

GLOBAL FRAMEWORK FOR CLIMATE SERVICES ADAPTATION PROGRAM IN AFRICA

PHASE II IMPLEMENTATION IN TANZANIA



**Agriculture and
Food Security,
Health and
nutrition,
Disaster Risk
Reduction**



Dear Colleagues and Readers,

Welcome

to our second biannual newsletter edition of Global Framework for Climate Services Adaptation Programme in Africa phase II (GFCS APA II) implementation in Tanzania. GFCS APA II is a two years program funded by NORAD and implemented jointly by TMA (Tanzania Meteorological Authority), WFP (World Food Program), WHO (World Health Organization), TRCS (Tanzania Red Cross Society), MoA (Ministry of Agriculture) and MoHCDGEC (Ministry of Health Community Development Gender Elderly and Children). Phase II is building on the accomplishments of the initial phase, with the goal of increasing resilience of vulnerable populations to the impacts of weather and climate related risks, through enhanced capacity of National Meteorological and Hydrological Services (NMHS) to provide weather and climate services; and enhanced capacity of health, agriculture/food security and disaster risk reduction to use climate services in decision making processes.

This newsletter contains information from events and activities implemented in pilot project areas in Tanzania (i.e. Kondo, Kiteto and Longido districts). And has been produced with the intent of widely sharing information with the general public, planners, policy and decision makers, particularly on issues pertaining to weather and climate change, as well as initiatives that have been made to improve resilience and reduce vulnerability in agriculture, health and disaster risk reduction.

In this edition, you will learn about our past and upcoming activities and find out how you can keep up to date with our future GFCS APA II activities in Tanzania.

I hope you will enjoy reading this edition.

Dr. Ladislaus Chang'a

Chairperson of GFCS Project Delivery Team (PDT) and Director of Research and Applied Meteorology at Tanzania Meteorological Authority (TMA)

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ACTION ON THE GROUND: UPDATES ON PROJECT ACTIVITIES

Tanzania Disaster Management Council (TADMAC) met to evaluate the implementation progress of GFCS project in Tanzania

As part of GFCS implementation, Tanzania Meteorological Authority (TMA) in collaboration with Prime Minister's Office (PMO) organized a TADMAC (Tanzania Disaster Management Council) members' meeting and TADMAC technical committee meeting to respectively present the status of GFCS APA II implementation in the country and Strategy for NFCS implementation in Tanzania. TADMAC is the NSC (National Steering Committee) for GFCS implementation in Tanzania and hence responsible to oversee the implementation activities in the country. TADMAC is comprised of permanent secretaries from different ministries responsible for managing disaster, as well as heads of early warning institutions such as TMA.

TADMAC members' meeting was preceded by TADMAC technical committee meeting, which reviewed the Strategy for NFCS implementation in Tanzania, and provide inputs and comments, which were then incorporated in the Strategy before being shared to TADMAC members for their endorsement.



Participants of TADMAC platform meeting in Dodoma.

During TADMAC meeting, members received the progress report on the implementation of GFCS phase II activities in Tanzania. TADMAC members

were very pleased with the achievements made and congratulated TMA for their efforts in ensuring all activities of the project are implemented as planned. The meeting also received the status of the NFCS Strategy preparation, and they were provided with the NFCS Strategy draft for their reviewal and endorsement.



Prof. Faustine Kamuzora, the NSC Chairperson (in the middle) addressing members during TADMAC meeting in Dodoma.

Both TADMAC members' meeting and TADMAC technical committee meeting were very successful as all the planned objectives of reviewing the NFCS strategy and presenting and discussing the implementation progress of the project were achieved. However, the NSC chairperson insisted on joint efforts in implementation of Disaster Risk Reduction Strategy and NFCS Implementation Strategy, in order to be more proactive to disasters and prevent unnecessary ordeals to vulnerable communities and the country at large.

Awareness raising meetings in Longido and Kiteto districts

Sensitization seminars were organized in Longido and Kiteto districts for farmers, livestock keepers, extension officers and students. The initiative was a collaboration between Tanzania Meteorological Authority (TMA) and Tanzania Red Cross Society (TCRS). The seminars were carried out in eight villages (i.e. four villages from each district); Mbigiri, Njoro, Ndaleta and Engusero villages in Kiteto district and Kiserian, Kimokouwa, Orbomba and Mairowa in Longido district. Sensitization meetings were also carried out in two schools in Kiteto district, Bwakaro Secondary School and Laalakiri Primary School.



