FUTURE CLIMATE FOR AFRICA

Impact Stories

Climate Information for Resilient Tea Production (CI4Tea)

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Project:
HyCRISTAL and UMFULA

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IMPACT

With a strong focus on co-production of climate information this project has identified and brought together diverse stakeholders; smallholder farmers, large tea estates, tea research institutes, tea certification organization, Ethical Tea Partnership (ETP) as a boundary organization, in-country partners from Jomo Kenyatta University of Agriculture and Technology (JKUAT) and Tea Research Institute (TRI), climate scientists and impact modellers, to provide tailored climate information for the tea sector in Kenya.

CI4Tea have developed a novel approach for generating site-specific future climate information at a scale at which stakeholders can comprehend and use information (paper in preparation). This is based on long-term observations shared by the tea estates and the tea research institute (made possible through open engagement to build trust), the global climate simulations (CMIP) and the new regional convection-permitting simulation ("CP4A") from the FCFA IMPALA project. This approach takes the "best of all worlds" of observations, uncertainty in global change, and uncertainty from unresolved convection in global models. It is anticipated that this approach could be used more widely, and be expanded to incorporate other sources of uncertainty.

CI4Tea plans to communicate the tailored climate information through in-country focused groups including smallholder farmers and their representatives. Simultaneously, CI4Tea are communicating information through Africa-wide tea events such as African Tea Science Symposium to improve the understanding of potential risks due to future climatic changes across the tea supply and demand chain. This has opened a platform for wider discussions around the impact of climate change on the tea sector.

THE CHANGE STORY

Tea is a perennial crop with a long economic cycle of around 80 years. The adaptation decisions and investments made today should be able to reduce the vulnerability of tea crops to the risk posed by future climate change. Long-term climate information is crucial to support such decisions. With increasing incidences of prolonged droughts, pest and diseases, the tea industry in Kenya is grappling with new challenges. This has increased the demand for tailored future climate information at a relevant spatial scale.

The Climate Information for Resilient Tea Production (CI4Tea) project has developed a new methodology for producing site-specific climate change information. CI4Tea is co-producing climate information by iteratively engaging tea sector stakeholders in western Kenya to understand their climate information needs and incorporate their feedback for developing usable climate information.

CI4Tea aims to enhance the long-term sustainability of the tea sector by providing tailored climate information that is generated in a collaborative way to make sure stakeholders understand the information to use it in an effective way for adaptation decision making. Partnership, trust building and collaborative working have been the key components towards achieving this aim.

Iterative stakeholder engagements and strong commitment towards delivering relevant and state-of-the-art climate information further helped in building trust. Constant feedback from stakeholders at each stage helped the project to evolve to enhance stakeholders' understanding of generated future climate information to be used for adaptation decision making.

FCFA area of change 4:

Approaches that support co-production of decision-relevant climate information and enable channels for on-going dialogue between the providers and users of climate information.

HyCRISTAL

FURTHER RESOURCES

Video: Climate Change and Tea: Challenges for Malawi and Kenya

LEARNING

Partnering with in-country institutes and iterative engagement of actors across the sector have been the key factors responsible for success of this work. It has been developed as a pilot between HyCRISTAL and UMFULA and has benefitted from their in-country contacts and existing efforts. The new state-of-the-art climate science developed under FCFA also helped build trust for two-way information sharing between researchers and stakeholders.

Future Climate for Africa's Areas of Change are:

1. Enhancing scientific knowledge and prediction of African climate and new understanding of the resulting impact on the robustness of future climate change scenarios.
2. Strengthening scientists' capacities to develop decision-relevant climate information.
3. Increasing the capacities of users/decision making bodies/institutions to appropriately integrate climate information within medium-term decision-making.
4. Approaches that support co-production of decision-relevant climate information and enable channels for on-going dialogue between the providers and users of climate information.
5. Identifying social, political, behavioural and economic barriers to the use of climate information in long-term decision-making, working to elicit solutions which support effective integration of climate risks within decision making across scales, sectors and social groups.
6. Approaches to climate science research and climate-sensitive risks within medium-term decision making which enable active participation and address the specific concerns of women and marginalised groups.

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