HIGHWAY SCIENTIFIC AND TECHNICAL WORKSHOP

APPROVED RECOMMENDATIONS

Output 1: Enhanced sustainable institutional framework for the generation, uptake and use of Early Warnings in the Lake Victoria Basin

Project Steering Committee to agree on the key elements, characteristics and modalities[1] of the Integrated Regional Cooperation Platform, including the harmonization of specifications[2] for early warnings in the Lake Victoria Region, taking into consideration existing mechanisms and protocols that are at the EAC and national levels, as may be appropriate

Project Steering Committee to ensure alignment of other existing activities, strategies, in the regional and sub-regional level to promote synergies and avoid duplication of effort

Project Steering Committee to ensure that joint initiatives being established under all Outputs take into consideration existing relevant stakeholders in the region

Principal Investigators, in collaboration with Highway Focal Points, to provide the Project Steering Committee a list of key project stakeholders participating in activities currently being developed under Outputs 2-4

Under the leadership of the Heads of NMHS of EAC Partner States, the Business Plan will be developed in consultation with all relevant stakeholders taking into consideration findings from the various project activities to ensure the sustainability of the Lake Victoria Basin Early Warning System

Output 2: Improved access to all operational data sources, taking into account regional and national policies, to support the generation and maintenance of Early Warning Services for the Lake Victoria Basin

All NMHSs to complete and update their station metadata information (all stations) in OSCAR/Surface, specifically compliance to WMO / WIGOS requirements;

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[1] Confirming which regional policies/ protocols/ mandates and systems apply to EWS for Lake Victoria as well as any systems that operate regionally (e.g. 110 telephone number?)

[2] Characteristics include the identification and naming of lake areas/ zones for all lake stakeholders to use; Aligning colour coding for warnings and action; Confirming generic thresholds for different user groups in relation to hazards; Agreeing common terms to describe weather and impact

WMO and host country (to be identified by Project Steering Committee) to organize training event for OSCAR/Surface;

NMHSs to improve the sharing of observational data, especially of SYNOPS and upper air data, aiming at meeting WMO target requirements;

WMO, KMD, TMA and UNMA to collaborate on activating upper air network, with the aim of providing twice-daily soundings to the GTS from at least 3 (preferably 4) locations;

Regional WIGOS Center pilot to be established jointly at KMD and TMA with WMO support;

Gap analysis Workshop (host to be identified by Project Steering Committee) with the aim of preparing for proposal for additional hardware purchase;

Request NCAR, in close collaboration with Highway Focal Points to develop the Operations Plan for the Field Campaign, including objectives, methodologies, and expected outcomes. These objectives include:

- o To improve understanding of the weather over the Lake Victoria Basin

- o Enhance local observational data sets for the region for activities identified in the other Output Activities

- o To share data among the regional HIGHWAY partners during the period of Field Campaign as itemized in the Operations Plan

Project Steering Committee to agree on modalities for data sharing, including data center

Project Steering Committee to review and endorse the operation plans for the Field Campaign.

Ensure the Special Observing Periods (SOPs), as appropriate, meet the objectives of the Field Campaign, such as during the rainy season (March, April, May 2019) and during the dry season (June, July, August 2019).

Include all relevant partners, such as SWIFT and HyCristal, in the Field Campaign

Include training in planning and execution of Field Campaigns now and in the future, with emphasis on human capacity building.

Training forecasters and technicians on radar mosaics and NWP model enhancements.

Output 3: Strengthened integration between producers and users to develop, validate and document innovative tailor-made EWS products for the Lake Victoria Basin

In addition to the agreed upon set of NWP products (unified model) for development and training, there is need for the Project Steering Committee to consider the feasibility and prioritization for the following additional activities, based on relevance to project and availability of funding:

- o Enhanced Data Assimilation

- o Perform an assessment and verification of available statistical methods[3] and their use in the region

- o Develop a model for water-spout forecasting

- o Establish MOSAIC / Composite Radar Output

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[3] Links to KU Leuven University

  o Couple Lake-Atmosphere Models

Project Steering Committee to advise, taking into consideration existing budget envelope, the possibility of short-term attachments for scientists and other relevant NMHS staff to academic and/or research institutes (i.e. NCAR, Univ of Leeds, Met Office, among others)

Explore the possibility of establishing networks for students to sharing information and opportunities

Output 4: Improved methods and strengthened capacity for communication and promoting understanding and use of EWS products with relevant producers, technicians, forecasters, intermediaries and users in the Lake Victoria Basin

NMHSs to consider branding warnings over Lake Victoria, i.e. regionally and/or nationally branded

Sustainability of services post project – in particular, relating to the dissemination of services using mobile technology – this may require agreements/ MoU to agree ways of working with the private sector mobile service providers to mutual benefit and long term sustainability

General Recommendation

WMO to rephrase the Activities under all Outputs in the Work Plans to better reflect and articulate actual activities

See below for proposed Output and Activities' names

Output 1: Enhanced sustainable institutional framework for the generation, uptake and use of Early Warnings in the Lake Victoria Basin

Activity 1.1: *Enhancement of the regional cooperation platform for EWS in the Lake Victoria Basin*

Activity 1.2: *Establishment of joint initiatives with relevant stakeholders (including producers and users) at national and regional level for EWS*

Activity 1.3: *Establishment of permanent institutional arrangements for the Lake Victoria EWS*

Output 2: Improved access to all operational data sources, taking into account regional and national policies, to support the generation and maintenance of Early Warning Services for the Lake Victoria Basin

Activity 2.1: *Enhance existing infrastructure, telecommunications and basic systems to strengthen the EWS*

Activity 2.2: *Operational processing and visualization of all data sources and products*

Activity 2.3: *Mini field campaign to exploit and improve all existing data sources and products*

Output 3: Strengthened integration between producers and users to develop, validate and document innovative tailor-made EWS products for the Lake Victoria Basin

Activity 3.1:   *Innovative EWS tools co-produced for marine safety to strengthen EWS on the Lake Victoria Basin*

Activity 3.2:   *Verification of new/improved co-produced EWS products and Standard Operating Procedures and Common Alert Protocol (CAP) developed for these*

Activity 3.3:   *Sharing of knowledge to build research output capacity*

Activity 3.4:   *Sharing of knowledge to enhance local post graduate capacity*

Output 4: Improved methods and strengthened capacity for communication and promoting understanding and use of EWS products with relevant producers, technicians, forecasters, intermediaries and users in the Lake Victoria Basin

Activity 4.1:   *Effective communication of EWS to all possible users in languages and formats which are understood and can improve decision making*

Activity 4.2:   *Effective training to forecasters and technicians to use and maintain the new EWS tools to improve decision making and issue of warnings in a timely fashion*

Activity 4.3:   *Effective training and improved awareness of user communities to understand the new EWS tools to improve decision making*