

POLICY BRIEF

Promoting the National Framework for Climate Services in Ghana Through Collaborative Effort for Sustainable Agriculture

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Introduction

Climate Service is the generation and provision of a wide range of information on past, present and future climate and its impacts on natural and human systems. It involves the acquisition, processing, packaging, and dissemination of weather and climate variables to a range of users at different levels. Climate services give information ranging from weather warnings. Climate services is a rapidly growing field of applied climate science that work in collaboration with decision-makers to design and communicate scientific climate knowledge in a way that is decision relevant. Climate services provide information that assists decision-making by individuals and organisations. Effective climate services deliver information ranging from short-term forecasts to warn people about imminent weather events such as heavy rain, wind and temperature extremes to seasonal forecasts and longer-term climate projections. Accurate, timely, relevant and usable information can help people to understand climate-related risks and act appropriately (Dupar Maira, 21).

Climate change and variabilities affects all economic, social, health care, public health and daily activities, with particular severe impacts on agriculture, health care, transportation and tourism, energy and in general infrastructure. The risk of climate variability and change threatens the Ghanaian economy. The livelihood of smallholder farmers, fishermen and pastoralists is highly vulnerable to the changing weather patterns (IPCC Troris et al. 2022).

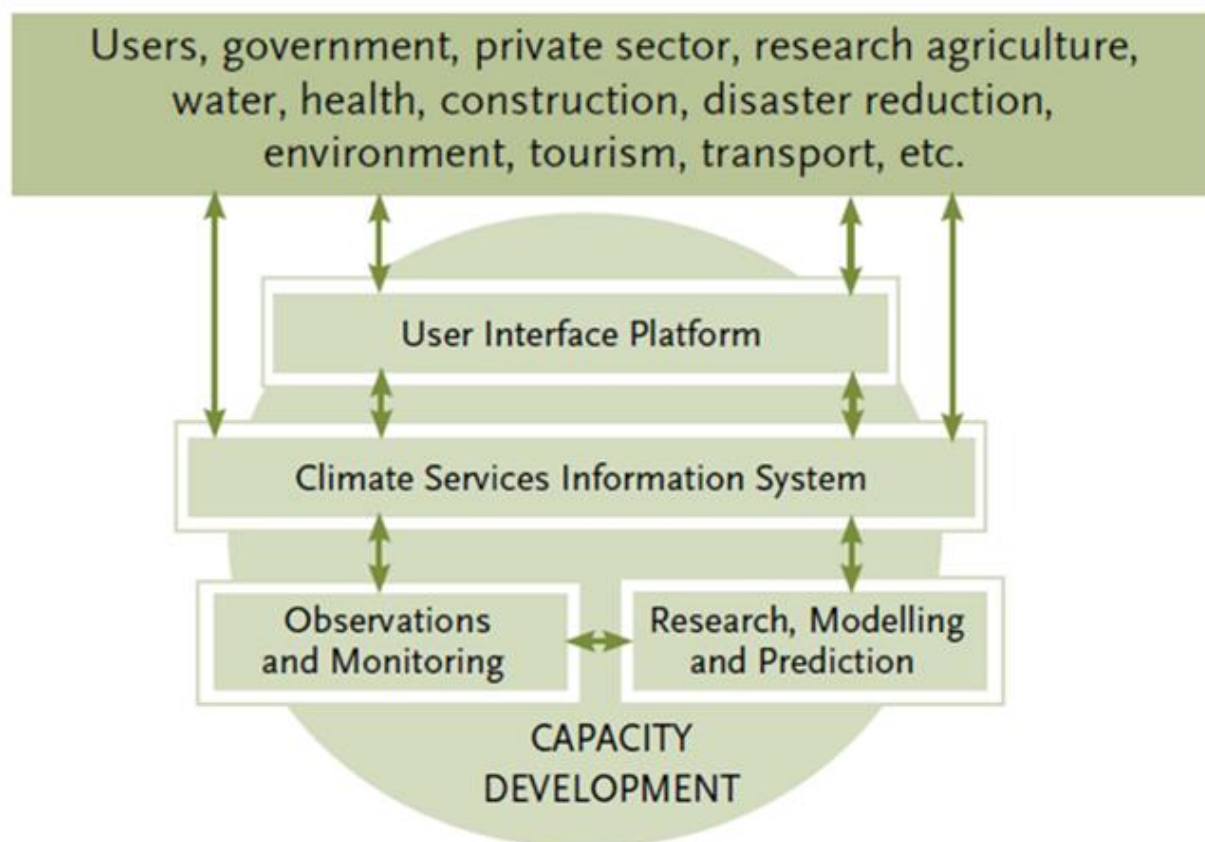
The Global Framework for Climate Services (GFCS) aims to guide the development of effective climate services so that they advance users' understanding of the climate and 'facilitate climate smart decisions that will reduce the impacts of climate-related disasters, improve food security and health outcomes, and enhance water resource management' (WMO, 2014: v). In line with the GFCS, the African region needs investments in climate services to ensure that these services are enhanced to meet the needs of users.

