FLOOD & DROUGHT MANAGEMENT TOOLS

Technical Training: Lake Victoria Basin

Report

12-14 June 2017

The Vic Hotel

Kisumu, Kenya

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1. Summary

There is a growing sense of urgency around the need to improve resilience within river basins, and for this to become a critical part of water management plans. The increased frequency and unpredictability of floods and droughts is a priority concern across scales from transboundary to local, along with the other multiple drivers that cause depletion and degradation of shared water resources.

The Flood and Drought Management Tools (FDMT) project (http://fdmt.iwlearn.org/) is funded by the Global Environment Facility (GEF) International Waters (IW) and implemented by UNEP, with the International Water Association (IWA) and DHI as the executing agencies. The project is developing online technical applications[1] which can be applied individually or together at the basin or local level to facilitate the inclusion of information about floods, droughts and future scenarios into Integrated Water Resources Management (IWRM) planning, Transboundary Diagnostic Analyses (TDA) and Strategic Action Plans (SAP), and Water Safety Planning (WSP). The project is being implemented from 2014 - 2018, and 3 pilot basins (Volta, Lake Victoria and Chao Phraya) are participating in development and testing.

Understanding how to use the technical applications is an important aspect of the future operational use and sustainability of the FDMT project, therefore, capacity on the use and interpretation of the tool and their outputs, as well as giving stakeholders an opportunity to provide feedback on the functionality of the tools will go a long way to achieving this.

The project has been holding a series of technical trainings targeting technical staff and junior to senior level water resource professionals from key project stakeholder. Trainings intend to provide a basis for bringing the basin organisations and relevant basin level authorities, and water utilities together around a planning tool, while being able to test and validate the technical content of tools. Feedbacks from the trainings are integrated into the development and refinement of the tools.

The objectives of the technical trainings are to:

- Enhance stakeholders understanding of the methodology and tools developed under the FDMT project
- Provide stakeholders with an opportunity to give feedback on the technical content of the tools
- Refine the development of the methodology and tools based on stakeholder feedback

With support from Lake Victoria Basin Commission (LVBC), DHI and the International Water Association (IWA) organised a three day training with LVBC and national level authorities from 12 to 14 June, 2017.

[1] The term tools and technical applications are used interchangeably. Tools in this context are defined as the technical applications being developed by the project and are available at http://www.flooddroughtmonitor.com/home

2. Technical training

2.1 Overview

Technical trainings on the use of the tools are scheduled on a yearly basis within each of the pilot basins. The technical training provides capacity building as well as an opportunity for stakeholders to give feedback on the functionality and use of the developed tools to date. The feedback is included in the further development and refinement of technical content of the tools.

The technical training provides a basis for bringing basin and national level organisations, and water utilities together around a common planning tool. The training for Lake Victoria Basin stakeholders was organised from 12 to 14 June in Kisumu, Kenya, with basin and national level organisations (see Annex 1 for agenda).

The training sessions reflected the developed functionality to date, using real data from the Lake Victoria Basin. Later trainings will include the functionality of the planning tools available in the Flood and Drought portal (http://www.flooddroughtmonitor.com).

Objective

The objective of the technical training was to:

- Enhance stakeholders understanding of the methodology and tools developed under the FDMT project
- Provide stakeholders with an opportunity to give feedback on the technical content of the tools
- Refine the development of the methodology and tools based on stakeholder feedback

Expected outcome of the workshop

The expected outcome of the technical training was for key stakeholders to understand the functionality, how to use the tools, and how the output from the tools could be used in decision making around flood and drought management and planning at the stakeholder's respective level.

For the project, it was also an opportunity to gather valuable feedback on the functionality and how the developed tools could be used in decision-making.

Target group

The target group of the technical trainings was the technical staff within the key project stakeholders, junior to senior level water resource professionals as recommended by the stakeholders. The training in Kisumu was convened by the Lake Victoria Basin Commission (LVBC), and key national representatives from Uganda, Kenya and Burundi; respectively, Ministry of Water and Environment – Uganda, LVEMP II – Kenya and the Hydrology Services Department of Burundi (IGEBU). See Annex 3 for the full participant list.

