

FLOOD AND DROUGHT RISK MITIGATION TO IMPROVE CLIMATE RISK RESILIENCE AND PREPAREDNESS IN THE NILE BASIN



PROJECT DETAILS

EXECUTING AGENCY

The Nile Equatorial Lakes Subsidiary Action Program (NELSAP-CU) is the implementing agency of the Flood and Drought Risk Mitigation Project / thematic area, which is part of the Nile Cooperation for Climate Resilience (NCCR) program.

NELSAP-CU is implementing the Project / thematic area in collaboration with the Nile Basin Initiative Secretariat (NileSEC), Eastern Nile Technical Regional Office (ENTRO), and the Lake Victoria Basin Commission (LVBC).

PROJECT DURATION

This project will be executed in four (4) years from March 2021 up to November 2025.

LOCATION

The project is located within the Nile River Basin.

PARTICIPATING STATES

Burundi, DR Congo, Ethiopia, Kenya, Rwanda, South Sudan, The Sudan, Tanzania and Uganda.

DEVELOPMENT PARTNERS

The Project is financed by The World Bank through the Cooperation in International Waters in Africa (CIWA) Trust Fund.

KEY OUTPUTS OF THE FLOOD AND DROUGHT RISK MITIGATION PROJECT

FLASH FLOOD MAPPING

Flash Flood Hotspots Identified and Mapped

FFEWS

A basin - wide Flash Flood Early Warning System NB - FFEWS developed

RISK MITIGATION

Investment Options for improved flood risk management identified and investment plan prepared.

« Overall objective of the Flood and Drought mitigation project is to enhance preparedness and resilience of Nile Basin countries against flash flood disasters through development of decision support information services. »



JUNE 2024



FLOOD AND DROUGHT RISK MITIGATION TECHNICAL WORKING GROUP CONDUCTED FIELD VISITS TO SELECTED FLASH FLOOD HOTSPOTS TO COLLECT PRELIMINARY INFORMATION ON FLOOD AND DROUGHT AND ESTABLISH CONTACTS WITH CUSTODIANS OF AVAILABLE OBSERVED HISTORICAL FLOOD AND DROUGHT DATA.

IMPORTANCE OF THE FLOOD AND DROUGHT RISK MITIGATION

NELSAP aims to provide member states with an opportunity to explore transboundary solutions to impacts of climate change through supporting joint analysis, planning and implementation of climate resilient interventions to address climate risks and uncertainty in the basin while improving preparedness of flood prone communities to flood and drought risk.

The Flood and Drought Risk mitigation thematic area of the NCCR project supports joint development of basin-wide flood and drought forecast models, information dissemination platforms and capacity building for flood risk mitigation investment planning. Under the thematic area, NELSAP aims to: (i) develop a flash flood early warning system (FFEWS) (ii) Build capacities of countries in flash flood emergency response planning; and (iii) identify areas with high flood risk and identify investment options for flash flood risk mitigation.

The project aims to support national meteorological and hydrological services in the Nile basin member states through development of a reliable and effective flash flood early warnings for the Nile Basin. It aims to increase local expertise and regional cooperation in flash flood management while improving disaster management efficiency.

« The Key out put of this project is to enhance preparedness of communities to flood disasters through identification of flash flood hotspots and the development of a basin wide flash flood early warning system - FFEWS . »

