



***Enhancing Community Adaptation  
to Climate Change through Climate  
Resilient Flood Early Warning,  
Catchment Management and  
WASH Technologies in Mpologoma  
Catchment in Uganda Project  
(CARFEWW)***

*BY*

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*AT THE*

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# Project Overview

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**FUNDER**

Adaptation Fund

**PROJECT PERIOD**

4.5 Years

**PROJECT AREA :**

Mpologoma Catchment Area Covering 11 Districts

**IMPLEMENTING ENTITY**

Ministry Of Water And Environment

**EXECUTING**

Water Aid Uganda

**CO-EXECUTING ENTITY**

Directorate of Water Resource Management with support from

WRI, KWMZ, EUWS, WSDF-E ETC



## **PROJECT GOAL**

The overall goal of the project is to increase the resilience of communities to climate change risks of floods and landslides through timely responses to climate hazards, sustainable community access to water, sanitation and hygiene services, and integrated catchment management measures in the Mpologoma catchment.

### **Specific objectives**

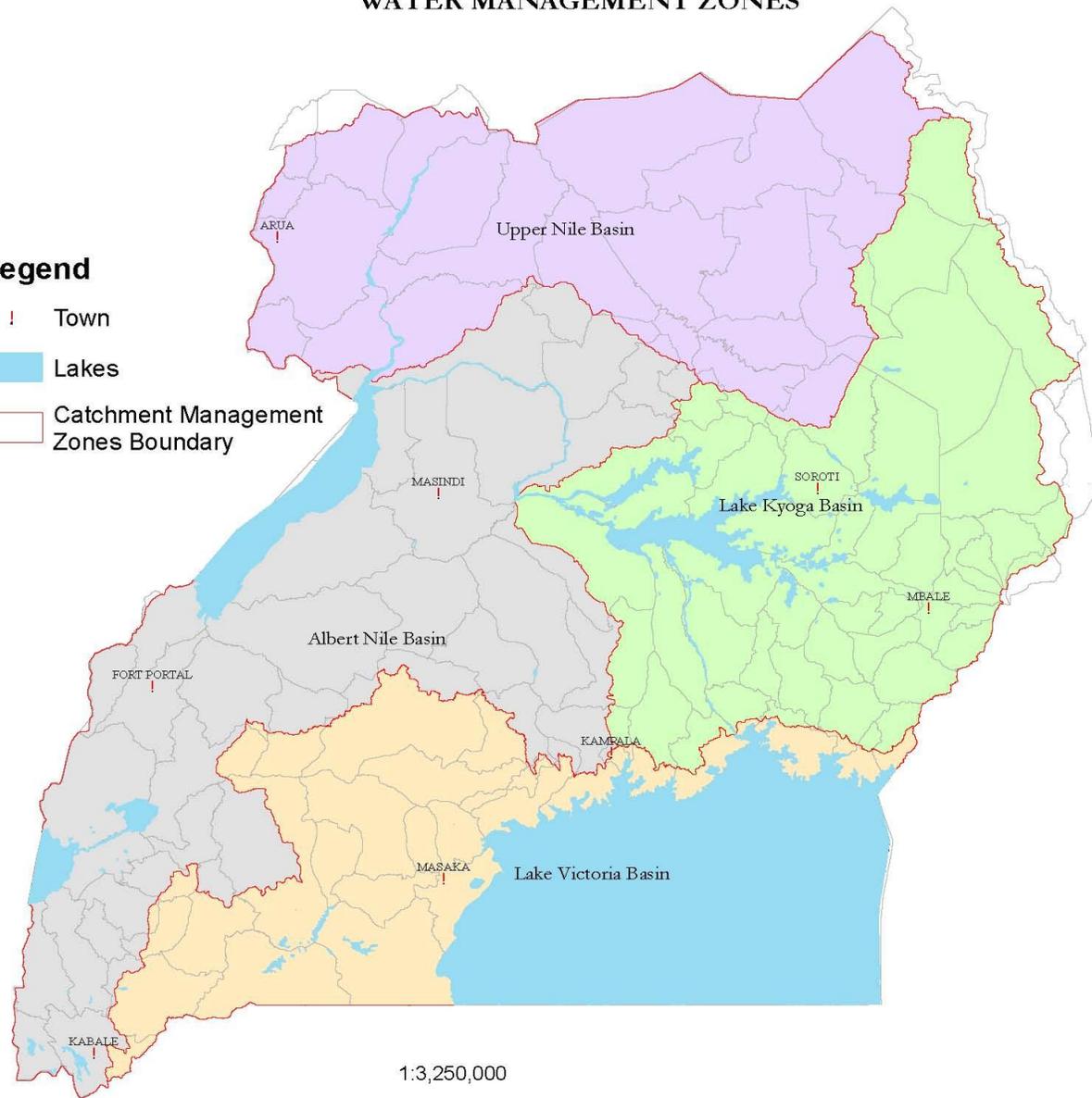
- Strengthen the institutional capacity for planning, designing, implementation and monitoring of integrated Flood Early Warning systems (FEWS) and climate-smart WASH technologies
- Develop and promote adoption of Floods Early Warning systems (FEWS), climate-smart WASH and Catchment Management technologies
- Facilitate communities to undertake adaptation actions for reinforcing resilience of populations and ecosystems against floods and landslides
- Enhance knowledge management and skills sharing in FEWS, climate resilient WASH and Catchment Management technologies

