

## WHAT IS HYDROMET?



**Hydrology + Meteorology =** A discipline contributing to the production, delivery, and the use of weather, water and climate information.



**Hydromet services provide real-time weather,** water, early warning, and climate data critically needed for growth and sustainable, climate-resilient development in Africa.



**At the heart of Hydromet service delivery** are the National Meteorological Services (NMSs) and National Hydrological Services (NHSs)—collectively referred to as NMHSs, which are responsible for providing governments, communities and private sector organizations with information to protect their lives and property, and for improving their economic well-being through timely forecasting and early warning of high-impact meteorological and hydrological phenomena.



**Using these services, communities can prepare in advance for disasters,** businesses can make effective decisions to increase their productivity and ensure continuity in adverse conditions, and government agencies can effectively develop partnerships with media, civil society and the private sector to adapt to climate change.



# AFRICA HYDROMET PROGRAM

## Strengthening Climate and Disaster Resilience in Africa

## THE CHALLENGE

4.5%

4%

460m

The continent of Africa has made significant development achievements in the last few decades; annual growth has averaged about **4.5 percent** in the last 20 years, but weather-, water- and climate-related disasters threaten these gains.

Although Africa accounts for less than **4 percent** of global gas emissions, the continent is most vulnerable to the adverse impacts of climate change, and struggles to adapt.

Since 1970, Africa has experienced more than 2,000 natural disasters, with just under half taking place in the last decade. During this time, natural disasters have affected over **460 million** people and resulted in more than 880,000 casualties.



In 2012, for example, Madagascar and Nigeria each are estimated to have lost more than 1 percent of GDP from **flooding and cyclones**, with losses totaling US\$8 billion.



The 2014-2016 El Nino event exacerbated a drought in the horn of Africa, which put 9.7 million people in Ethiopia and 5 million people, or more than 40 percent of the population in Somalia in need of **emergency food and livelihoods assistance**.



It is estimated that by 2030, up to 118 million extremely poor people (living below \$1.25/day) will be exposed to drought, floods, and **extreme heat in Africa**.



Yet only **10 African countries** provide adequate forecasting and early warning services needed to prevent and mitigate these disasters.

## THE RESPONSE

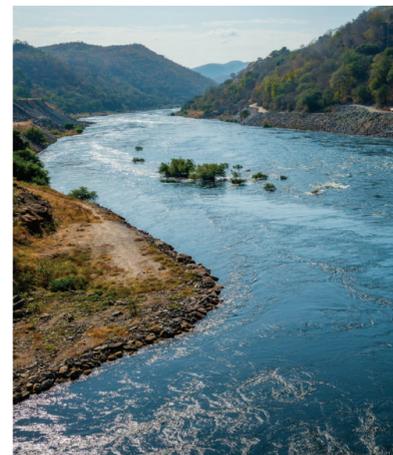
The World Bank and the Global Facility for Disaster Reduction and Recovery, World Meteorological Organization, African Development Bank, United Nations Development Programme, Agence Française de Développement and World Food Programme came together in the Africa Hydromet Program, a partnership to address this development challenge and to build climate and disaster resilience in Africa.

The Africa Hydromet Program envisages a total investment of **US\$600 million** approximately for modernization of **15 countries'** hydrological and meteorological services and systems, and strengthening of their early warning and response systems benefitting over **100 million people** in an eight-year time frame.

The Program will holistically address modernization needs at national, sub-regional and regional levels, including:

- **Modernize** observation infrastructure to offer timely and reliable forecasts of impending disasters and risks
- **Deliver** improved weather, climate and hydrological services to citizens and weather-dependent sectors by enhancing national hydromet service delivery systems

## THE IMPORTANCE OF HYDROMET SERVICES



The most common disasters in Africa are hydro-meteorological or climatological, **such as floods, droughts, cyclones and storms**, yet hydromet services that can monitor and anticipate disaster risks and issue early warnings are presently not equipped to meet the needs of Africa's over one billion people.

Hydromet services provide **real-time weather, water, early warning, climate information and data** critically needed for sustainable, climate-resilient development in Africa.

Based on latest studies, for every investment in hydromet services, three times the benefit is expected to be realized, spread in a wide range of sectors.

## FOUR DEFINING FEATURES OF THE PROGRAM

1

**First**, the program invests in three main components:  
**i. Strengthening** national hydromet systems (including local early warning systems)  
**ii. Modernizing** regional centers  
**iii. Integrating** regional systems and facilitating global knowledge exchange

2

**Second**, it leverages partnerships and fosters interagency coordination.

3

**Third**, it is aligned with the Global Framework for Climate Services (GFCS) and the Integrated African Strategy on Meteorology.

4

**Fourth**, it champions better hydromet services as a public good for resilient development and poverty reduction, and encourages sustainability by blending scaled up investment financing from development partners with corresponding operational financing from host governments.

## THE RESULTS SO FAR

- In the Democratic Republic of Congo, **\$10.8 million**, from GEF LDCF, CREWS and GFDRR funds will support efforts to strengthen hydromet and climate services and improve monitoring, forecasting and preparedness in relation with extreme weather events. These efforts will benefit over 3 million people.
- In Mali, the Green Climate Fund has allocated **US\$22.75 million** to strengthen hydromet, food security and civil protection services, in order to assist population at-risk better prepare for climate, hydrological and weather extremes.
- In Ethiopia, a **\$10 million** hydromet sub-component project will pilot impact-based early warning systems in the Awash River Basin. A Green Climate Fund (GCF) project will also modernize integrated hydromet services and early warning systems in the country.
- Capacity, funds, and concerted effort specifically dedicated to improving hydromet services are vital and critically needed to preserve past and future investments, and the Africa Hydromet Program presents this opportunity.
- Hydromet operations are shortly to commence in Mali and Burkina Faso.
- Hydromet operations are under preparation in Chad, Togo and Cote d'Ivoire.