MINUTES

Event: Workshop 3 with Stakeholders and Working Group to discuss ranking of sites (Output & Activity 4.2)

Date: June 07, 2024

Location: Joma adventure Lodge- Salima District

Project: UNEP CTCN - Using simple mobile technologies to scale up digital collection & processing of climate observations for adaptation actions in Malawi

Participants

Name	Title	Organisation
Fatsanawo Dzingomvera	Sr Assistant Meteorologist - ICT & Stations Management	Department of Climate Change & Meteorological Services (DCCMS)
Lisa Dengue	Meteorologist	
Lemani Ngwena	Senior Assistant Hydrological Officer	Department of water Resources (DWR)
Tapiwa Kanyinji	Water Resources Engineer	
Gloria B. Chinangwa	Disaster Relief and Rehabilitation Officer	Salima District Council *Department of Disaster Risk Management*
Waki Chungwa	Senior Community Water Supply and Sanitation Officer	Salima Water & Sanitation Office
No participant confirmed.		National Water Resources Authority
Dr Vincent Msadala	National Coordinator	T-Notch Consulting Ltd
Wezzie Kamphale	Gender Expert	
Thokozani Mtewa	Project Officer	

Total participants: 10 (female participants: 5; male participants: 5)

Item	Action
1. Dr Msadala, on behalf of the consultant team, welcomed the workshop participants from the Working Group and stakeholder entities, and briefed them on the meeting objective: a) A thorough presentation, discussion, and agreement on the final location(s) for testing the prototype technology of using mobile phones to digitise manual hydro-meteorological observations (informed by the preliminary assessment in Activity 4.1)	The participants agreed on the workshop objective and the adjustment to the planned output of final selection of testing sites (1.b): The Working Group agreed that final selection of geographical areas would be decided at the forthcoming online meeting on the draft

b) A milestone in the UNEP CTCN projects, putting the technology in a concrete context in terms of Malawi's geography and hydro-climatic conditions. On the objective to finalise the location for testing, the workshop participants agreed to postpone final selection as the operational and budgetary criterias could only be assessed once the top three options of geographical areas were identified and subsequent analysis could be performed on the number of stations involved for those three areas.	pilot implementation plan in Activity 4.4.
Selection of sites for piloting	
2. Dr Msadala made the presentation (Annex A) outlining workshop expectations, an overview of the technology system architecture and the mandatory and selection criteria to use when evaluating and ranking 10 most optimal geographical areas for pilot testing. He further explained the importance of understanding the roles of other stakeholders in the project, within the Government system/agencies in piloting.	n/a
3. The term "pilot testing sites" was discussed and clarifications were given to participants that "site" means observation station. However, these sites/stations are grouped in a geographical area context that make most hydrological and meteorological sense. For the technology prototype for hydro-meteorological observation data, these area delineations translate into basins/watersheds/catchments, districts and Extension Planning Areas (EPAs, organised by agriculture extension services). The ten proposed areas used for discussing testing and piloting areas were identified in the draft Site Assessment and used basins as area delineations (Activity 4.1): 1. Ruo & Mwanza River Basins 2. Bua & Dwangwa River Basins 3. Linthipe River Basin 4. South Rukuru & North Rumphi River Basins 5. Lisungwi & Rivirivi River Basins 6. Wankulumadzi River Basin 7. Lake Chirwa & South West Lakeshore basins 8. Nkhotakota Lakeshore & Nkhatabay Lakeshore areas 9. North Rukuru, Rufira & Songwe River Basins 10. South East Lakeshore & Lake Chiuta Basins	The workshop agreed that the geographical area delineation for piloting involves overlap between basins, EPAs and districts, within which observation stations are located and serve a hydrometeorological analytical purpose. The boundaries of piloting areas are therefore not fixed but rather an overlay of hydrological basins and meteorological districts/EPAs.
4. The mandatory and selection criteria were discussed in detail with emphasis on the criteria of observation data being collected forming a basis for hydrological and meteorological analysis.	n/a

