

Experience-sharing Workshop to Support Co-development of National Framework for Weather, Water and Climate Services (NFWWCS) for Eastern and Southern Africa

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Workshop Summary



AICCRA
Accelerating Impacts of CGIAR
Climate Research for Africa



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Titles in this series aim to disseminate interim climate change, agriculture, and food security research and practices and stimulate feedback from the scientific community.

About AICCRA

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Background

Accelerating Impacts of CGIAR Climate Research for Africa project in Eastern and Southern Africa (AICCRA ESA) has kick-started a programme action aimed at empowering and accelerating the planning, development and implementation of the National Framework for Weather, Water and Climate Services (NFWWCS) in East and Southern Africa. The program action brings along catalytic stakeholders such as the International Water Management Institute (IWMI), African Climate Policy Centre (ACPC), the World Meteorological Organization - Regional Office for Africa (WMO-ROA), stakeholders from Eastern and Southern Africa countries, World Meteorological Organization(WMO) Permanent representatives, NMHS and other experts, the regional climate centers as well as the UN agencies to support and enrich NFWWCS development process through a learning and knowledge-sharing workshops, with the view of crafting enabling mechanisms and interventions to accelerate the implementation of NFWWCSs across all the ESA countries.

Following the successful co-development and endorsement of AICCRA-supported NFCS in Ethiopia, AICRRA is conducting, in partnership with the African Climate Policy Centre (ACPC), WMO Africa and IGAD Climate Prediction and Application Centre (ICPAC), through regional workshops to explore the landscape in the development and implementation of NFWWCS. This cross-regional and south-south consultative learning and knowledge-sharing regional workshops bring together various stakeholders from Eastern and Southern African countries, including their respective WMO Permanent representatives, NMHS and other experts, the regional climate centers, and the UN agencies.

The NFWWCS is designed to mainstream weather, water, and climate science into decision-making at all levels and help ensure that every country and every climate-sensitive sector of society is well-equipped to access and apply the relevant climate information. The NFWWCS is premised on the Global Framework for Climate Services (GFCS) conceptualized and endorsed by the World Meteorological Organization (WMO) to strengthen the production, availability, delivery and application of science-based climate monitoring and prediction services. Mirroring the functioning of the GFCS, NFWWCS provides for an enhancement and expansion of the NFCS, which its function is now being expanded to include weather and hydrological services, based on the experiences and lesson learned during the development and implementation of the NFCS across few WMO member states that have embarked on the framework development process.

Regional Learning and Knowledge-sharing

On behalf of the Accelerating Impacts of CGIAR Climate Research for Africa project in Eastern and Southern Africa (AICCRA ESA), South African Weather Service (SAWS), International Water Management Institute (IWMI), African Climate Policy Centre (ACPC), and the World Meteorological Organization - Regional Office for Africa (WMO-ROA), have hosted a three-day experience sharing workshop to support co-development of National Framework for Weather, Water and Climate Services (NFWWCS) for Southern Africa countries in Cape Town, South Africa from 28 to 30 September 2022. This workshop is a follow-up on the successful co-development and endorsement of the AICCRA-supported National Framework for Climate Services (NFCS) in Ethiopia and a regional workshop for IGAD and SADC member States held in Zanzibar, Tanzania, in December 2021 and the regional workshop in Ethiopia, both which explored regional landscape in the development and implementation of NFWWCS.

The workshop was attended by Southern Africa country-specific NHMSs representatives from Member Countries and their partnering organizations.

The workshop in Cape Town allowed the participating Southern African countries to present and share their progress in the planning and development of the NFWWCS in their countries. The representatives presented, over and above, the progress on the planning and development of NFWWCS and current weather and climate services offered by their NMHSs in their respective countries. The progress was reported in accordance with the NFWWCS steps as provided by the Step-By-Step Guidelines for National Framework for Weather, Water and Climate Services. The countries further shared their experiences, lessons learned, and best practices in developing the NFWWCS. Strategic and operational challenges faced by the countries in providing these services were also shared with the participants. This included gaps and barriers that inhibit the successful development and implementation of the NFWWCS.