Awareness raising meeting at Bwawako Secondary School.

The seminars focused on raising awareness of farmers, livestock keepers, intermediaries and students in climate and weather services provided by TMA; disseminating seasonal weather forecast for October to December rainfall season (OND - Vuli 2019); and registering farmers, livestock keepers and intermediaries in the FarmSMS system. FarmSMS is a database system operated and used by TMA to disseminate weather and climate information to end users via mobile phones.

A total of 1677 community members were reached through sensitization seminars, out of them 460

(274 Males and 186 Females) were villagers (i.e. farmers, livestock keepers, agriculture and livestock extension officers), 1190 (604 Males and 586 Females) were students from Bwakaro Secondary Schools and Laalakiri primary, and 27 (16 Males and 11 Females) were teachers from primary and secondary schools. During the seminars, participants were provided with a brief overview on rainfall climatology of their localities and the changes of rainfall patterns as the result of climate change and variability, and how these will affect productivity in agriculture and livestock keeping. Participants were motivated to start integrating climate services and information received from TMA in their agro-pastoral activities to cope with the changes in weather and climate conditions.

Awareness raising meetings are vital to improve people's awareness on climate services and information that are readily available and how they can use them to reduce their vulnerability and become more resilient to weather and climate change impacts. Low level of awareness on usability and usefulness of climate services and information can hinder effective use of climate services and information.



Participants of Kimokouwa village in Longido district during the sensitization seminar.

Digitization and management of weather and climate data

TMA through its observations of weather and climate conditions has accumulated a large amount of data that are archived in paper form and some of them have started wearing out, posing a threat of losing the valuable weather and climate data. Through GFCS project, TMA has been converting historical old paper-based weather and climate records into computer based electronic images for long-term safety, and data management to improve the efficiency and effectiveness of delivering meteorological services in Tanzania.

TMA is continuing to enhance efforts to ensure that all accumulated climate and weather data are digitized and stored in the CLIDATA data base system. This will provide valuable additional data for a variety of applications, including monitoring of climate change and provision of meteorological services in a more effective and efficient way.

Data rescue activities have been conducted for 9 regions in Tanzania namely Mbeya, Ruvuma, Songwe, Rukwa, Katavi, Tabora, Kigoma, Njombe and Iringa. Imaged and digitized parameters were rainfall and temperatures for 559 meteorological stations from the aforementioned regions. The 559 meteorological stations include 9 Synoptic stations, 4 Agrometeorological station, 40 Climatological stations and 506 Rainfall stations. The data rescue activities performed include, updating rainfall and climatological stations inventories, and entry of station Metadata into new developed inventory sheet; sorting; keying; scanning; cropping and uploading images into ELO system.

Mainstreaming of weather and climate information in health sector via DHIS2 dashboard

District Health Information System version 2 (DHIS2) is a tool for collection, validation, analysis, and presentation of aggregate and patient-based statistical data, tailored (but not limited) to integrate health information management activities. DHIS2 is a generic tool rather than a pre-configured database application, with an open meta-data model and a flexible user interface that allows the user to design the contents of a specific information system without the need for programming.

Through the GFCS project, the Ministry of Health has integrated climate and weather data in DHIS2 to help health practitioners plan ahead of time and thus reduce the impact of climate variability and change in human health. The goal of this is to have an early warning system that will be generated in the dashboard using available climate and weather data. The DHIS2 has used dengue fever and cholera as pilot diseases during the development and testing of the dashboard. The system will be tested in Kiteto, Longido and Kondoa districts.



Stakeholders that participated in the development of DHIS2 dashboard in Morogoro

GFCS impart knowledge to students in primary and secondary schools in Kiteto district through environmental clubs

Tanzania Red Cross Society (TRCS) via the GFCS project has established environmental clubs in primary and secondary schools in Kiteto district. In the implementation of phase II activities, a total of 5 environmental clubs have been established in the aforementioned district; 2 clubs in secondary schools (Ndedo and Njoro secondary schools) and 3 clubs in primary schools (Ndaleta, Olpopong and Makame primary schools). Each environmental club has about 25-35 members, issues of gender equity and equality were integrated during formation of these clubs to ensure both boys and girls are part of the clubs and both can benefit equally from the project.