5. The team's gender expert emphasised that for the selection of testing sites, gender inclusion, disability inclusiveness and gender based-violence risk mitigation for both males and females should be considered (as well as any risk of sexual exploitation and abuse for gauge readers and observers).	The said considerations will be included in the draft implementation plan and in the guidance information provided to gauge readers and observers.
6. After presentation of the selection criteria, participants deliberated on ranking areas that were more qualifying against the criteria). The ranking activity was transparent and discussed openly among participants and government agencies. 7. The hydrological and meteorological areas' characteristics were discussed as a basis for site selection. Biophysical, ecological and ecosystem characteristics of the hydrological units were provided and discussed. The extent of variability of weather types and climate was considered including benefits for the detection and modelling of climate variability and change within those particular areas. Historically recorded hydrological and climatic extremes such as floods, droughts, stormy rains and dry spells were discussed. 8. Consideration of instrumentation, equipment and availability of observers/gauge readers was discussed in general but it was agreed that the working group will base their final selection decision on the detailed testing stations, instruments/equipment and observers availability for the recommended three areas of basins. 9. The best three for each participant were put in 'a pot' where all selections were tallied together. The top three featured sites from all the potted choices were adopted as the three recommended sites. 10. Three areas were selected as priority areas.	The workshop participants agreed that the top three areas that best fit the mandatory and selection criteria were: 1. Ruo & Mwanza River Basins (tributaries in the Lower Shire River basin) in southern Malawi. 2. Bua & Dwangwa River Basins (tributaries into Lake Malawi) in northern Malawi. 3. Linthipe River Basin in central Malawi.
11. To select the final area of piloting the technology, the workshop participants needed to identify the exact number of manual observation stations in each area to understand the detailed scope. 12. Among the selection criteria is cost. The cost for piloting could not be budgeted until the exact number of stations are identified as well as the number of stations that will need rehabilitation, replaced monitoring equipment and updated river rating curves.	The workshop decided that the final selection among the three top priority areas will be agreed at the online meeting planned in Activity 4.4 (presentation of draft implementation plan). In the meantime, DWR and DCCMS agreed to provide the consultant team with an estimated number of stations for each of the three areas prior to the meeting in 4.4 planned for July 2024.

System Architecture Design discussion	
13. General feedback: DCCMS • DCCMS said the previous WIS platform was okay but looking forward to seeing more value added to the data so that one can make a story out of it. • All the work in the platform should be streamlined with what DCCMS does, i.e. standard operating procedures, infrastructure etc. • DCCMS further said as 'custodians of data' being their motto, they hope to also be the data custodians in this project. For example, how can local servers that belong to the department be the host of data? • The technology could be too expensive for the Malawi Government.	DCCMS and DWR will be provided with the draft System Architecture Designs in mid-June by Water in Sight (Activity 3.5), after which an iterative process will be offered for design alterations and feedback. Points raised on cost-effectiveness are built into the prototype technology design and will be further explored in Output 5 of the project.
14. General feedback: DWR • Malawi has a quality issue with hydrological data and sometimes this is due to lack of capacity building. As the project goes on, capacity building should be prioritised as one of the most important parts - even at pilot phase. • The project should support rehabilitation at river gauging stations and support maintenance work, such as updated rating curves.	Capacity building is a central output of the project (Output 6). However, the team will include training as part of online engagement and monthly WG meetings during deployment in Output 4. Output 4 includes some budget for equipment and rehabilitation expenses. The exact scope of the rehabilitation works and equipment will be identified in the first deployment.
15. General feedback. Salima Department of Water and Sanitation • The project will help in data generation for decision making especially for disaster risk management issues. • Emphasis should also be made on community sensitisation when doing rehabilitation works to avoid vandalism. Communities will also better understand the importance of the observation stations.	Community engagement activities are planned as part of implementing the pilot.
Closing remarks	
16. The Chair thanked everyone for a fruitful workshop and closed the meeting.	n/a

Figure 1. Workshop No 3 Participants (June 07, 2024 - Salima, Malawi). Participants (L-R, back row): Waki Chungwa, Leman Ngwena, Dr. Vincent Msadala; (L-R, font row): Tapiwa Kanyinji, Wezzie Kamphale, Gloria B. Chinangwa, Lisa Dengue, Fatsanawo Dzingomvera (photographer, participant: Thokozani Mtewa).

Figure 2. Workshop No 3 Discussions on site selection (June 07, 2024 - Salima, Malawi).

Agenda

Item	Time
Presentation – Site selection criteria	09:00 – 10:30
Health Break	10:30 – 11:00
Presentation – Description of the ten selected sites across Malawi	11:00 – 13:00
Lunch Break	13:00 – 14:00
General discussion on the issues to be considered under each potential site with reference to the selection criteria.	14:00 – 15:00
Health Break	15:00 – 15:30
Selection of the best three sites for piloting.	15:30 – 16:00