



WORLD
METEOROLOGICAL
ORGANIZATION



Global Water
Partnership
West Africa



ADAPTATION FUND

Integrating Flood and Drought Management and Early Warning for Climate Change Adaptation in the Volta Basin

Project date: June 2019-June 2023
Thematic Focal Area: Disaster Risk Reduction and Early Warning System
Project Grant: 7,920,000 US Dollars
Implementing Entity: World Meteorological Organization (WMO)
Executing Entities: Volta Basin Authority (VBA)
 Global Water Partnership West Africa (GWP-WAF)
 World Meteorological Organization (WMO)
Countries: Benin, Burkina Faso, Côte d'Ivoire, Ghana, Mali and Togo

Key words: Integrated Flood and Drought Management, Climate Change Adaptation, Disaster Risk Reduction, Early Warning System, Capacity Development, Gender, Livelihood, Agriculture

GENERAL INFORMATION on the VOLTA BASIN

Total population:
 29 million (2016)
 Expected in 2025:
 34 million

Total area: 400 000 km²

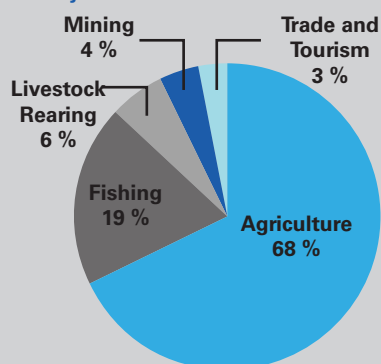
Climate: Semi-arid to sub-humid

Floods: Over 2 million people affected by floods during the last 20 years

Location in West Africa



Major economic activities



CONTEXT

The Volta Basin is one of the most vulnerable regions in West Africa due to its high exposure and low adaptive capacity to water-related disasters in general and climate variabilities in particular. The region has been affected by climate change events such as floods and drought for the past decades, resulting in social, economic and environmental losses.

Affected stakeholders are mainly people working in the agricultural sector, making up about 68% of the total population of the basin. Moreover, people affected by poverty tend to move to urban areas and, due to the lack of land-use planning and alternative options, mostly live in areas prone to risks such as floodplains. Besides exposure to riverine floods along the river courses, high intensity pluvial events cause localized floods particularly devastating in urban areas.

These socio-economic baseline issues are exacerbated by a climate that has undergone considerable change in recent decades and is expected to continue changing throughout the twenty-first century. Various studies predict a reduction in precipitation and a temperature increase in the Volta Basin.

OBJECTIVE

The Volta project has the ambition to **provide the first large scale and transboundary implementation of Integrated Flood and Drought Management** by empowering the National Meteorological and Hydrological Services (NMHS) and other competent authorities of the six riparian countries with robust and innovative solutions for disaster risk reduction and climate change adaptation, including ecosystem-based solutions and gender-sensitive participatory approaches. An Early Warning System (EWS) will be designed to reach the civil security services and other private and public stakeholders.



The project is largely based on the concept of Integrated Flood Management (IFM) and Integrated Drought Management (IDM) that have been developed and enriched over the last 17 years by the **joint WMO/GWP Associated Programme for Flood Management (APFM) and Integrated Drought Management Programme (IDMP)**. The APFM Technical Support Unit work has been essential to the development of the project and will lead its implementation.

PROJECT DESCRIPTION

The Flood and Drought Volta project will assist the six countries through:

- 1. **Coordinated and joint measures** that will be implemented to improve their existing management plans at the regional, national and local levels building on the lessons learned from the past and current projects related to disaster risk reduction and climate adaptation.
- 2. **Integrated water resources management, risk maps and development of early warning systems** that will be developed to increase resilience to floods and droughts and ensure sustainable development. Furthermore, at the local scale, agricultural practices will be improved thanks to new knowledge and early warnings that will enable farmers to adapt their production methods.
- 3. **Climate change adaptation issues** that will be considered, ensuring transversal solutions from governance to technical and decision making.

Component 1 Risk Prevention	Component 2 Concrete adaptation and stakeholder engagement	Component 3 Governance
<ul style="list-style-type: none">• Risk maps• Climate scenarios• Ecosystem services• Long-term risk management strategy	<ul style="list-style-type: none">• Early warning system• Pilot sites• Nature-based solutions• Gender mainstreaming	<ul style="list-style-type: none">• Strengthening resilience• Capacity building of policy-makers• Local collaboration

EXPECTED RESULTS


The project will develop the underlying capacity of national and regional institutions to maintain long-term sustainability and to scale up the results. It will support stakeholders at all levels by providing policy and management guidance and by sharing scientific information, knowledge and best practices for Integrated Disaster Risk Reduction and Climate Change Adaptation. The six riparian countries will therefore benefit not only from a basin-wide transboundary management framework to ensure long-term environmental and economic development but also from concrete solutions to alleviate a potential increase of vulnerability and to build an effective network of actors.

The Volta project is aligned with the Adaptation Fund objective to “reduce vulnerability and increase adaptive capacity of communities to respond to the impacts of climate change at the local, national and regional levels.”


SUSTAINABILITY

One of the important aspects to ensure the long-term sustainability of the project achievements will be dependent on the VBA receiving the meteorological, hydrological and climatological data and related products from the NMHSs of Benin, Burkina Faso, Côte d'Ivoire, Ghana, Mali, and Togo. Several NMHSs and other agencies in charge of environmental protection have already provided support letters to ensure the long-term transfer of information from the national databases to continue operations of the forthcoming VOLTALARM EWS coordination unit.


Key Issues in the riparian countries' Nationally Determined Contributions (NDCs) addressed by the project:




Vulnerabilities and Impacts




Human Awareness and Knowledge Development




Strengthening Early Warning Systems



Climate Change and Environment




Water Resources




Gender


The project is a direct contribution to Sustainable Development Goal (SDG) #13 as well as 11 other SDGs:




1 NO POVERTY




2 ZERO HUNGER




3 GOOD HEALTH AND WELL-BEING




4 QUALITY EDUCATION




6 CLEAN WATER AND SANITATION




7 AFFORDABLE AND CLEAN ENERGY




8 DECENT WORK AND ECONOMIC GROWTH




10 REDUCED INEQUALITIES




11 SUSTAINABLE CITIES AND COMMUNITIES



13 CLIMATE ACTION



16 PEACE, JUSTICE AND STRONG INSTITUTIONS



17 PARTNERSHIPS FOR THE GOALS