DRAFT CONCEPT NOTE:

CAPACITY DEVELOPMENT TRAINING PROGRAMME

Introduction and Objective

The main outcome of the World Climate Conference- 3 in September 2009 was the establishment of the Global Framework for Climate Service including the User Interface Platform. Regional Climate Outlook fora have been instruments to operationalize the platform leading to identification of needs and specific services requirements by sectors impacted by climate variability and change. The specific services development often requires impacts tools using high resolution climate variables as input and delivering bespoke actionable indicators understandable by stakeholders in specific sectors (i.e., start of the agriculture season, dry spell length for agriculture). Delivering these actionable indicators for decision making is a challenge addressed as part of the FOCUS-Africa project. The FOCUS-Africa project aims to develop sustainable tailored climate services in the Southern African Development Community (SADC) region for four sectors: agriculture and food security, water, energy and infrastructure. More information about the FOCUS-Africa project can be found at: http://focus-africaproject.eu/.

To ensure sustainability of the project's useful tools, it is proposed to organize trainings for further expansion of these tools use to improve the portfolio of climate services of the Regional Climate Outlook Fora therefore meeting the needs of sector stakeholders for actionable information considered urgent in the changing climate. Over the past almost 30 years since SARCOF's started, seasonal outlooks were only given as probabilities and users have been having a hard time using the information to plan for their different sectors. Even though the SARCOF process introduced the UIP during SARCOF-19 in Angola in 2019, and included stakeholders from the Agriculture, Water, Energy, DRR and health sectors, stakeholders had to discuss the implications of the outlook without quantitative information on expected climate impacts on their sectors. Stakeholders from the region have expressed a strong need for specific tools to help them plan effectively and mitigate the impacts of climate change.

The objective of this training is to improve seasonal forecasting in the SADC region, by introducing sector specific tools and products for the Food and Agriculture, Energy, water and Infrastructure sectors.

Methodology:

The training will be done in three stages, whereby selected climate expert trainer of trainees (ToT) from all SADC member states including SADC CSC staff will be trained in order to ensure sustainability of the FA tools in the region at the end of the project. The first stage of the training will be online for four weeks, whereby TOT will be familiarized with the FA developed tools. The second stage of the training will be an in-person training where participants will interact with FA tools through practical demonstration and testing. The third stage of the training will also be an in-person training which will focus on practical application of the FA tools which will be carried out during the Climate Expert Meeting (CEM-29) to be held in August 2024, and the results presented during the SARCOF-29 User Interface

Platform (UIP). The objective of the is to gather ToT from all SADC member countries, including staff from SADC CSC, for an online training session spanning the entire month of March 2024.

The training sessions will be delivered in three stages and structured according to the WMO competency framework for climate services which include data and data management, (ii) climate data processing and derived products, (iii) climate model outputs and forecasts interpretation, (iv) climate services quality assurance and (v) climate services communication (User-Interface).

- **Stage 1** will be delivered online between 11 April and 30th June 2024 and will focus on providing Trainer of Trainees (ToT) fundamental knowledge on FOCUS Africa knowledge products and tools. The sessions are planned for upto a maximum of four (4) hours per week.
- **Stage 2** will be an in-person training between 01 July and 06 July 2024 where ToT will interact with FOCUS Africa knowledge products and tools through practical demonstration and testing.
- **Stage 3** will be an in-person training during Southern Africa Regional Climate Outlook Forum (SARCOF-29) and Climate Expert Meeting (CEM-30) in August 2024 and it will focus on practical application of the FOCUS Africa tools, and the results presented during the SARCOF-30 User Interface Platform (UIP).

Target Audience:

This capacity development training programme is designed to provide comprehensive training on climate variability, seasonal and decadal forecasting, socio-economic impact assessments, and climate change detection, tailored specifically for experts in climate services. The training sessions will be led by the FOCUS Africa consortium partners and will utilize a combination of presentations, interactive discussions, case studies, group exercises, and hands-on practical sessions. Participants will have the opportunity to engage with experts, share experiences, and apply newly acquired knowledge and skills through practical exercises and simulations.

Expected outcomes

- Enhanced ability of climate services expert to use FOCUS Africa tools to develop tailored advisories and action plans for various sectors
- Strengthened capacity to utilize advanced climate assessment tools and methodologies for comprehensive climate risk assessments, improving the quality and relevance of climate service delivery across the region
- Improved practical understanding of climate services through engaging exercises and case studies, allowing for the direct application of knowledge in enhancing climate resilience in the region

