CONCEPT NOTE

South-South Technical Knowledge Exchange and Learning Initiative (STEKELI) Workshop for ICPAC and AGRHYMET

Date: 28-30 June 2022

Venue: the United Nations Conference Center (UNCC), Addis Ababa, Ethiopia

Introduction

There are many actors in the weather and climate services field in Africa, ranging from the international organizations to continental institutions, sub-regional and national entities, and they are all implementing various programmes/projects/initiatives to improve the development, provision, and uptake of weather and climate services[1]. For instance, the regional climate centers (RCCs), in collaboration with international research organizations, have been engaged in the development of models and methodologies based on ground and satellite observations to monitor rainfall, crop-water requirements, drought monitoring, early warning system, weather/climate forecasting as well as seasonal and inter-annual variations. They have also provided training in a wide range of expertise including in agro-meteorology, hydrology, and equipment maintenance, as well as on topics related to food security, climate change, and sustainable natural resources (land and water) management.

However, much of the knowledge, tools, and practices produced by these institutions are merely accessible and/or difficult to be understood by end-users and therefore remain underutilized. Hence, a significant amount of resources invested in such areas have produced limited impacts as their interventions are implemented in a small scale, uncoordinated fashion, and working in a silo. Furthermore, a strong multi-institutional and multi-stakeholder collaboration that promotes knowledge-sharing platforms and strengthens the networking capacities of institutions and stakeholders is critical to best use their efforts in producing, packaging, and disseminating CIS to end-users. ***In recognition of this, in 2017, the World Bank, the World Meteorological Organization (WMO), United Nations Development Programme, the African Development Bank, African Ministerial Conference on Meteorology, Food and Agriculture Organization, and the Africa Climate Policy Centre (ACPC) held a workshop in Saly, Senegal and discussed the need for a coordinated effort in scaling-up weather-, water- and climate service delivery different sub-region of Africa through regional***

[1] https://www.sasscal.org/regional-stakeholder-coordination-workshop-defining-a-common-roadmap-for-scaling-up-the-delivery-of-weather-water-and-climate-services-in-africa/

alliance, promoting knowledge-sharing platforms and building synergies among key stakeholders in the continent.

As a follow-up to this effort, the ACPC and its partners, such as Climate Change Agriculture and Food Security (CCAFS) and WMO, took steps to strengthen the South-South technical knowledge exchange and learning in Africa by packaging the key messages, lessons, best practices, peer learning and recommendations from their-own and other initiatives. For instance, under the auspices of the Weather and Climate Information Services for Africa (WISER) initiative, the ACPC and its partners conceived a series of knowledge exchange workshops that led to the production of a document that identified best practices of the African Regional Climate Outlook Forums (RCOFS) processes. Experts from the Intergovernmental Authority on Development Climate Prediction and Application Centre (IGAD-ICPAC), the Central Africa Centre for Application and Climatological Forecasting (CAPC-AC), Agrometeorological, Hydrology, Meteorology (AGRHYMET) regional center, the African Centre of Meteorological Applications for Development (ACMAD) and the Southern Africa Development Community Climate Services Centre (SADC-CSC) participated in subsequent workshops. The contributions of these experts were then complemented by inputs from national meteorological and hydrological services (NMHSs), regional economic commissions (RECs), and the WMO in its capacity as the initiator and custodian of RCCs globally. Climate scientists from two RECs – the East African Community (EAC) and the Economic Community of West African States (ECOWAS) – also participated. Such compendium of best practices is a valuable contribution to ongoing efforts to support investment in the production, analysis, and uptake of climate information services in development policy and implementation in Africa and ultimately inform climate-resilient societies, ecosystems, and economies on the continent.

A hands-on workshop aiming at strengthening the institutional linkages, south-south partnerships, and capacity building was also co-organized by the ACPC-WISER, CCAFS, and ICPAC in Victoria Falls, Zimbabwe, to build capacities of national and regional experts in the objective seasonal forecasting, enhance the co-production of reliable and improved climate information and services in the agriculture and food security sector, as well as to establish multi-institutional and multi-stakeholder dialogue and knowledge-sharing platform. The workshop brought together more than 50 experts from NMHS, RCCs, Research Institutions, Agricultural and Food Security institutions, and actors from 15 Southern, Eastern, and Horn of Africa nations. One of the recommendations from the above workshops is to up scaling ICPAC's good practices on RCOFS, objective forecasting, climate predictability tool, and co-production to institutions that reside in other African sub-regions (e.g., AGRHYMET), and conversely, the ICPAC experts will learn from their experiences.

