



WORLD  
METEOROLOGICAL  
ORGANIZATION



Meeting Report

Project Steering Committee Meeting

**2 March 2018**  
**Nairobi Safari Club**  
**Nairobi, Kenya**

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**Project Name:** High Impact Weather Lake System (Highway)

**Financed by:**

UK Department for International Development (DFID), Weather and Climate Information Services (WISER) for Africa Programme, through the Met Office UK

## **Main Objectives of the Project Steering Committee meeting:**

1. Formal Establishment of the Project Steering Committee and endorsement of the Terms of Reference
2. Agreement of Guiding Principles in the implementation of the Project
3. Review and Endorsement of the Technical and Scientific Workshop Recommendations
4. Clarity on Highway Budget and upcoming potential funding for the 1M GBP for Field Campaign and the 1.5M GBP for capital equipment

## **Key Discussions and Outcomes**

### **1. Nomination of Chair and Adoption of Agenda**

Uganda was nominated as Chair of the Project Steering Committee, following EAC protocol. Adopted Agenda is attached as **Annex 1**

### **2. Formal Establishment of Project Steering Committee**

Burundi is represented by the Highway Focal Point. The Project Steering Committee Member will be nominated no later than end of March.

The ICPAC Representative will also be nominated no later than end of March.

### **3. Approval of Project Steering Committee Terms of Reference**

The endorsed TORS are attached as **Annex 2.**

### **4. Approval of Guiding Principles in the Implementation of Highway**

PSC takes notes of the Guiding Principles and request WMO to make appropriate edits to clearly indicate the principles referred to, ie. collaboration, integrity, among others. See **Annex 3** for updated Guiding Principles.

### **5. Presentation of Highway Budget**

The Project Steering Committee takes note of the DFID approved budget; and looks forward to receiving the updated budget allocations following the decisions of the PSC to the recommendations from the Technical Workshop and the provision of national activities with estimated budgets.

WMO, in collaboration with Project Focal Points and Principal Investigators, will harmonize all inputs from partners at the latest by the end of March 2018.

### **6. Presentation of Proposed 1M GBP for Field Campaign**

The Project Steering Committee takes note of the observations, activities and timelines on the 1M GBP Proposal for the Field Campaign.

WMO will send the Concept Note to Highway Project Steering Committee and Focal Points for feedback by 7 March 2019.

Project Steering Committee will provide feedback no later than 30 March; the proposal submission date.

7. [Review and Endorsement of the Technical and Scientific Workshop Recommendations](#)

The Project Steering Committee took note of the Recommendations from the Technical and Scientific Workshop and requests WMO to provide background information to facilitate PSC in taking the appropriate decisions.

8. [Way Forward](#)

WMO is requested to proceed with urgency in engaging the Highway Project Coordinator, who will be based in the WMO sub-regional office in Nairobi; and share the Terms of Reference with PSC Members.

WMO is requested to explore the possibility of providing French interpretation in the Project Steering Committee meetings.

WMO is requested to develop the Terms of Reference for Highway Focal Points and Principal Investigators, including communications and reporting lines.

Project Steering Committee requests WMO to provide a Concept Note for the OSCAR/Surface Training Event and explore which country can host.

WMO is requested to schedule a conference call with PSC Members on the 5<sup>th</sup> of April 2018.

WMO is requested to send the Concept Note for the additional 1M GBP Proposal (by 7 March) to Highway Project Steering Committee and Focal Points for feedback no later than 29 March 2018.

WMO is requested to share the proposed regional activities per Output as developed during the Technical and Scientific Workshop to enable NMHSs to provide country specific activities by the 29<sup>th</sup> of March 2018.

Also attached as **Annex 4** to this report is the agreed Roadmap presented and discussed during the Technical and Scientific Workshop Meeting. The Roadmap will enable WMO and partners to move forward in the next month while waiting for PSC and Heads of NMHSs decisions on the Endorsed Recommendations of the Technical and Scientific Workshop Meeting, attached as **Annex 5**.

## Annex 1: Adopted Agenda

**2 March 2018**

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<b>Time</b>	<b>Items</b>	<b>Presenter</b>
13.30 – 13:45	<ul style="list-style-type: none"><li>• Nomination of Chair of the Steering Committee</li><li>• Opening Remarks</li><li>• Adoption of the Agenda</li></ul>	Chair of Steering Committee
13.45 – 14.45	<ul style="list-style-type: none"><li>• Formal Establishment of Steering Committee</li><li>• Approval of Steering Committee Terms of Reference</li><li>• Approval of Guiding Principles in the Implementation of Highway</li></ul>	Chair of Steering Committee
14.45 – 15.15	Presentation of Highway Budget, Proposed 1M GBP for Field Campaign	Jay Wilson
15.15 – 16.00	Discussion on Budget	Chair of the Steering Committee
16.00 – 16:30	Review and Endorsement of the Technical and Scientific Workshop Recommendations	Lars Peter Riishojgaard
16:30 – 17:00	Discussion and Way Forward	Chair of the Steering Committee
17:00	Coffee Break and End of Meeting	

## **Annex 2: Endorsed Project Steering Committee Terms of Reference**

### **1. Background**

There is a need for improved weather forecast products related to early warning systems, which is co-produced between scientists and users, to prevent deaths and damage due to severe convection and strong winds in the Lake Victoria Region.