KEY PROJECT ACTIVITIES TIMELINES

- 2022 JUN.** DEVELOPMENT OF BASIN FLASH FLOOD EARLY WARNING SYSTEM INITIATED
- 2022 JUN.** KICK-OFF - FIRST REGIONAL WORKSHOP WITH TECHNICAL WORKING GROUP IN NAIROBI, KE.
- 2022 OCT.** COUNTRY CONSULTATIONS AND VISIT TO FLOOD PRONE COMMUNITIES IN ETHIOPIA
- 2022 DEC.** COUNTRY CONSULTATIONS AND VISIT TO FLOOD PRONE COMMUNITIES 9 NILE BASIN COUNTRIES
- 2023 JAN.** COUNTRY CONSULTATIONS AND VISIT TO FLOOD PRONE COMMUNITIES IN TANZANIA COUNTRY
- (2023 MAR. TO 2023 JUN.)** CONSULTATIONS AND VISIT TO FLOOD PRONE COMMUNITIES IN UGANDA KENYA, BURUNDI, RWANDA DRC, SOUTH SUDAN. RAPID MAPPING
- 2023 OCT.** REPORT ON IDENTIFICATION OF FLASH FLOOD HOT SPOTS IN THE NILE BASIN COUNTRIES SUBMITTED
- 2023 SEPT.** FLASH FLOOD ASSESSMENT AND IDENTIFICATION OF FLASH FLOOD HOTSPOTS, REPORT SUBMITTED
- 2024 MAR.** CAPACITY BUILDING OF FLOOD MANAGERS ON THE FLASH FLOOD EARLY WARNING SYSTEM
- 2024 MAR.** REVIEW AND VALIDATION OF FFEWS
- 2024 AUG.** DEPLOYMENT OF THE FFEWS
- 2024 AUG.** NATIONAL FLOOD-RISK ASSESSMENT RPTS
- 2025 FEB.** DETAILED FLOOD-RISK ASSESSMENT RPTS
- 2025 MAY.** REVIEW INVESTMENT ROAD-MAP FOR-IMPROVED FLOOD RISK MANAGEMENT IN NILE BASIN FLASH FLOOD EARLY WARNING SYSTEM
- 2025 NOV.** (FFEWS) OPERATIONAL



1ST REGIONAL WORKSHOP OF THE FLOOD AND DROUGHT RISK MITIGATION TECHNICAL WORKING GROUP (F&D-TWG), NAIROBI KENYA, JUNE 2022. THE F&D-TWG PROVIDES ADVISORY AND TECHNICAL GUIDANCE TO ENSURE THAT PROJECT IS CONSISTENT WITH STANDARD FLOOD AND DROUGHT MANAGEMENT PRACTICES FRAMEWORK OF NBI COUNTRIES AND PROVIDE LINKAGES TO RELEVANT NATIONAL INSTITUTIONS TO ENSURE COUNTERPART SUPPORT TO THE PROJECT

CONTEXT AND RELEVANCE OF THE PROJECT

The Flood and Drought Risk Mitigation project / thematic area is in line with the Nile Basin Initiative NBI ten years NBI strategy (2017 – 2027), specifically strategic goal number 5 - to improve basin resilience to climate change impacts. It also addresses the Sustainable Development Goal (SDG) number 13 on climate action, which calls for urgent action to combat climate change and its impacts.

The specific objectives are:

- Identification of frequent flash flood prone areas in the Nile basin and selected regions of the Nile Basin countries within the Nile Basin;
- Develop a flash flood early warning system for the Nile Basin and selected regions of the Nile Basin countries within the Nile Basin;
- Enhance flash flood preparedness for the Nile Basin member countries through capacity development for the use of flash flood early warning system.
- Carry out basin-wide risk assessment of flood (in-cluding flash flood) and drought;
- Identify investment options both structural and non – structural such as drainage improvement, capacity development, technical assistance, watershed management, institutional strengthening, etc, for improved flood management in the basin;

CURRENT PHASE OF THE PROJECT

Currently, NELSAP is carrying out country consultations and field visits towards the identification of suitable investment options for improved flood management in the Nile Basin countries. The investment options for improved flood management will include both structural and non-structural interventions such as drainage improvement, infrastructure development, capacity development, development of early warning information services, watershed management programs, awareness creation and community sensitization, among others.

This will include detailed pre- feasibility studies of selected sites leading to development of an investment plan for improved flood management.

IDENTIFICATION OF FLASH FLOOD PRONE AREAS.

Flash flood hot spots were identified through collaborative country visits in the nine NBI countries. The aim of the visits was to understand relevant characteristics of representative flash flood hotspots in the different countries, liaise with key national stakeholders such as national meteorological institutions, national disaster management and response institutions to understand flood risk vulnerability and response preparedness. These country missions also included interaction with communities to understand vulnerability, relevance and access to early warning information.

In addition, flash flood potential areas were identified through spatial analysis of catchment characteristics to generate indicators such as the Flash Flood Potential Index - FFPI which is based on the physiographic characteristics of the catchment and the Dynamic Flash Flood Potential Index DFFPI which adds the aspect of hydrology.