# PROJECT AREA

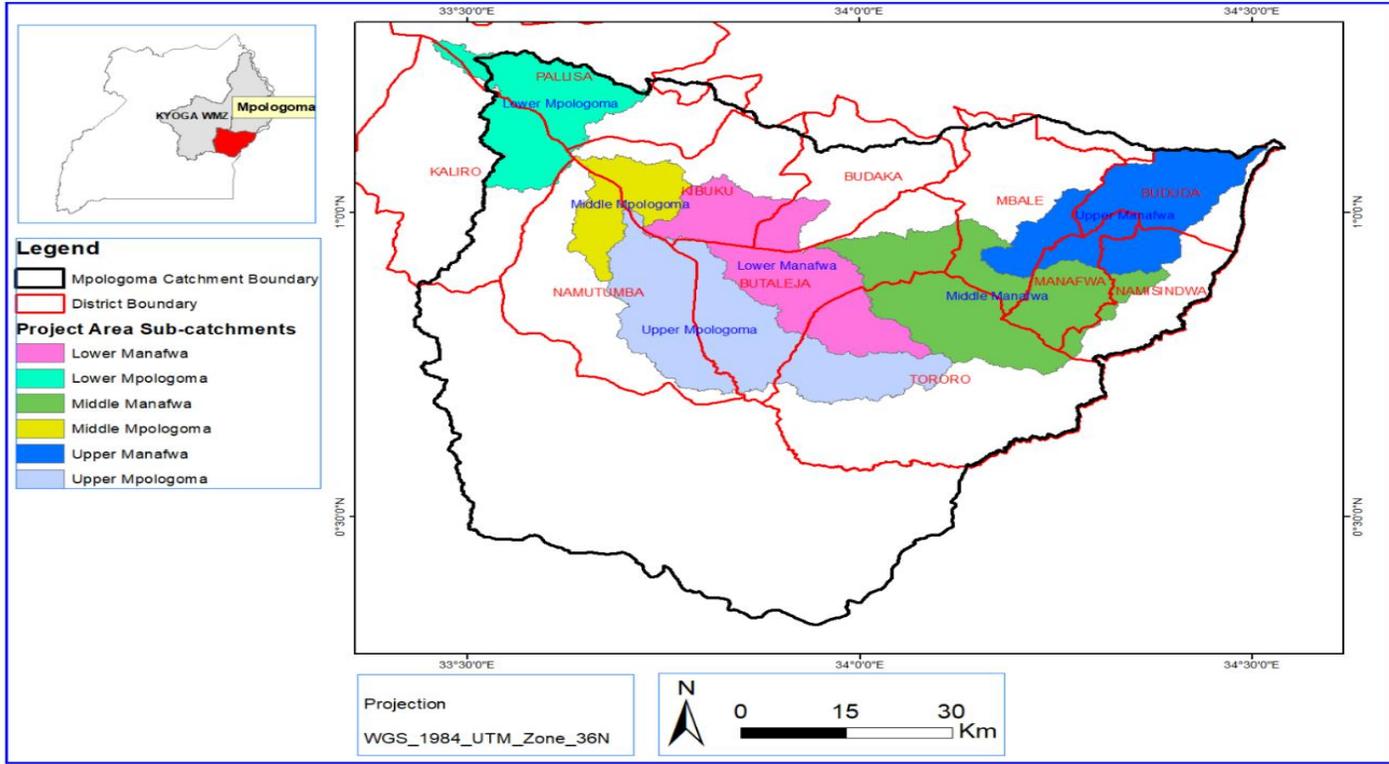
## WATER MANAGEMENT ZONES

### Legend

- Town
- Lakes
- Catchment Management Zones Boundary



# PROJECT AREA



Drainage	Sub-catchment	Districts Covered (partially)
Upstream	Upper Manafwa	Bududa, Namisindwa, Mbale, Manafwa
	Middle Manafwa	Butaleja, Namisindwa, Mbale, Manafwa, Tororo
Midstream	Lower Manafwa	Butaleja, Kibuku, Budaka, Tororo
	Upper Mpologoma	Namutumba, Butaleja, Tororo
Downstream	Middle Mpologoma	Kibuku, Namutumba
	Lower Mpologoma	Kaliro, Pallisa