Further to the presentations made by the Southern African countries, round table discussion groups were organized as break-away sessions. The participants used these sessions to surface and deep dive into common challenges, experiences, gaps and barriers to the successful planning and development and implementation of the NFWWCS. The outcome of each working group was presented to the broader participating audience. The audience pondered solutions that could bridge the gaps in Southern African countries that lead to NFWWCS development paralysis.

The workshop concluded with a methodical summarization of the challenges, interventions and way forward proposed for each country. Common challenges across all Southern African countries are associated with lack or limited financial resources to fund the development of the NFWWCS, lack of support and buy-in from national government and political leaders in the respective countries and participation on staff members who are not decision makers. Broader requests included the need to develop a regional framework for weather, water, and climate services, that will drive regional programmes (funding, research, etc.) and assist in accelerating the implementation of NFWWCSs across all the SADEC countries. The interventions and way forward included country-specific solutions that could empower each country, particularly those at step zero, to get going, while those that have started progressing to the next stages of the NFWWCS development.

Similar to the workshop held in Ethiopia, participants from the Southern African countries commended this platform's relevance and recommended that the support should continue ad infinitum to ramp up the development of NFWWCS across all countries. Accordingly, countries at stage zero or stage one requested a platform where they could learn more from the AICCRA's experiences in Ethiopia and elsewhere.

AICCRA's efforts on these workshops and regional engagements are aimed at assisting NMHSs and their partner institutions at the national level, engaged under the five components of the GFCS, to successfully plan, develop and implement an NFWWCS and its action plan, in line with WMO mandate to strengthen their national adaptive capacities. The NFWWCS is being developed as an update, based on experiences with the development and implementation of the NFCS, to cover weather, water, and climate services, which are the full mandate of the WMO.

Wayforward

The delegates within the workshop, through an interactive session, agreed that the following should constitute the way forward for each country post the workshop;

Zambia

The country of Zambia is in the process of procuring the services of a competent NFWWCS service provider to assist the country with the planning and development of the NFWWCS. Zambia has informed the WMO on its intention to embark on the process of establishing the Zambia National Framework for Climate Services (NFCS-ZA). The intention was to solicit financial and technical support towards the development and implementation of the NFWWCS. The AICRRA project has allocated financial resources to move towards supporting the establishment/development of NFCS-ZA. To this end the Terms of Reference were developed after lessons learnt during a virtual meeting and Zanzibar workshop.

The country has established the National Steering Committee which is referred to as the National Steering Committee on Climate Change. The steering committee is composed of Zambia Meteorological Department, Ministry of Agriculture, Ministry of Water, Ministry of Health, Disaster Management and Mitigation Unit Environment, Forest and Climate Change Departments and WARMA. The country has also established the Project Management Team called ZMD 5 to drive the planning and development of the Framework.

Upon appointment of the competent NFWWCS consultant, the development of the NFCS-ZA will commence with the development of their NFWWCS. The bidding process is envisaged to be concluded in the first quarter 2023. The expected duration for the development of the NFCS-ZA about 12 months from appointment of the consultant. The country of Zambia raised the issue of leadership support and buy-in as one of the main barriers in accelerating the development of the Framework. The Zambia representative requested that the WMO intervene to assist in bring country leadership on board. The project is funded by AICRRA and is being championed by Zambia Meteorological Department. The project priority sectors have not been defined at this stage, and the NFCS consultation workshop when the project start should be able to provide for this.

South Africa

South Africa embarked on the process of developing the National Framework for Climate services (NFCS-SA) in 2016, and the process was concluded in 2017. The NFCS-SA focused on the following priority sectors: health, biodiversity, agriculture and food security, disaster management and reduction, energy, oceans and coasts, human settlement and water. The country presented a comprehensive landscape of climate service providers, comprising of service providers across the climate services value chain, comprising of NMHS, research institutions, academic institutions, national ministries, and state-owned entities. The country further presented a structured and detailed landscape of climate services users in the country comprising of general public, academic institutions, research entities, government, private sector entities, media and Non-Governmental Organizations. The country is about to embark on a process of reviewing the current Framework to align with the current WMO requirements. Furthermore, there has been immense developments in the country that needs to be taken into consideration. South Africa proposed the development of a

regional framework, which could help ramp up national frameworks in the SADEC region. The regional framework could also propel regional based developments, such as regional research programmes or regional resource mobilization to assist the SADEC countries in developing and implementing the frameworks.