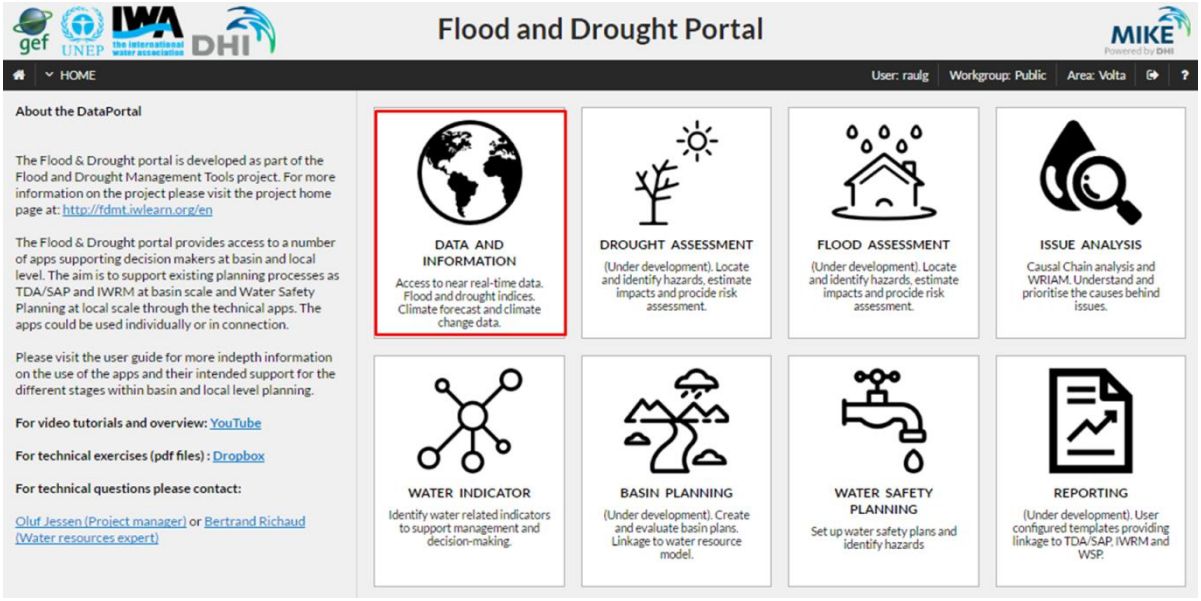
2.2 Technical training

From 12 to 14 June, 2017, LVBC and representatives from countries within the Lake Victoria Basin convened at the Vic Hotel. The first day focused on data and information, and the second and third day focused on climate forecasting and drought impact and planning.

Day 1: Data and Information

12 June, 2017

The first day started with presentations from DHI, focusing on an overview of the project and understanding the objectives. This was followed by an introduction to the Data and Information application, where participants went through a number of exercises looking at different evaluation options with an emphasis on seasonal data (drought and rainfall indices). These included evaluations of rainfall data, historical climate, rainfall deviation and Standardise Precipitation Index (SPI) and seasonal forecasting and forecasted SPI.



To view the documentation (presentation, guiding material and exercises) click on the items in the table below:

Training overview and objectives
Project outputs
User registration and access
Case 1: seasonal and long term planning
Data and Information • Introduction to Data and Information • Exercise: Introduction to the data and information application • Demo of the data and information application • Exercise: Climate data in the basin
Identify and locate climate hazard • Introduction to climate related drought indices and hazards • Exercise: Identify historic climate related hazards
Introduction to additional data sources

Day 2: Climate forecast, drought impact and planning
13th June, 2017

The second day concentrated on climate forecasting, drought impacts and how this information can be used in planning. The Reporting and Issue Analysis applications were introduced to the participants, focusing on the creation of reports, disseminations and selection of indicators. Participants learned about Causal Chain Analysis (CCA) and about the Water Resource Issues Assessment Method (WRIAM); methods which support the analysis of environmental impacts, looking at the immediate, underlying and root causes of identified impacts. The application helps users to identify impacts and help prioritise for future action.

During the training, participants went through a number of exercises looking at climate forecast reporting, creation of reports and disseminations and identification of indicators during group works.

