 14–27% by 2080, while simultaneously, crop demand is expected to increase by about 14% per decade until 2050. Yet, if rapid changes in production methods are swiftly implemented, agriculture can also offer tremendous opportunities for promoting more sustainable and resilient development.

In response to these challenges, the African Union has set ambitious goals in the *First Ten Year Implementation Plan* of its *Agenda 2063*: by 2023, total agricultural factor productivity will double, emission arising from agriculture or deforestation will be reduced to 2013 levels, a third of the population working in agriculture will practice climate-resilient production systems, and 30% of agricultural land will be placed under sustainable land management practice.

In June 2015 in Elmau, the G7 countries committed to supporting the most vulnerable countries in “increasing agricultural production and productivity and incomes while adapting and building resilience to climate change and mitigating greenhouse gases.” Building on existing drought-risk facilities like the African Risk Capacity (ARC), they have launched a climate-risk insurance initiative to increase insurance coverage against climate change-related hazards. They are committed to substantially increase sustainable energy access in Africa by 2030 through the G7 Renewable Energy Initiative for Africa, for example.

This session will discuss the prospects for climate-resilient agriculture in Africa. It will present and discuss options for incorporating adaptation and mitigation policies into agricultural sector planning and elaborate ways to manage the remaining climate change-induced risks in the agricultural sector. Central topics include:

- National Adaptation Plans (NAP) to integrate climate change adaptation into long-term development planning.
- More efficient, clean energy supply and use, changes in agricultural practices and management as well as resource efficiency for emissions reduction, agricultural productivity, and food security.
- “Climate-smart-agriculture” to reconcile the sustainable increase in productivity and incomes with meeting the dual challenge of mitigation and adaptation. It takes into account site-specific conditions to select and develop appropriate crops and innovative production techniques, diversify agricultural value chains and target support for value-enhancing activities.
- Options for effective climate-risk management, encompassing disaster risk financing and including, for example, sovereign risk pools to cover public risks from extreme weather events, or direct insurance solutions for small-scale farmers and their families to protect against economic losses due to crop failure or livestock loss.

These topics include various policy options for making Africa’s agricultural sector more resilient to climate change. What are their limits and opportunities? How can they be translated into concrete action?