Environmental club from Makame primary school.

Established environmental clubs are registered entities of Red Cross, and they serve as Red Cross branches at the grassroots level. Each environmental club meets on a weekly basis and participate in different activities such as establishing and managing tree nurseries, planting trees, receiving and discussing dekadal weather forecast as well as other climate and weather information received from TMA. Members of environmental clubs are also responsible to disseminate weather forecast to their families and neighbours. Each environmental club

has an advisory committee, which provide guidance in the implementation of activities as well as monitor and advice the club.

The registered environmental clubs are among the community listening groups established for Interactive Radio Climate Information Services in Tanzania project. The project which was subcontracted by WFP to Farm Radio International (FRI) as part of the radio component output for GFCS project. Each club has been provided with a solar-powered MP3 radio, so that they can listen to weather forecast and climate information aired by Radio Sauti ya Injili.

To ensure sustainability of these groups, when students finish school, they are replaced to maintain the number of club members. Those students that finished school are also trained to become TRCS volunteers in their respective villages.



Environmental club advisory board from Ndaleta primary school.

Participatory Integrated Climate Services for Agriculture(PISCA) training to pastoralist and livestock keepers in Longido and Kiteto districts

Building the capacity of intermediaries to improve their competences in understanding, interpreting, and communicating forecasts as well as planning and preparing for the forecasted season is imperative to ensure climate information can trickle down to end users without being distorted and can be integrated in decision making. This will contribute in improving resilience of end users to climate change.



Participants engaging in group work during PISCA training in Arusha

Participatory Integrated Climate Services for Agriculture (PISCA) Training of Trainers (ToTs) has been conducted since GFCS phase I, focusing on farmers only. During phase II implementation, a need arose to include pastoralists and livestock keepers in the training; after realizing the tool will also be useful to address climate change challenges in livestock keeping activities. A scoping study was carried out to explore how to customize and adapt PISCA to be useful to pastoralist and livestock farmers in Longido and Kiteto districts.

In pastoral communities, women are more sedentary with more diverse responsibilities than men, hence, it was recommended for PISCA training for pastoralists to be conducted in separate gender groups with primary focus on women. And the training to be conducted during the rainfall seasons, since it is during these times pastoralists stay in one place for a long period. During the training, males and females were guided to develop separate seasonal calendars, the information provided were then synthesized to produce a generic seasonal calendar. These training also involved extension officers from the three pilot districts.

In phase I and II implementation, all extension officers in Longido district and 99% of all staff in Kiteto district have been trained on PISCA approach. Extension staff from Kondoa district have also been trained and efforts are made to ensure all extension officers receive PISCA training. This is vital since extension officers will impart the knowledge to end users and help them plan and decide better by incorporating climate information in socio-economic activities.



Participants during the production of seasonal calendar for pastoralists and livestock keepers

WFP Tanzania partnered with community radios to disseminate weather and climate information

Community radios have a huge impact in disseminating information in rural areas. Due to their high impact in reaching communities, GFCS programme engaged with Farm Radio International (FRI) to disseminate seasonal and dekadal weather forecasts via community radios. FRI conducted a qualitative formative research through focus group discussions in all three pilot districts (i.e. Longido, Kiteto and Kondoa districts) to identify the preferred methods for farmers and pastoralists to listen and be involved in the radio programs (i.e. time of listening, preferred format, use of SMS, etc.). Also, FRI team explored with listeners what kind of ICT tool they would prefer to access information from remote locations where there is weak or no radio coverage. During the research, the team also assessed the stations' technical viability and checked on the coverage of potential radio stations, so as to understand and ensure how best to reach the widest area of target listeners. The research identified Mwangaza Fm in Kiteto district, Irangi Fm in Kondoa district and Olkonorei radio in Longido district as the most preferred radio stations with the widest coverage in their respective districts.



A CLG leader from Longido district, demonstrating to group members how to operate the solar-powered MP3 radio.