**6 SUB CATCHMENTS, PART OR WHOLE OF 11 DISTRICTS**

# Our Experiences

## Strengthened multi-level collaboration propels project success

- CARFEWW and EURECCCA we see that coordinated work between MWE, DWRM, WAU, NEMA, UNMA, district governments, and community structures accelerates implementation and improves climate-risk planning.
- PSC structures and district inception processes have improved alignment and accountability.

## Deep field engagement and ownership

- Baseline survey conducted across 11 districts with >2,000 respondents.
- Joint reconnaissance visits, district inception meetings, and community engagements built trust and local ownership.

## Evidence-driven planning and prioritisation

- Integrated assessments of FEWS, WASH, forests, wetlands, riverbanks, and water points provide a strong foundation for selecting intervention sites.
- Use of mWater, GIS mapping, and hydrological assessments strengthened decision-making and transparency.

## Leveraging existing community structures

- Water User Committees, early warning volunteers, school environment clubs, and farmer groups offer ready platforms for scaling climate-resilient practices.
- Previous AF projects demonstrated that these structures sustain interventions beyond project timelines.



# Lessons Learned Across Adaptation Fund Projects

## **Climate impacts are intensifying faster than traditional systems can cope**

- More frequent floods, landslides, and dry spells are overwhelming WASH systems, damaging infrastructure, and increasing contamination risks.
- CARFEWW findings (e.g., 84% latrine collapse in Mazimasa) echo patterns seen in Mt. Elgon and Rwenzori AF projects.

## **Capacity building must be continuous**

- District and sub-county teams need ongoing support to interpret climate data, manage FEWS, enforce environmental laws, and maintain WASH systems.
- One-off trainings are insufficient for long-term resilience

## **Nature-based solutions require long-term stewardship**

- High levels of deforestation (up to 65% in LFRs), wetland degradation (up to 72%), and riverbank cultivation reduce natural flood buffering and groundwater recharge.
- Earlier AF projects show that restoration succeeds when paired with alternative livelihoods and community-based governance.

## **Behaviour change is as critical as infrastructure**

- Limited adoption of climate-resilient sanitation, water harvesting, and safe-water practices constrains resilience.
- Sustained social mobilisation and community-driven accountability are essential.

# KEY CHALLENGES IN INTEGRATED WATER RESOURCES MANAGEMENT PROJECT

## Escalating climate extremes

- Intense rainfall events cause flash floods, latrine collapses, and contamination of water sources.
- Prolonged dry spells reduce water availability and increase pressure on unprotected sources.

## Severe degradation of water-related ecosystems

- Nearly half of CFRs and two-thirds of LFRs are already deforested.
- Wetland encroachment and riverbank cultivation accelerate siltation, reduce natural storage, and weaken FEWS accuracy.

## Widespread water quality deterioration

- Over 90% of sampled water sources in CARFEWW fail national drinking-water standards due to runoff contamination, poor sanitation, and lack of source protection.
- Similar patterns observed in other AF projects in Aswa, Kyoga, and Mt. Elgon basins.

## Weak governance and limited O&M financing

- Water User Committees lack funds, tools, and technical capacity to maintain climate-resilient systems.
- Enforcement of environmental regulations remains inconsistent in high-pressure ecosystems.

## Fragmented institutional coordination

- Despite improvements, integration of FEWS, WASH, catchment management, and disaster-risk reduction remains uneven.
- Slow approvals and inter-agency alignment delay climate-responsive action.



# Project Steering Committee Meetings



# Interventions for catchment protection



Construction of Gabions to plug gullies



Construction of stone bunds



Construction of earth bunds



Construction of infiltration trenches

# Communities supported to harvest water and control floods



# Reafforestation activities in the catchment

Before catchment restoration

Just after a few interventions



# Soil conservation & Agro-forestry in Mpaga





*THANK YOU*