These were validated against the Global Hydrologic Model. The output of this analysis is a set of maps which show flash flood prone areas for each of the Nile Basin Countries.

DEVELOPMENT OF THE F.F EARLY WARNING SYSTEM

To further enhance preparedness of Nile Basin Countries for flood disasters, NELSAP started the development of a basin -wide Flash Flood Early Warning System. NB-FFEWS. The aim is to support National Meteorological and Hydrological services in each of the Nile Basin Countries to prepare and disseminate flash flood early warning information to reduce the risk.

The Draft FFEWS was reviewed by the Flood and Drought Regional Working Group in March , 2024 and areas for improvement identified. During this workshop, participant that included officers from the different Ministry of Water affairs, National Meteorological Institutions and Disaster Preparedness and Response Institutions were trained to use the FFEWS to generate and disseminate flash flood early warning information.

The final FFEWS will be validated in October, 2024 upon deployment on the NBI Portal.



FIELD VISITS, AND STAKEHOLDER CONSULTATIONS AND INTERACTIONS WITH FLOOD PRONE COMMUNITIES BY NELSAP TEAM AND TECHNICAL WORKING GROUP MEMBERS

POTENTIAL FLASH FLOOD HOTSPOTS FROM SELECTED NILE BASIN COUNTRIES

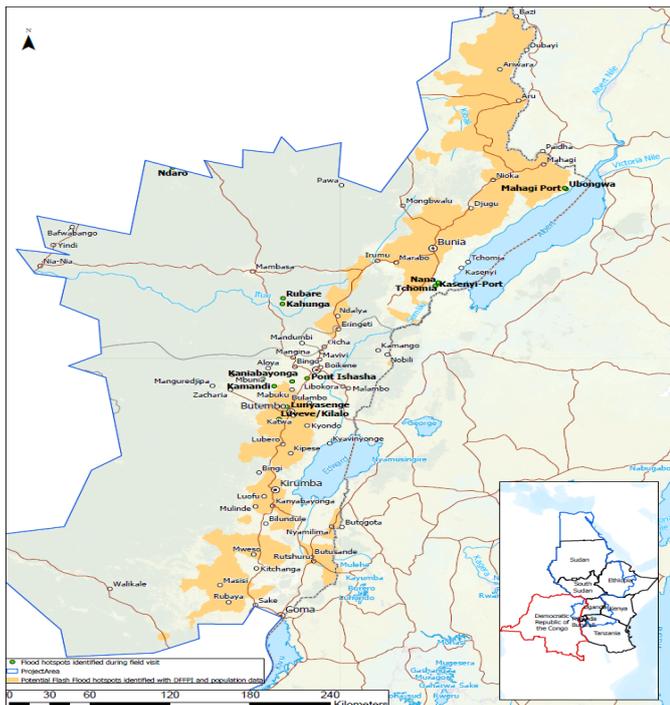
Potential Flash Flood Hotspots in Tanzania



Potential Flash Flood Hotspots in Uganda



Potential Flash Flood Hotspots in Democratic Republic of Congo (DRC)



ABOUT NILE EQUATORIAL LAKES SUBSIDIARY ACTION PROGRAM

The Nile Equatorial Lakes Subsidiary Action Program Coordination Unit (NELSAP-CU) headquartered in Kigali, Rwanda, is one of the two investment programs of the Nile Basin Initiative (NBI), the other being the Eastern Nile Technical Regional Office (ENTRO), headquartered in Addis Ababa, Ethiopia. NELSAP-CU was established in December 1999 by the Council of Ministers for Water Affairs in the Nile River Basin, with a mission to “contribute to the eradication of poverty, promote economic growth, and reverse environmental degradation in the Nile Equatorial Lakes (NEL) region, within the overall NBI’s shared Vision of sustainable socioeconomic development and the equitable use of and benefit from Nile Basin water resources”. NELSAP-CU is governed and reports to the Council of Water Ministers from 10 Nile Basin membership states of Burundi, DR Congo, Egypt, Ethiopia, Kenya, Rwanda, South Sudan, Sudan, Tanzania and Uganda.

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