To view the documentation (presentation, and guiding material and exercises) click on the items in the table below:

Climate forecast
Reporting • Exercise: Reporting application (step by step)

Issue Analysis • Exercise: Group work on causes and priorities of issues
Climate forecast

Day 3: Overview, data and information
14th June, 2017

During the third day of the technical training, the agenda included indicators; selection of indicators and an introduction to the Planning application. Participants completed exercises focusing on the selection of indicators and creating evaluation plans.

To view the documentation (presentation, and guiding material and exercises) click on the items in the table below.

Indicators and Planning • Selection of indicators for the key issues (Introduction to the Water Indicator application)

Next steps (2017)

The following activities are planned for 2017:

- Finalise drought early warning and dissemination
- Development and validation of climate processing functionality
- Implementation of planning methods
- Support for Transboundary Diagnostic Analysis (TDA)
- Concept for climate change and flood management
- Finalise technical developments for technical applications

For lack of knowledge, people perish – meaning that information (and knowing how to use this information) can make a difference in knowing how to prepare and plan to the impacts of climate change. Capacity development, to ensure that key stakeholders understand how to use and interpret the tools is essential to the sustainability and continuity of the project outputs. Aside from the yearly trainings, the project is exploring other methods to keep stakeholders informed of new developments, e.g. newsletter, webinars demonstrating the use of project outputs, YouTube tutorials, updated step-by-step guides on the various applications, etc. These outputs will be made available via the Flood and Drought portal (http://www.flooddroughtmonitor.com/) and through the project website (http://fdmt.iwlearn.org/).

Annex 1 – Agenda

Basin and national level training

Monday the 12th of June 2017 *Overview, data and information*		
Time	**Title**	**Responsible**
09.00 – 09.15	Welcome by LVBC	LVBC
09.15 – 09.30	Overview of workshop agenda and project objectives and status • Agenda and objectives Project overview	DHI
09.30 – 10.30	**Project outputs** • Overview of project outputs User registration and access	DHI
10:30 – 11:00	Break	
11:00 – 11:15	**Use case 1: seasonal and long term planning** Presentation of use case 1 for the training Planning: Strengthening the planning on Lake Victoria with focus on climate variability and climate change	DHI
11:15 – 13:00	**Data and information** • Introduction to satellite data (presentation) • Demo of the data and information application Exercise • Introduction to the data and information application Climate data in the basin	DHI
13.00 – 14.00	Lunch	
14.00 – 15.30	**Identify and locate climate hazard** • Introduction to climate related drought indices and hazards Exercise Identify historic climate related hazards	DHI
15:30 – 16:00	Break	
16.00 – 16.45	**Additional data** Introduction to additional data sources	DHI
16.45 – 17.00	Feedback and wrap up	

Tuesday the 13th of June 2017 *Climate forecast, drought impact and planning*		
Time	**Title**	**Responsible**
09.00 – 09.30	Reflection on day 1	DHI
09.30 – 10.30	**Climate forecast** • Introduction to seasonal and medium range forecast • Downscaling and skill assessment Exercise • Use of climate forecast in seasonal planning	DHI
10:30 – 11.00	Break	*DHI*
11.00 – 13.00	**Reporting** • Dissemination and reporting Exercise • Reporting application	DHI
13.00 – 14.00	Lunch	

14.00 – 15.30	**Issue analysis** • Background to CCA and WRIAM Exercise • Group work on causes and priority of issues	DHI
15.30 – 16.00	Break	
16.00 – 17.00	**Indicators** • Selection of indicators Exercise • Selection of indicators for the key issues	DHI
17.00	Feedback (groups) and wrap up	

Wednesday the 14th of June 2017 *Planning*		
Time	**Title**	**Responsible**
09.00 – 09.30	Reflection on day 2	DHI
09.30 – 10.30	**Indicators (continued)** • Selection of indicators Exercise Selection of indicators for the key issues	DHI
10.30 – 11.00	Break	
11.00 – 13.00	**Planning** • Background to planning application Exercise • Introduction to the planning application Creating and evaluation of plan	DHI
13.00 – 14.00	Lunch	
14.00 – 15.00	Wrap up and feedback	LVBC

Annex 2 – Participants

Name	Organisation	Country	Email
Basin level participants			
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