In response to this need, the World Meteorological Organisation, in collaboration with the AMCOMET Secretariat, and under the agreement with the UK Met Office (MO), as Fund Manager of Department for International Development's (DFID's) Weather and Climate Information SERVICES for Africa (WISER) Programme, will implement the HIGH impact Weather LAke sYstem (HIGHWAY) Project in the Lake Victoria region. The expected impact of the HIGHWAY Project is an increased use of weather information to improve resilience and reduce the loss of life and damage to property supporting sustainable economic development in the Lake Victoria region. This objective is in line with the overall objectives set out by AMCOMET's Integrated African Strategy on Meteorology (Weather and Climate Services) and is an AMCOMET Flagship Programme.

The expected outcome of the Highway proposal is *increased access to and use of co-designed and sustainable early warning systems to inform regional, national, sub-national and community level planning and decision-making in the Lake Victoria region.*

The Highway proposal will address this need and reach the desired outcome and impact, by working towards the following four outputs:

- a. Established, effective institutional framework for an Early Warning System for the Lake Victoria Basin Region;
- b. Improved access to operational data sources to support the generation and maintenance of Early Warning Services for the Lake Victoria Basin Region;
- c. Strengthened integration between producers and users to develop innovative, reliable tailor-made EWS products through co-production for the Lake Victoria Basin region; and
- d. Improved methods and strengthened capacity for communication and promoting understanding and use of EWS products with relevant producers, technicians, forecasters intermediaries and users in a in the Lake Victoria Basin region.

### **2. Project Steering Committee Members**

A Project Steering Committee (PSC) will be established, comprised of representatives of core partners in the project, including the World Meteorological Organization, the UK Met Office, the National Meteorological and Hydrological Services in East Africa (Burundi, Kenya, Rwanda, Tanzania and Uganda), the East African Community and the Lake Victoria Basin Commission.

Project Steering Committee Members should have skills complementary to those of the programme and which could include expertise in the following areas: African meteorology and weather forecasting, management of operational services as well as capacity development and communications. Membership should include African representatives and consider gender balance. Among the stakeholders, members may include appropriate representatives from academia, government, development partners, NGO or civil society organizations.

### 3. Project Steering Committee Terms of Reference

The Project Steering Committee will provide overall strategic guidance and advice to ensure the project is implemented on-time and within budget, as well as ensure its overall success and sustainability. The PSC will also provide inputs and approve annual project and financial reports.

The Project Steering Committee will meet at least once *every 6 months*, convened by the Project Coordinator. There will also be quarterly *coordination meetings* via *teleconference* between Project Steering Committee members to ensure the smooth implementation of the HIGHWAY project; quarterly project and financial reports will be reviewed. Monthly reports will be provided to the PSC for information.

The Project Steering Committee will follow EAC procedures in terms of quorum and representation.

The Projects Coordinator will liaise closely with the Project Steering Committee Members to ensure they are adequately informed on the progress of the Project to enable them to perform their mandate.

Costs for attending meetings will be covered through the project funds in accordance with the Grant Agreement between WMO and DFID through the Fund Manager, the UKMO.

The Project Steering Committee is expected, *inter alia*, to provide the following to the project:

- a. At each meeting, review and provide oversight of the following standing items.
- b. The strategic direction of the project including; cohesion of the technical workplan; research uptake; capability building; and M&E strategies based on the logframe and impact indicators;
- c. The quarterly reports to identify possible delays and/or problems.
- d. The implementation plan, budget and activities for the following 6 months, with proposal of adjustment, if needed.
- e. The high level engagement<sup>1</sup> with relevant ministries and platforms in the region, collaboration and/or communication in the EA region to ensure the progress of the project towards a successful, operational EWS in the region.
- f. Guidance to ensure that all aspects of the project are supported and sustained by decision makers, policy makers and users in the region.
- g. Creation of new links to promote the project's outcome and sustainability, using established platforms;
- h. Evaluate and mitigate Project risks;
- i. Governance and management of the project;
- j. Assurance of content and opportunities for policy engagement globally;
- k. Ethical considerations and good conduct of the research;
- l. Any other specific items of concern; and
- m. Endorsement of the annual report prior to submission to DFID.