South Africa presented the governance structure, institutional arrangement, and operational structure for the NFCS-SA. The governance structure is composed of Ministries of Forestry, Fisheries and the Environment and Science and Innovation. The NFCS is hosted by the South African Weather Services (SAWS), with the Department of Forestry, Fisheries, and the Environment (DFFE) providing an oversight role. SAWS has established within its operating structure a Climate Services Programme that provides daily operations of the provision of climate services and coordination of various players. The country has established NFCS-Advisory Policy Committee (DFFE, DSI, SAWS, NDMC, ARC, DWS, WRC, SAMRC, DHS, CSIR) that provides strategic direction to the implementation of the NFCS-SA and assist with data input from various contributing institutions and users. The NFCS-SA be implemented in a 5-Phase approach, to ensure that lessons in early phases can be applied in subsequent phases. This approach will minimize the risk associated with implementation of such a massive project.

Currently, SAWS is conducting ongoing bilateral engagements with climate service providers. This is to ensure that more comprehensive set of climate services information and products are produced to meet the needs of the priority sectors. Other activities undertaken by SAWS toward the full implementation of the NFCSA includes developing the User Interface Platform, study on the funding model for observation infrastructure and the development and operationalization of an Integrated Climate-Driven Multi-Hazard Early Warning System (ICMHEWS) funded by donor funding.

Challenges in South Africa includes limited resources (human capacity, skills and knowledge, ICT, connectivity, quality data), decreasing infrastructure network, investments in weather and climate services to support the full value chain, deeper understanding in terms of the link between open data and socio-economic value for the benefit of the country and reliance on contracts or service providers. Some of the remarkable progresses made by South Africa includes:

- A climate service portal has been developed to exchange best practice, make information available for specific sectors and encourage networking.
- Partnership with local university to co-develop a system climate services.
- Development and operationalization of an Integrated Climate-Driven Multi-Hazard Early Warning System (ICMHEWS) funded by donor funding.
- Bilateral meetings with relevant stakeholders to address key issues and challenges that need to be addressed.
- Engaging with the World Bank to fund research study on funding model/options for public goods weather and climate infrastructure to support the implementation of the NFCS.

Malawi

The country of Malawi has, in 2014, started with the development of the National Framework for Climate Services in Malawi. The country is currently on stage 4 of the NFWCS development process. The outstanding actions includes endorsement of the national strategic plan and action plan for the NFCS, followed by the official launching of the NFCS. The country seeks to review the current framework to align with the provisions of the Malawi National Adaptation Plan. Malawi presented the different types of climate services produced in country, the key stakeholders in climate services and the existing user platforms that have been established. The country further seeks to ensure that the Framework complies with the current WMO full mandate, in particular incorporating the elements of weather and water (i.e., hydrological services). Malawi also wants to set an enabling environment for enabling attainment of leadership support, more especially that the current leadership has been recently appointed and as such, there is an urgent need to socialize the current leadership with the intentions of the Framework and the type of support that will be required to ensure the successful implementation of the Framework. The country is also experiencing significant funding challenges that hampers the implementation of the framework.

Malawi indicated current operational challenges as lack of credible infrastructure, limited financial resources, Covid19 pandemic and inadequate human capacity. The country also identified lack of understanding of climate services and unavailability of Legal Framework (Act - under development) as current barriers to the development of the Framework. However, Malawi equally identified opportunities that included enhanced user engagement, improvement of climate services in order to raise developmental status, increase awareness of central role of climate services in national economic development, provision of increased services frequency and early warning services for extreme weather/ climate events, private public participation, availability of national met policy and establishment of district climate centres.