In this planned knowledge-sharing platform, ICPAC and AGRHYMET will take part and learn from each other their best practices. ICPAC is a Climate Center accredited by the WMO that provides Climate Services to ***11 East African Countries***, with aim at creating resilience in a region deeply affected by climate change and extreme weather. It provides services in wide ranges of areas including environmental monitoring, capacity building, climate forecasting, disaster risk

management, water resources, climate information dissemination, agriculture and food security and climate change on various spatio-temporal scales. ***The AGRHYMET Regional Center***, on the other hand, encompasses 17 countries from West Africa and Sahel and is a specialized institution of the Permanent Interstates Committee for Drought Control in the Sahel (CILSS) that trains personnel, provide adequate equipment for the meteorological and hydrological station networks, and set up regional and national multidisciplinary working groups to monitor the meteorological, hydrological, crops, and pastures conditions during the rainy season ***for West Africa***. After 40 years of existence, AGRHYMET's scope of activities expends now beyond the geographical boundaries of CILSS member states to include the whole of West Africa, thanks to several initiatives it has been implementing on behalf of the Economic Commission of West African States (ECOWAS) on food security and environmental issues, including climate change.

Through the organization of the planned knowledge-sharing platform between AGRHYMET and ICPAC, both institutions are expected to share their best practices and knowledge in the areas of their comparative advantages shown in the below agenda. Moreover, this knowledge-sharing platform helps professionals connect, perform better, and become stronger while saving money on training and capturing and keeping knowledge.

Objective of the workshop

The main objective of this workshop is to provide a platform for the IGAD Climate Prediction and Application Centre (ICPAC) and Agriculture, Hydrology and Meteorology (AGRHYMET) Regional Centre to exchange experiences and build on best practices and ideas along the value-chain of Climate Information Services (CIS) in Africa and thereby promoting South-South cooperation.

The specific objectives are for these two major African Climate Centers (i.e., ICPAC and AGRHYMET) to exchange knowledge and best practices on:

1. Objective weather and climate forecasting;
2. Hydrological monitoring and forecast; crops monitoring and yield forecast using models;
3. Practical practice on Onset Forecasting based on daily GCM data from the C3S data store;
4. Regional Coordination of RPCA (Reseau de prévention et de gestion des crises alimentaires;
5. PREGEC (prévention et gestion des crises Alimentaire), monitoring of cropping season (climate/weather conditions, phytosanitary monitoring, desert locust monitoring, crop/yield assessment).

Outcome(s) of the workshop

The outcomes of the proposed initiative, among others, include (i) the best practices and technical arms of AGRHYMET and ICPAC are identified and documented, (ii) the capacity of experts from both institutions on the above-mentioned best practices enhanced, and (iii) South-South cooperation and learning between these institutions strengthened.

Format

The meeting will begin in the morning hours of Tuesday, 28 June 2022, with an official opening by an invited official followed by a panel discussion that encompasses heads of AGRHYMET, ICPAC, WMO-ROA, UNECA-ACPC, and Accelerating Impacts of CGIAR Climate Research for Africa (AICCRA). The experience-sharing sessions will continue in the remaining days to discuss the best practices identified by both institutions (*see proposed agenda for more details*).

Budget

AICCRA-ESA and AICCRA-West Africa will meet all travel expenses, including accommodation, a round-trip economy-class air ticket, home country taxi costs, airport transfers, COVID-19 test costs, and a modest allowance to cover dinner and incidentals as per ILRI rates for Addis Ababa, Ethiopia.

Participants

Senior experts from both AGRHYMET and ICPAC will participate in the workshop. Moreover, representatives from AICCRA, WMO-ROA and ACPC will attend it.

