**NOAA – USAID Fifteenth International Training Workshop**

**Climate Variability and Predictions (15ITWCVP)**

Accra, Ghana, 11 – 20 September 2023

**Training Workshop Schedule**

**Monday, 11 September 2023**

09:00 – 09:15 Registration and Housekeeping Announcements (GMA)

09:15 – 9:30 Self Introductions, Participants

9:30 – 11:00 Sanity Check on Prerequisite Packages, Endalk, Zewdu, Ehsan

**11:00 – 11:15** **Break**

11:15 – 12:00 Introduction to Linux Commands, Wafae/Endalk

12:00 – 13:15 Introduction to GrADS Commands, Endalk/Wafae

**13:15 – 14:30 Lunch**

14:30 – 15:15 Introduction to Geographical Information System, Ehsan

15:15 – 16:00 GIS Lab Instructions and Exercises, Ehsan/William

**16:00 – 16:15 Break**

16:15 – 18:00 GIS Lab Instructions and Exercises, Ehsan/William, NOAA/CPC

**Tuesday, 12 September 2023**

09:00 – 09:45 GIS Map Making, William, NOAA/CPC

09:45 – 11:15 Lab – GIS Map Making, William, NOAA/CPC

**11:15 – 11:30 Break**

11:30 – 12:15 Introduction to Artificial Intelligence (AI) models and Applications in Prediction, Ehsan

12:15 – 13:15 Practice AI based time series model to predict climate variables, Ehsan Bhuiyan

**13:15 – 14:30 Lunch**

14:30 – 15:30 Machine Learning Based Flood Forecasting Model, Ehsan

15:30 – 17:30 Practice AI based time series model to predict climate variables, Ehsan Bhuiyan

**Wednesday, 13 September 2023**

09:00 – 10:00 Creating Diagnostics for Sub-Seasonal Forecasts, Endalk

10:00 – 13:15 Real-time Subseasonal Forecasts, Endalk/Wafae, NOAA/CPC

 **(Coffee served at 11:00)**

**13:15 – 14:30 Lunch**

14:30 – 18:00 Model Forecast Calibration Demonstration, Endalk

**(Coffee served at 16:30)**

**Thursday, 14 September 2023**

09:00 – 13:15 Exercise, Subseasonal Forecasting using real-time forecasting and Calibration tools, Wafae/Endalk

**(Coffee served at 11:00)**

**13:15 – 14:30 Lunch**

14:30 – 16:30 Introduction to the Climate Predictability Tool for Monthly and Seasonal Forecasts, Chalump,

**16:30 – 16:45 Break**

16:45 – 18:00 Practice Monthly and Seasonal Forecasts, Chalump/Awatif

**Friday, 15 September 2023**

09:00 – 09:30 Practice Monthly and Seasonal Forecasts, Chalump/Awatif

09:30 – 11:00 Practice Monthly and Seasonal Forecasts, Chalump/Awatif

**11:00 – 11:15** **Break**

11:00 – 13:00 Introduction to Objective Seasonal Forecasting, Zewdu

**13:00 – 14:30 Lunch**

14:30 – 16:30 Practice Monthly and Seasonal Forecasts based on logistic regression, Zewdu/Wafae

**16:30 – 16:45** **Break**

16:45 – 18:00 Introduction and practical to forecasting of intraseasonal rainfall characteristics including onset & cessation using CFSv2 and ECCC model outputs, Zewdu/William

**Saturday, 16 September 2023**

09:00 – 10:45 Practice forecasting of intraseasonal rainfall characteristics including onset & cessation using CFSv2 and ECCC model outputs, William/Zewdu

**10:45 – 11:00 Break**

11:45 – 13:00Exercise,Onset and Cessation of Rainfall Seasons, William/Zewdu

**Monday, 18 September 2023**

09:00 – 10:00 Opening Ceremony

 Welcoming Remarks

 NOAA, WMO,GMA, other officials

10:00 – 10:30 Group Photo and Break

10:30 – 11:00 WMO Presentation (topic TBD), Dr. Moufouma Okia, WMO

11:30 – 11:30 Perspectives on Climate-Based Early Warning Systems and Response, **Dr. Wassila Thiaw**, *NOAA/CPC*

11:30 – 12:00 Ghana Met Agency Presentation (topic **TBD)**, *GMA*

12:00 – 12:30 15IWCVP Workshop Summary, Dr. Zewdu Segele, NOAA/CPC

12:30 – 14:00 **Lunch**

14:00 – 16:00 Panel on hydrometeorological – climate forecasting and early warning systems and response: drought, floods, food security, health, energy, transportation – Case of Ghana

 (The Ghana Meteorological Agency will kindly invite their partners in the sectors outlined above to tell the audience how they utilize weather and climate information and discuss perspectives on advancing early warning systems for Ghana.)

16:00 – 16:15 **Break**

16:15 – 17:00 **Networking**

**Tuesday, 19 September 2023**

09:00 – 10:45 Group Projects, Subseasonal, Seasonal and Onset/Cessation, Participants

**10:45 – 11:00 Break**

 11:00 – 13:15 Group Projects, Subseasonal, Seasonal and Onset/Cessation, Participants

**13:15 – 14:30 Lunch**

14:30 - 16:00Group Projects, Subseasonal, Seasonal and Onset/Cessation, Participants

**16:00 – 16:15 Break**

16:15 – 18:00 Group Projects, Subseasonal, Seasonal and Onset/Cessation, Participants

**Wednesday, 20 September 2023**

09:00 – 10:45 Project Presentations

**10:45 – 11:00 Break**

11:00 – 13:15 Project Presentations

**13:15 – 14:30 Lunch**