KEY RECOMMENDATIONS

- Train agricultural experts to access, understand, appreciate, and use climate information- from the farmer to the minister
- Build the capacity of universities to conduct climate research along with tools for modelling
- Local/community information centres could be engaged in the dissemination of Climate information in a simplified language
- Fund the reset up of dysfunctional weather stations
- Institutional capacity building (Institutional capacity building on AG-data Hub)

Role of the NFCS and its component pillars

The National Framework for Climate Services (NFCS) provides the framework for collaboration through a collaborative engagement platform. Climate Services raise a range of concerns in the conceptualisation, construction, and tailoring and delivery of information.



The NFCS provides background information on the climate outlook in Ghana and sets the scene for the development of the framework for the GFCS priority sectors. Achieving the sustainable development under the erratic and changing climate is dependent on the successful implementation of a comprehensive NFCS. The Framework will provide capacity for the development and application of Climate Services in the planning and implementation of risk management in all climate-sensitive sectors of the economy



✓ Should I plan antimalarial measures in my region?

✓ Do I need to plan drought -resistant seeds next season?



✓ How much solar energy can we expect to get in this area

✓ Will we need to evacuate the city due on forecast heavy rains?



✓ Will we need to start restricting the use of water?

Key Objectives of the NFCS

The specific objectives of the NFCS are to:

- ✓ Understand the impact of climate change and the risks it poses.
- ✓ Understand the vulnerability of the various sectors, particularly the five relevant sectors (agriculture and food security, water resources, energy, health, and disaster risk reduction)
- ✓ Enhance capacity in observations and monitoring of climate systems.
- ✓ Improve the provision of climate services at the national and local levels.
- ✓ Guide the mainstreaming of climate information in development planning and decision-making.
- ✓ Build capacity to develop, package, and communicate weather and climate information.
- ✓ Enhance the capacity of users in understanding and application of climate information and services.

How best can Ghana's NFCS serve as a true asset?

- ✓ Create awareness about the services nationwide
- ✓ Rehabilitate and maintain equipment at various stations
- ✓ Use technologies - phones, tablets, voice, local language, sms, etc
- ✓ Improve the quality of GMET services
- ✓ The private sector should be included in the process of translation and dissemination of climate information
- ✓ Expand the local dialects used in disseminating climate information
- ✓ Build capacity of the agricultural sector on the use of climate information

How can services concretely reach targets?

- Identify and use lead farmers, opinion leaders as champions and showcase them on TV and radio
- Create farmer-led videos for social media campaigns
- Create awareness about the GMET services and products
- Collaborate with Telco's and other digital service providers
- Partnership with the media houses and community radios and religious bodies to create awareness.
- Simplify the interface of the apps for easy access and use by farmers
- Model climate scenarios to create an impact - impact studies
- Deliver targeted messages and voice messages at the right time for easy access
- Create a two-way communication channel (tool)- create a person-to-person communication
- Involve the private sector in disseminating the information to reach farmers at a fee
- Provide advisory services on agriculture to farmers e.g. on-set of rainfall and cessation

Collaboration of International partners

For Ghana Meteorological Agency to meet the different demands of the sectors considered in NFCS and to a greater extent the GFCS, efforts of different actors come into play to leverage synergies so that the impact and outcome will be maximised.



International Research Institute of Columbia University played a leading role with AICCRA – Ghana funding all available costs to make the NFCS governance and operationalisation achieved and the desired impact maximised



NFCS is instrumental as a platform convening stakeholders and providing system-level advisory services. The WMO Step-by-step Guidelines for Establishing a National Framework for Climate Services (WMO-No. 1206, 2018) supports NFCS governance.



IRI has come on board to train GMET staff on different climate services products on different timescales and location specific products.

- ✓ The mission of the IRI is to enhance society's capability to understand, anticipate and manage the impacts of climate in order to improve human welfare and the environment, especially in developing countries. The IRI conducts this mission through strategic and applied research, education, capacity building, and by providing forecasts and information products with an emphasis on practical and verifiable utility and partnership.
- ✓ The IRI Climate and Society Map Room, built on the IRI Data Library, is a collection of interactive maps and figures that provide historical climate analyses, monitoring of current climate conditions, and an array of forecasts tailored to various uses for researchers and decision-makers. IRI's Enhancing National Climate Services initiative (ENACTS) is a unique, multi-faceted initiative designed to bring climate knowledge into national decision-making by improving the availability, access, and use of climate information. Implementation of ENACTS includes developing Map Rooms with an array of application-specific information products that use quality-controlled national data combined with globally available proxies.