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<sup>1</sup> Engagement with high level representatives from relevant ministries at the national level and EAC, among others, to ensure the sustainability of the Regional Early Warning System



**4. On an ad hoc basis or as necessary, advise the Principal Investigators and Project Manager on:**

- a. Strategy and progress;
- b. Contingency plans;
- c. Risk mitigation
- d. Wider context of the project and emerging opportunities;
- e. Research uptake channels and opportunities for packaging and promoting research outcomes;
- f. Effective communication to intended users; and
- g. Effective partnerships with target institutions in developing countries and relevant continental and international institutions.

**5. Members and Observers of the Project Steering Committee**

<b>Institution</b>	<b>Name</b>	<b>Email</b>
Institut Géographique du Burundi (IGEBU) / Burundi Meteorological Service	To be nominated	
East African Community Secretariat	James Kivuva	jkivuva@eachq.org
Kenya Meteorological Department	Mr Samuel Mwangi, Deputy Director of Forecasting	mwangi@meteo.go.ke or smgathumbi@yahoo.com
Lake Victoria Basin Commission	Amos Christopher Ndoto, Maritime Safety Officer	Ndoto@lvbcom.org
Météo Rwanda	Mr Anthony Twahirwa, Senior Meteorological Applications	twahirwa_anthony@yahoo.com a.twahirwa@meteorwanda.gov.rw rwakiy@yahoo.com
Tanzania Meteorological Agency	Dr. Pascal Waniha, Director Technical Services	pascal.waniha@meteo.go.tz
Uganda National Meteorological Authority	Mr. Paul Isabirye, Director Stations Network and Observations	paul_isabirye@yahoo.com
World Meteorological Organization (WMO)	Paolo Ruti	pruti@wmo.int
Met Office	Kathrin Hall	kathrin.hall@metoffice.gov.uk
WMO Regional Office for Africa – Eastern and Southern Africa	Mark Majodina	mmajodina@wmo.int
WMO WISER Focal Point	Jay Wilson	jpwilson@wmo.int
IGAD Climate Prediction and Applications Centre	To be nominated	
WISER Programme Manager	John Mungai	john.mungai@metoffice.gov.uk



## 6. Principal Investigators / Focal Points

<b>Names</b>	<b>Institutions</b>	<b>Contact</b>
Aloys Rurantije	Institut Géographique du Burundi (IGEBU) / Burundi Meteorological Service	<a href="mailto:arurantije@yahoo.fr">arurantije@yahoo.fr</a>
James Kivuva	East African Community	<a href="mailto:jkivuva@eachq.org">jkivuva@eachq.org</a>
Paul N. Oloo	Kenya Meteorological Department	<a href="mailto:oloo@meteo.go.ke">oloo@meteo.go.ke</a> or <a href="mailto:paul_oloo@yahoo.com">paul_oloo@yahoo.com</a>
Amos Christopher Ndoto	Lake Victoria Commission	<a href="mailto:Ndoto@lvbcom.org">Ndoto@lvbcom.org</a>
Floribert Vuguziga	Météo Rwanda	<a href="mailto:vfloribert@yahoo.com">vfloribert@yahoo.com</a> <a href="mailto:f.vuguziga@meteorwanda.gov.rw">f.vuguziga@meteorwanda.gov.rw</a>
Ladislaus Chang'a	Tanzania Meteorological Agency	<a href="mailto:ladislaus.changa@meteo.go.tz">ladislaus.changa@meteo.go.tz</a>
Margaret Serwanja	Uganda National Meteorological Authority	<a href="mailto:margotnankya@gmail.com">margotnankya@gmail.com</a>
Lars Peter Riishojgaard	World Meteorological Organization	<a href="mailto:Iriishojgaard@wmo.int">Iriishojgaard@wmo.int</a>
Rita Roberts	National Center for Atmospheric Research	<a href="mailto:rroberts@ucar.edu">rroberts@ucar.edu</a>
Kathrin Hall	UK Met Office	<a href="mailto:Kathrin.hall@metoffice.gov.uk">Kathrin.hall@metoffice.gov.uk</a>
Rebecca Venton	UK Met Office	<a href="mailto:rebecca.venton@metoffice.gov.uk">rebecca.venton@metoffice.gov.uk</a>
Paul Watkiss	UK Met Office	<a href="mailto:paul_watkiss@btinternet.com">paul_watkiss@btinternet.com</a>