GFCS also established Community Listening Groups (CLGs) in pilot project districts, a total of 60 CLGs were established,

20 CLGs from each district. These groups meet on a weekly basis and listen to the radio programs and provide feedback on the effectiveness of the programs to the broadcasters, extension officers and the project team in order to enhance the delivery of the programs. The CLGs have a good representation of women, to ensure that women listen the programs and provide feedback on how the project can better address their priorities and needs. Each CLGs is supported with a solar-powered MP3 radios, for them to record the programs and listen at their convenient time.



Ms. Hawa Msami a CLG member from Mulua village in Kondoa district showing the crops in her farm.

The programs aired by the community radios as part of GFCS project in Tanzania have been very useful in enabling farmers to plan properly and make best farming decisions due to weather information and advisories they receive from the radio programs. One farmer from Mulua village in Kondoa district who is also a

leader of a CLG, when visited by the project officer, she said *"our crops have been progressing well; we planted on time following instructions from the radio program, followed all the advisories from the extension officer and now we are expecting to harvest more than we used to"*.

Use of mobile phone's voice services to disseminate weather and climate information

WFP Tanzania country office in collaboration with Farm Radio International (FRI) introduced the use of phone-based voice services (i.e. beep for weather (B4W) and Uliza poll services) to ensure even the illiterate users can benefit from weather information and services. Beep 4 Weather service allow users to receive weather information via voice message while the Uliza poll service allow the users to ask questions and receive feedback via voice.

Beep 4 Weather is an advisory service developed to meet small-scale farmers' needs for meteorological information, which is accompanied with agricultural advice. Weather information is vital to all farmers, but it has never been more crucial to the success of Tanzania's small-scale farmers. Beep 4 Weather responds with local weather forecasts paired with practical farming advice developed by local agricultural extension workers and TMA agro-meteorologists.



A farmer from Kondoa district listening to the dekadal weather forecast via the beep for weather service

Uliza Poll is an internet-based platform that enables interaction between listeners and broadcasters or other intermediaries. The most common use of Uliza is for weekly poll questions, known as Beep 2 Vote. After every climate service radio program, the broadcasters provide questions either open or close ended for listeners to respond. Uliza Poll service allows farmers/listeners to record their answers using voice services, and the results of the poll is displayed using internet-based platform which is accessible to the radio station. The responses from listeners are incorporated into future radio programs.

Uliza poll and Beep 4 Weather mobile phone services have provided opportunity for rural communities in the pilot project district to receive weather information via voice. These services are also available in *Maasai* language; end users can choose a language which they are conversant with to receive weather information and advisories.

For the rural communities particularly those who can't read properly and/or can't comprehend Swahili well, it was difficult for them to integrate weather information in their socio-economic activities since they couldn't read and understand weather information that were sent to them via text messages. These mobile phone voice services have become popular in the project districts as farmers and pastoralists are using Uliza poll and beep for weather services and are enjoying receiving the information in their native language.

GFCS APA II Future activities; April 2020 - September, 2020

Action on the ground: Updates on project activities

- Sensitization meetings, *in Longido, Kiteto and Kondoa districts*
- Engaging with policy makers to get support for NFCS, *in Dodoma*
- Design and implement climate-smart agro ecological techniques, *in Kiteto*
- Train Red Cross volunteers and staff to interpret EW alerts, *in Kiteto*
- TADMAT members meeting and TADMAT technical committee meeting (platform) in Dodoma
- Sharing the NFCS Strategy with end users in Longido and Kiteto districts
- ENACT Training of Trainers (ToT)

Capacity building

- Training of TMA staff on Climate Data Tool and updating Maproom products
- Training of climate change in health institutions

Capturing impacts of GFCS on pilot districts

- Success stories from the project beneficiaries
- GFCS and women empowerment/involvement
- Lessons learned from the implementation of GFCS in Tanzania

For more information please contact :

Director General,
Tanzania Meteorological Authority (TMA),
Morogoro Road, Ubungo Plaza, 3rd Floor
P.O.Box 3056,
DAR ES SALAAM, TANZANIA

Tel: +255 22 2460706-8

Fax: +255 22 2460735

Website: <http://www.meteo.go.tz>

Email: met@meteo.go.tz

Meet the project partners;



World Health
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