Currently, the primary source of climate data is observation by ground-based weather stations across the continent. The main strength of these station observations is that they give the true measurements of the climate variable of interest. However, in many parts of Africa, stations are sparse, declining in number, and unevenly distributed.

The goal of ENACTS is to provide reliable and readily accessible climate data at high resolution to decision makers across Africa. ENACTS delivers robust climate data, targeted information products, and training that's relevant to user needs, enabling them to apply climate information to decision making with confidence



IRI has already trained GMET staff on Climate Data Tool (CDT), Automatic Weather Data Tool (ADT). Currently, scheduled period for training of Map room is underway.

Next STEPS

✓ **Stakeholder engagement both at local and higher level**

It is important to see the current levels of engagement of each stakeholder and ensure that they all become supportive towards the project. There is the need for inclusivity ensuring everyone in the stakeholder community is afforded an opportunity to engage. One of the key component will be inclusivity. It is very important to have total understanding of the scope of the stakeholders and the climate services actors that are within bounds. Some users might not know they have a role to play in climate services and sometimes might not even be included in the climate services landscape. It is therefore recommended that a stakeholder mapping exercise is undertaken, which can be used as a basis for ensuring that all relevant actors are included in the space. Although such exercises were undertaken by GMET, these were limited to the capital and need to be refined and expanded on.

Stakeholder engagements

- i Meeting with political actors
- ii Meeting with journalists, media houses
- iii civil society organisations like farmers' groups
- iv Women's unions and the socially marginalised groups

✓ **Critical review of the document by experts**

The documents should include weather and water elements. NFCS should also provide information on rainfall characteristics of on-set, cessation and other characteristics that are relevant for agriculture-more climate data needs to be included

✓ **Involve the Parliamentary select committee in discussions**

Recognising and admitting the importance of achieving excellence in climate services delivery in now at the doorstep of Political leaders. Much as climate services are essential parts of disaster risk reduction and climate resilient management - to avert and reduce losses and disaster- only a few political leaders have embraced the potential of climate services to pervade all facets of national development considering dynamic climate and changing hazards. Parliamentary select committee responsible for climate and disaster risk reduction and interior should be involved in the discussions.

The GFCS document gives the NFCS steering Committee to be made up of Inter-ministerial, who will meet once a year. Directors of the various ministries will also meet as inter sectorial committee two to three times a year. It will be very proactive to meet the Parliamentary Committee in charge of climate and environment for discussions about NFCS

✓ **Form a platform of experts to review and support implementation of the NFCS**

Bringing on board experts as collaborators is a very critical step to take. This collaboration is needed if we are to benefit from the existing knowledge, experience and expertise in Ghana. National framework for Climate services at the national level is what Ghana needs to enable the creation and delivery of climate services.

✓ **Link implementation of NFCS to the Ag-Data Hub**

Linking the NFCS to the Ag-Data hub will accelerate the dissemination and delivery of the Ghana National Climate Services in record time.

✓ **Create a working desk at GMET with sole aim of officiating NFCS activities**

A National focal point and a working desk will be crucial in officiating NFCS activities and developing a sustainable plan for NFCS. A working desk will prevent the duplication of ideas among direct actors, producers, and users, and direct people to where, how and who to get information from.

✓ **Facilitate the agreement among partners to have access to super computers and equipment.**

✓ **Incubate ideas , catalyse the process, be a bridge as a platform to agree on way forward , stimulant for gaps , fundraiser.**

✓ **Fully integrate the one health into the NFCS**

✓ **NFCS must integrate the needs of the communities in the appropriate format and content**

Conclusion

National Framework Climate Services has come to help disseminate weather and weather variables to climate services users. This framework will generate services that will ensure agricultural growth and expansion, improve productivity, and change in the lifestyle of the farmers . With funding from the AICCRA project, the Ghana Meteorological Agency will be supported to develop products that are necessary for the implementation of the NFCS.

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AICCRA
Accelerating Impacts of CGIAR
Climate Research for Africa



About AICCRA

Accelerating Impacts of CGIAR Climate Research for Africa (AICCRA) is a project that helps deliver a climate-smart African future driven by science and innovation in agriculture.

It is led by the Alliance of Bioversity International and CIAT and supported by a grant from the International Development Association (IDA) of the World Bank.

Discover more at www.aiccra.cgiar.org

