GLOBAL CENTER ON ADAPTATION

SAPIENZA UNIVERSITÀ DI ROMA

UNIVERSITY FOR DEVELOPMENT STUDIES

Webinar

Extensive Climate Hazards and Vulnerabilities Assessment of The Tree Crop Sector in Ghana

December 3, 2024, 14:00-16:00 CET (13:00-15:00 GMT), Online

ABOUT THE EVENT

In support of the World Bank's Ghana Tree Crop Diversification Project, the Global Center on Adaptation (GCA), in collaboration with Sapienza University of Rome, Italy, and the University for Development Studies, Ghana, is undertaking a comprehensive assessment of climate hazards and vulnerabilities in Ghana's tree crop sector. This project aims to provide an in-depth understanding of climate risks affecting key crops such as cocoa, cashew, coconut, oil palm, rubber, shea, and mango, while evaluating how these risks impact sector productivity. The initiative includes a series of research-driven activities designed to enhance sustainable adaptation strategies for the resilience and growth of Ghana's tree crop sector.

ENHANCING CLIMATE RESILIENCE ON TREE CROP SECTOR IN GHANA

Climate change presents a serious and escalating threat to agriculture worldwide, with pronounced impacts in more vulnerable regions like sub-Saharan Africa. In Ghana, where agricultural productivity heavily depends on seasonal rainfall patterns, rising temperatures and unpredictable precipitation are likely to threaten crop yields over the coming decades. These climatic shifts place substantial pressure on tree crops, which are integral to food production, rural livelihoods and the country's economy. As climate hazards intensify, the tree crop sector faces increased vulnerability to shifts in agroecological zones and greater susceptibility to pests and diseases, ultimately putting livelihoods at risk and underscoring the urgency of climate resilience in agriculture.

Food insecurity remains a critical challenge for many African nations, including Ghana, where agriculture is a cornerstone of rural livelihoods. As outlined in the United Nations' Sustainable Development Goals (SDG), particularly SDG2, zero hunger, the international community aims to end hunger and ensure access to nutritious food. Yet, Ghana's agricultural system remains highly dependent on rainfed cultivation, with irrigation covering only 1% of arable land, leading to regional disparities in food security across the country. Enhancing climate resilience is thus crucial not only to stabilize crop yields but also to support food security. By promoting adaptation and sustainable practices, Ghana can strengthen its tree crops production (and food) systems, safeguarding productivity and market stability.

Ghana's tree crop sector is also economically vital, representing 85% of the country's agricultural exports and generating significant income for both commercial and smallholder farmers. Cocoa alone accounts for 70% of these exports, with Ghana the world's second-largest producer of the crop, contributing to rural livelihoods and the national economy. However, productivity in the sector remains low due to a lack of coordinated management, limited access to resources, and insufficient use of climate adaptation practices among others. Building climate resilience in the tree crop sector has the potential to increase yields and income for farmers while strengthening Ghana's role in global agricultural markets. Investing in climate adaptation solutions can support the sustainable growth of this essential sector, ensuring long-term economic stability and contributing to regional food security and resilience.

KEY OBJECTIVES

This webinar aims to present key findings from the climate risks and vulnerabilities assessment for Ghana's tree crop sector, facilitate a comprehensive dialogue among key stakeholders and experts on the implications for the sector, and explore strategies (for implementing actions/practices) to enhance climate resilience for the sector. The detailed objectives are as follows:

- Share the latest insights from the project, including climate hazard and vulnerability assessments specific to Ghana's key tree crops (cocoa, cashew, coconut, oil palm, rubber, shea, and mango).

- Highlight specific climate risks affecting Ghana's agricultural productivity, including increased temperatures, shifting rainfall patterns, and pest and disease vulnerabilities, to support data-driven resilience measures.

- Engage stakeholders, including policymakers, researchers, agricultural experts, and sector representatives, in an in-depth discussion on the impact of climate change on the tree crop sector, aligning efforts toward sustainable development and resilience.

- Explore climate-smart agricultural practices, agroforestry, irrigation potential, and other adaptive strategies to enhance climate resilience and support food security in Ghana's tree crop sector.

THE WEBINAR

The webinar will be delivered as a collaborative effort of GCA, Sapienza University of Rome, and the University for Development Studies, Ghana, combining expertise from academia, international organizations, and public and private sectors to address climate hazards in Ghana's tree crop sector. Key research insights will be shared, and participants will be able to interact with the presenters and get clarifications regarding questions they may have.

Some of topics to be explored by presenters will include an exploration of Ghana's climate and hydrological characteristics, main eco-physiological characteristics of tree crops, ecosystem services loss linked to deforestation, a critical review of the flood early warning system and seasonal drought forecasts, climate-smart agricultural practices, and the potential of irrigation to enhance climate resilience.

The session will feature five presentations. The event will be conducted in English.

DETAILED AGENDA

Moderator

- **Dr. Xun Sun**, Senior Researcher, GCA

Keynote presentation

Part I: Understanding Climate Risks in Tree Crop Sector

- **Climate Vulnerability in Tree Crops in Ghana**
  Dr. Fausto Manes, Emeritus Professor, Università di Roma 'La Sapienza'
  Duration: 20 minutes
- **Historical and Projected Climate & Hydrological Features in Tree Crop Regions**
  Dr. Francesco Cioffi, Associate Professor, Università di Roma 'La Sapienza'
  Duration: 20 minutes
- **Q&A discussion**
  Duration: 10 minutes

Part II: Actions and Adaptations for Climate Resilience

- **Climate -Smart Agriculture Practices for Tree Crops**
  Dr. Fabio Attorre, Associate Professor, Università di Roma 'La Sapienza'
  Duration: 20 minutes
- **Irrigation Potential for Tree Crops Using Surface and Groundwater Resources in Ghana**
  Dr. Maxwell Anim Gyampo, Associate Professor, the University for Development Studies
  Duration: 15 minutes
- **Early Warning Systems for Flooding and Drought Forecasts**
  Dr. Francesco Cioffi, Associate Professor, Università di Roma 'La Sapienza'

Duration: 15 minutes

- **Q&A discussion**
  Duration: 20 minutes

Venue

- Zoom link:
  https://gca-org.zoom.us/webinar/register/WN_LqO_m1iUTPqjh47gQjoDzQ#/registration

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