Organizers

AICCRA-ESA, AICCRA-West Africa, ACPC, WMO ROA

Agenda

Title: South-South Technical Knowledge Exchange and Learning Initiative (STEKELI) Workshop

Date: 28-30 June 2022

Venue: The United Nations Conference Center (UNCC), Addis Ababa, Ethiopia

DAY 1 Session I: Opening			
Time	**Events**	**Responsible**	**Chair**
08:30 – 09:00	**Registration**	AICCRA team	
09:00 – 09:05	**Welcoming Remarks**	Mr. Fetene Teshome (Director General, Ethiopian Meteorology Institute)	Dr. Joseph Mukabana (Senior Research Officer, WMO-ROA)
09:05 – 09:15	**Introduction to AICCRA**	Dr. Dawit Solomon (Regional Program Manager, AICCRA-ESA)	
09:15 – 09:30	**Introduction of Participants**	Participants	
09:30 – 10:30	**Panel Discussion** – *Why do we need such knowledge-sharing platform in Africa?* – *Give one best knowledge-sharing mechanism from your organization* – *What do you recommend for future collaborations?*	Dr. James Murombedzi (Chief, ACPC, UNECA) Dr. Amos Makarau, Director, WMO-ROA) Dr. Guleid Artan (Director General, ICPAC) Dr. Hamadoun Malienne Director-General, AGRHYMET) Dr. Robert Zougmoré (Lead, AICCRA-West Africa) Dr. Dawit Solomon (Regional Program Manager, AICCRA-ESA)	
10:30 – 11:00	**COFFEE/TEA BREAK (Group Photo)**		**Organizers**
DAY 1 Session II: AGRHYMET Component			
11:00 – 13:00	**Hydrological monitoring and forecast; crops monitoring and yield forecast using models**	**AGRYMET team**	Dr. Robert Zougmoré (AICCRA- West Africa Lead)
13:00 – 14:00	**Lunch**		**Organizers**
DAY 1 Session III: ICPAC Component			
14:00 – 15:30	**Introduction to Objective Forecast components:** 1. Introduction to ICPAC's Consolidated Objective Seasonal Prediction 2. HPC Management at ICPAC 3. CCA through PyCPT 4. Linear Regression and Consolidated objective seasonal forecasts including probability of exceedance and SPI; 5. Demonstration of Logistic Regression for JJAS rainfall forecast using Pacific SST indices predictors (depending on availability of time, the demonstration	**ICPAC team**	Dr. Ernest Afiesimama (Program Officer, WMO-ROA)

	will include data download on personal MacOS);		
15:30 – 16:00	Coffee/Tea	Organizers	
16:00 – 17:00	**Objective forecasting** *(…continued….)*	**ICPAC team**	
18:30 -	**Dinner Program**		**Organizers**

Day 2 Session IV: ICPAC Component			
Time	**Events**	**Responsible**	**Chair**
09:00 – 10:30	**Onset Forecasting based on daily GCM data from the C3S data store** 1. Downloading data (demonstration using C3S data store); Examples of onset determined from different initializations (May vs. June 2022); Procedure to produce deterministic and probabilistic multi-model onset forecasts; 2. WRF (Weekly weather forecasts, Tropical Cyclone tracking, seasonally for onset determination); 3. Experience on data sharing between RCC and NMHS; 4. Co-production (use and enhancement of products and services).	**ICPAC team**	Dr. Robert Zougmoré (AICCRA- West Africa Lead)
10:30 – 11:00	**Coffee/Tea**	**Organizers**	
11:00 – 13:00	**Practical** *(…continued….)*	**ICPAC team**	
13:00 – 14:00	**Lunch**		**Organizers**
Day 2 Session V: AGRHYMET Component			
14:00 – 15:30	**Regional Coordination of RPCA (Reseau de prévention et de gestion des crises alimentaires**	**AGRHYMET team**	Dr. Yosef Amha (Researcher, ACPC-AICCRA)
15:30 – 16:00	**Coffee/Tea**	**Organizers**	
16:00 –17:00	**(…continued….)**	**AGRHYMET team**	
Day 3: Session VI: AGRHYMET Component			
Time	**Events**	**Responsible**	**Chair**
09:30 - 11:00	**PREGEC (Prévention et gestion des crises Alimentaire), monitoring of cropping Season (climate/weather conditions, phytosanitary monitoring, desert locust monitoring, crop/yield assessment)**	**AGRHYMET team**	Dr. Joseph Mukabana (Senior Research Officer, WMO-ROA)
11:00 – 11:30	**Coffee/Tea**		**Organizers**

Day 3: Session VII: Closing			
11:30 – 13:00	**General Discussion and Recommendations to facilitate country uptake**	**AICCRA**	Dr. Dawit Solomon
13:00 – 13:30	**Wrap-up and Vote of Thanks**		
13:30 -	**Lunch**		
For more information, contact: **Dr. Yosef Amha amhay@un.org; Ms Addah Magawa (ILRI) A.Magawa@cgiar.org**			