Mozambique

Mozambique presented its challenges and opportunities in the co-development and implementation of the NFWWCS. Mozambique is at stage zero in terms of the Guidelines for the National Framework for Weather, Water and Climate Services. It has not started with the development of the NFWWCS, and plan to kick-start Stage 1 and Stage 2 of the project. The country is embarking on establishing seamless alignment between the key strategic plans and ensure that the development of the Framework is developed within a well aligned environment. The process of establishing the Framework requires that there is attainment of leadership support to guarantee successful planning and development.

Mozambique highlighted several challenges impeding the country to embark on the planning and development of the Framework. These included amongst others, the lack of governmental legal and regulatory policies for the key providers of climate services, lack of users' integrated platform for users and providers for enabling co-producing and co-development, and feedback mechanism of water, weather and climate information is not established as yet.

Furthermore, the challenges are heightened by lack of funding to support the planning and the development of the Framework. The country deems it prudent to develop the Framework, incorporating recent developments and full WMO mandate, such as inclusion of weather and water. Other challenges presented by Mozambique was the lack of experience exchange amongst the

countries that successfully have implemented the NFCS, and that this platform established by AICCRA could assist in solving these challenges.

Going forward, the country of Mozambique is planning to organize national consultation workshop on climate services to bring together all key stakeholders and identify gaps and key elements for a plan of action to develop and implement the NFWWCS. The country will further set-up working groups comprising of identified providers of climate information including a relevant body to drive the action plan development for the Mozambique NFWWCS. The country is also soliciting funding to implement the NFWWCS through various funding models. Finally, the draft governance and institutional agreements towards the enabling political support and legislation development are in the pipeline.

Botswana

Botswana has not started with the development of the framework for weather, water and climate services and as such the country is on stage zero in terms of the Guidelines for the National Framework for Weather, Water and Climate Services. The country is embarking on establishing seamless alignment between the key national strategic plans and ensure that the development of the Framework is conducted within a well aligned environment. The Botswana Department of Meteorological Services (BDMS) in collaboration with SADC CSC is currently developing a concept note for Botswana NFCS that will be submitted to Weather and Climate Information Services (WISER)-UK Met Office for vetting and possible funding. The WISER programme aims to deliver transformation in the generation and use of co-produced weather and climate services to support decision making at local, national, and regional levels, building resilience to the impacts of climate change. Funding will be used to engage experts to develop a Framework for Botswana and perform capacity building and training workshops.

The process of establishing the Framework requires that there is sound attainment of leadership support to ensure successful planning and development. Furthermore, the challenges are elevated by lack of financial resources to support the funding of the Framework. Mozambique plans to incorporate and expand their envisaged Framework to align fully with WMO mandate, including the incorporation of weather and water. Botswana firmly believes that the NFCS will enable BDMS and its national partners in achieving climate service co-production and co-delivery. In Botswana, as in many parts of the world, the integration of climate services into government policies and decision-making processes is still limited.

Zimbabwe

The country of Zimbabwe has started with the development of the Zimbabwe National Framework for Weather, Water and Climate Services in 2021, prepared by the Zimbabwe Meteorological Services Department. Furthermore, the challenges associated with the full development of the Framework remain intensified by lack of funding for the planning and the development of the Framework. Parallel to this, the country has embarked on the process to appoint a consultant for development of the Climate Services Information System to strengthen resilience of agricultural livelihoods of vulnerable communities, particularly women, in Southern Zimbabwe in the face of increasing climate risks and impacts.

Zimbabwe expressed its main challenges as inadequate resources (financial, human, etc.), inadequate infrastructure network of observatory stations coupled with trained personnel and lack of adequate leadership in driving this process. Zimbabwe also depicted opportunities as incorporation of indigenous knowledge systems, regional approach to address some of the challenges in capacities (NWP, radar technology). Further opportunities include understanding Zimbabwe' landscape (capacities within institutions), developing the capacity of leadership to drive the NFCS, and the use of virtual platforms.