### **Annex 3: Guiding Principles**

#### **Guiding Principles for the Highway Project**

1. **Partnership:** The implementation of the Project will be carried out as a partnership in a coordinated manner. Each partner will support operations under the Project based on partners' comparative advantages, mandates and capacities.
2. **Streamlined interventions:** The Project Partners are committed to avoid overlapping engagements and align their interventions to allow maximal outreach, maximize synergies and reduce implementation complexity and transaction costs for governments.
3. **Regional Ownership:** The Project will foster regional as well as country ownership and leadership including key national stakeholders to meet the needs of users in specific sectors, recognizing the responsibilities of different actors involved in the harvesting of data, production and delivery of weather, climate water and early warning services to end-users.
4. **Linkages to continental and global strategies:**
  - a. The Project will encourage continuous capacity building, through the regional centers and other actors. The Project is aligned and contributes to the implementation of AMCOMET's Integrated African Strategy on Meteorology (Weather and Climate Services) available at: <https://www.wmo.int/amcomet/en/pages/integrated-african-strategy-meteorology-weather-and-climate-services>, and the Global Framework for Climate Services in Africa available at: <http://www.wmo.int/gfcs/> .
  - b. The Project is aligned and contributes to the DFID WISER Guidance on Equitable and Inclusive co-production for Weather and Climate Services, dated September 2017, available at: <https://www.metoffice.gov.uk/binaries/content/assets/mohippo/pdf/international/wiser/wiser-co-production-guidance.pdf>.
5. **Data Sharing:** The Project will facilitate data sharing and access to data, with a view to promote interagency and regional cooperation.
6. **Public-Private Engagement Principles:** The Project will support the development of country-led public-private partnerships and cost-recovery mechanisms whenever applicable, with a view to promote and sustain long-term delivery of services to vulnerable communities. Supported public private partnerships adhere to the WMO's Guiding Principles in engaging with the private sector, in particular the principles of Shared Value, Integrity and Transparency, among others.

## **Annex 4: Highway Roadmap**

### **HIGHWAY REGIONAL STAKEHOLDER MEETING**

1. Project Steering Committee – 2 March 2018
  - Approval of PSC Terms of Reference and Highway Guiding Principles
  - Discussion and Approval of the Recommendations from the Technical and Scientific Workshop
  - Presentation of the Highway Budget
  - Presentation of the additional 1M GBP Funding for the Field Campaign for Project Steering Committee of approval of capital expenses based on input from Technical and Scientific Workshop Recommendations
2. Development and Project Steering Committee approval of the Field Campaign Operation Plan
3. Organization of training event for OSCAR/Surface (host to be identified by Project Steering Committee)
4. Begin the process for the Regional WIGOS Center Pilot
5. Gap analysis Workshop (host to be identified by Project Steering Committee) with the aim of preparing for proposal for additional hardware purchase (1.5M GBP, submission date approx. Dec 2018)
6. Begin developing baseline information for the Business Plan, under the leadership of the Heads of NMHS of EAC Partner States, to ensure the sustainability of the Lake Victoria Basin Early Warning System
7. Following agreement from the SC, EAC, in collaboration with Partner States to begin process of formalising modalities of collaboration under Integrated Regional Cooperation Platform, as it relates to the Highway Project; taking into consideration existing mechanisms and protocols that at the EAC and national levels, as may be appropriate
8. Work Packages were developed for Outputs 1-4 by Project Stakeholders and will be shared with relevant partners for fine-tuning
  - NMHSs need to submit national level activities to support the Work Packages for each Output and identification of national Focal Points
  - Formalise agreements between WMO and NMHSs in the implementation of their national activities
9. WMO, in collaboration with partners, will update the risk register and Monitoring and Evaluation Framework. WMO will also develop Overall Project Implementation Plan (Gantt Chart), Terms of Reference for Focal Points and Principal Investigators, including reporting modalities and terminologies.
10. WMO to share the fine-tuned Terms of Reference for the Highway Project Manager to be based in the WMO Regional Office – Eastern and Southern Africa.

## **Annex 5: Endorsed Recommendations**

### **HIGHWAY SCIENTIFIC AND TECHNICAL WORKSHOP**

#### **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<sup>2</sup> of the Integrated Regional Cooperation Platform, including the harmonization of specifications<sup>3</sup> 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;
- 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;

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<sup>2</sup> 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?)

<sup>3</sup> 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

- 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:
  - To improve understanding of the weather over the Lake Victoria Basin
  - Enhance local observational data sets for the region for activities identified in the other Output Activities
  - 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:
  - Enhanced Data Assimilation
  - Perform an assessment and verification of available statistical methods<sup>4</sup> and their use in the region
  - Develop a model for water-spout forecasting
  - Establish MOSAIC / Composite Radar Output
  - 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

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<sup>4</sup> Links to KU Leuven University

**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*