THURSDAY, 11 APRIL 2024		
		Host /Lead
OPENING SESSION		
10:00 – 10:10	Welcome remarks Introductions	**WP7 (ACMAD/WMO)**
10:10 – 10:20	Opening remarks • WMO • ACMAD/SADC	**WP7 (ACMAD/WMO)**
10:20 – 10:30	• Review of workshop objectives and expectations	**WP7 (ACMAD/WMO)**
SESSION I: INTRODUCTION TO CLIMATE SERVICES **LEAD: WMO/ACMAD**		
10:30 – 10:45	**Overview of the FOCUS Africa project** ✓ Objectives and importance of tailored climate services ✓ The full-value chain of climate services and work packages overview	**WP1 (WMO)**
10:45– 11:15	**SADC regional climate services gap analysis** ✓ Assessment of End-User's Challenges and Climate Services Requirements	WP2 (CSIR)
	✓ Capacity Development Needs Assessment	WP7 (ACMAD)
11:15– 12:30	**Engagement of Stakeholders in Responsible Research and Innovation (RRI)** ✓ Introduction to RRI and co-designing climate services through the RRI lens	WP1 (LGI)
THURSDAY, 18 APRIL 2024		
SESSION II: CLIMATE DATA MANAGEMENT, PROCESSING AND DERIVED PRODUCTS **LEAD: WMO/ACMAD**		
10:00 – 11:00	**Understanding Climate Processes** ✓ Fundamental understanding of southern Africa Climate dynamics at climate change timescales ✓ Trends, analogue and composite approaches in Seasonal forecasting	**ACMAD**
11:00 – 12:30	**Extreme events identification and variability** ✓ Regional extreme events identification and variability	**AMIGO**
	✓ Climate extremes in seasonal forecasting and climate variability	**UCT**
THURSDAY, 25 April 2024		
SESSION II: CLIMATE DATA MANAGEMENT, PROCESSING AND DERIVED PRODUCTS **LEAD: WMO/ACMAD**		
10:00 – 11:00	High-resolution climate projections analysis	**MO**
11:00 – 12:30	Analysis of the predictability of forecasts	**WITS**
THURSDAY, 02 MAY 2024		
SESSION III: CLIMATE MODEL OUTPUTS AND FORECASTS INTERPRETATION **LEAD: WMO/ACMAD**		
Seasonal Forecast quality assessment (verification)		
10:00 – 11:00	Visual and objective verification of seasonal forecasts	**ACMAD**
11:00 – 12:30	Methods and tools for forecasts (seasonal) verification	**WP4 (BSC)**

THURSDAY, 09 MAY 2024		
SESSION III: CLIMATE MODEL OUTPUTS AND FORECASTS INTERPRETATION **LEAD: WMO/ACMAD**		
✓ **Climate projection and decadal assessment (T4.2)** o Multimodal and downscaling for seasonal forecasts		
10:00 – 11:00	✓ Statistical downscaling and bias adjustment based on the cumulative distribution functions transformation (CDFt)	**(ACMAD)**
11:00 –12:30	✓ Statistical and dynamical seasonal forecasting in southern Africa (decadal and climate change timescales)	**(WP5)**
THURSDAY, 16 MAY 2024		
SESSION III: CLIMATE MODEL OUTPUTS AND FORECASTS INTERPRETATION **LEAD: WMO/ACMAD**		
10:00 – 11:00	**Climate projection and decadal assessment** ✓ Projections and decadal predictions (T4.4)	
11:00 – 12:30	**Derived products using seasonal forecasts, climate projections and / or decadal predictions (T4.5)**	
THURSDAY, 23 MAY 2024		
SESSION IV: QUALITY PROCESSES FOR CLIMATE MONITORING **LEAD: WMO/ACMAD**		
10:00 – 11:00	**Quality processes for climate monitoring** ✓ Assessments of compliance with regulations and guides, and to provide supervised assessment compliance to its manuals and guides	ACMAD/WMO-CLIMSA
11:00 – 12:30	**Methods and tools for socio-economic impact assessment of climate services** ✓ Impact assessment	**WP6** (LGI/BSC)
THURSDAY, 30 MAY 2024		
SESSION IV: QUALITY PROCESSES FOR CLIMATE MONITORING **LEAD: WMO/ACMAD**		
Methods and tools for socio-economic impact assessment of climate services		**WP6**
10:00 – 12:30	✓ Ex-ante impact assessment of the climate services	WP6 (LGI)
	✓ Ex-post Impact assessment of the climate services	WP6 (BSC)
	✓ Market analysis and Scalability and Replicability Analysis	WP6 (AMIGO)
THURSDAY, 06 JUNE 2024		
SESSION V: CLIMATE SERVICES COMMUNICATION (USER-INTERFACE) **LEAD: WMO/ACMAD**		
10:00 – 10:45	**Development of end-user tailored climate services prototypes** ✓ Data requirements, and a set of guidelines, for all FOCUS Africa CS prototype development	**WP5**
11:45 – 12:00	**Factors to consider when applying climate projections in agricultural finance: climate/crop models**	**CS1 (CSIR)**

THURSDAY, 13 JUNE 2024		
SESSION V: CLIMATE SERVICES COMMUNICATION (USER-INTERFACE) **LEAD: WMO/ACMAD**		
Application Agriculture and Food Security - TEAL TOOL		**WP5**
10:00 – 12:30	✓ Use of historical climate statistics and seasonal forecasts of indicators relevant to rainy season ✓ Onset determination methods and tools	**WP5**
	✓ Precipitation datasets assessment over Tanzania/ Assessment of inflow data ✓ Evaluation against ground stations and using GLOFAS ✓ Onset and hydropower applications	**WP5**
THURSDAY, 20 JUNE 2024		
SESSION V: CLIMATE SERVICES COMMUNICATION (USER-INTERFACE) **LEAD: WMO/ACMAD**		
Application in Key Sectors: Agriculture and food security - Aquabeher tool		
10:00 – 12:30	✓ Use seasonal forecasts and projected data for local adaptation on crop types or method to estimate agronomic onset and cessation of the wet season	**CS3 (SSSA)**
THURSDAY, 27 JUNE 2024		
SESSION V: CLIMATE SERVICES COMMUNICATION (USER-INTERFACE) **LEAD: WMO/ACMAD**		
Application in Key Sectors: Energy and Water		
10:00 – 11:00	**Energy -TEAL Tool** ✓ Precipitation datasets assessment over Tanzania/ Assessment of inflow data ✓ Evaluation against ground stations and using GLOFAS ✓ Onset and hydropower applications	**WP5**
11:00 – 12:30	**Water -WRF Tool???** ✓ Consider applications based on Mauritius Case study	**CS8 (CSIR)**