Overall way forward

The general consensuses and recommendations going forward from the workshop participants are captured below following a brainstorming session, which was conducted at the tail-end of the workshop. The purpose of the session was to chart a course for the next key and important processes that needs to take place in the Southern Africa region:

- There was an urgent need to bring about effective governance model to enable the successful development and implementation of the NFWWCSs. The governance model should comprise of ministries or entities that has political powers to influence ministerial and stakeholders' collaboration at National level, represented by key decision makers.
- Political and government buy-in is of paramount importance to the successful development of the Framework. Political buy-in and government leadership support will assist propel the development and implementation of the Framework. Support from high level authorities will catalyze coordination of contributing ministries and entities. Furthermore, soliciting of funding and inclusion of NFWWCS funding in the treasury funding bills will be possible.
- The new guidelines for the development of NFWWCS and RFWWCS should be dispatched to the countries and to the region to smoothen and enrich the process for developing the NFWWCS in line with WMO requirements, and assist in building proper governance models, intuitional arrangement models, and articulate the key Framework development steps.
- The workshop participants from represented countries in the Southern Africa endorsed the idea of developing Regional Framework for Weather, Water and Climate Services. The general sentiment was that the regional framework shall provide for regional based programmes, in particular programmes such as regional based resource mobilization and user-driven research. This framework could be utilized as a strategic instrument to accelerate the implementation of NFWWCSs across all Southern Africa countries.
- The participants' petition was that decision makers needs to be involved in the planning, critical workshops, launching and endorsement of the Frameworks. The role and importance of the Framework and the broader socio-economic benefits over and above adaptive capacities should be well articulated to decision makers.
- The participants also felt that leaders and senior government staff members in the Southern Africa countries should be given the responsibility, through the appropriate government structures to champion, support or enable the development of the Frameworks, as it is done with other plans such as adaptation plans. Furthermore, the leaders in the countries should be held accountable for the planning and implementation of the Framework.

Other workshop enriching presentations

Other presentations were shared with participants during the experience and lessons sharing workshop, with the objective of empowering Southern Africa countries on best practices and key enabling mechanisms for successful planning, development, and implementation of the Frameworks. The presentations covered the following topics:

Presentation	Presenting organization
Leadership and Management in NMHSs for the Generation and Delivery of Climate Service: Challenges and Opportunities.	World Meteorological Organization
Best practices and lessons learned in the development of NFCS	Ethiopian Meteorological Institute
GFCs sectoral exemplars – how can climate services address sectoral needs?	IGAD Climate Prediction and Applications Centre (ICPAC)
BluePrint for the Framework through the Guidelines for the National Frameworks for Weather, Water and Climate Services	Mamadi and Company SA
Successful Climate Services address users' needs through well-structured UIs.	
Regional Climate Services Value Chain in Services Delivery: Opportunities and challenges	WMO Regional Office for Africa
The Importance of CIS in NDC Revision and Implementation: From policy perspective	ACPC-UNECA

Conclusion

It was evident for the three workshops held by AICRRA, that the countries require immense support and capacity building on the planning, development, and implementation of the Frameworks, including its associated governance models, which are at the epicentre of enabling key stakeholder coordination and engagement.

It is therefore recommended that regional NFWWCS efforts and initiatives undertaken as a joint effort by WMO-RoA, ACPC, ICPAC, AICCRA ESA and the NHMSs of ESA countries be continued and strengthened, through structured platforms like these experience and lessons learnt sharing workshops and other initiatives. These regional efforts are informing the co-development and adoption of the global blueprint for the RFWWCS and NFWWCS, as well as the full application of the step-by-step guidelines for the development of the RFWWCS and NFWCCS to accelerate the development of the Frameworks in the ESA countries and beyond. These combined efforts will send a strong message to the key enabling stakeholders, partners, and funding agents that we are working together as a team making a concerted effort to:

- Influence national, regional, and global policy/investment decisions through our engagements/information dissemination sessions; and
- Inform discussions at the global, Africa-wide, regional, and country-level events through our joint outputs.



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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.

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