

## **Understanding Weather and Climate Boosts Economies and Saves Lives**

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Each time we think we have a decent understanding of the weather and climate, disaster strikes and communities are left devastated by floods, droughts, and other adverse natural events. We then ask ourselves why we were not prepared. This is an exhausting cycle that simply must end. African leaders must commit themselves to take action, and include the potential impacts of weather and climate as the cornerstone of their decision-making. Such a commitment will ensure that communities have the early warning needed to prepare for and, if required, evacuate areas before disasters hit, government agencies effectively plan for climate change based on the latest information, and businesses in climate-sensitive sectors incorporate timely, accurate data in the decisions that affect their industry.

Here is a startling fact: weather and climate related disasters are reversing our continent's development gains; in some cases, disasters are setting countries years, if not decades, back. Such disasters create recurring losses and damage, and these patterns are exacerbated by climate variability. These natural hazards impact every facet of society: economy, agriculture, transport, aviation, energy, education, health, and civil protection. Worse still, as the changing climate exacerbates current weather conditions, sea levels will rise, flooding will increase in low-lying cities and regions along West Africa's coastline and waterways, cyclones and storm surges will cause havoc in the East, and heat waves and droughts will hamper farming and agriculture along the Sahel, leaving millions food insecure and crippling economies. We, as African leaders, have the power to prevent such losses in development and build climate-resilient economies and communities.

To prevent these losses, preserve lives and build local, national, and regional resilience to disasters, we must improve what we commonly refer to as hydromet services – those that are weather, climate and hydrologic (water-related) in nature. These services are at the core of adaptation, planning, and sustainable development. Hydromet services range from climate outlooks and advanced weather forecasting to simple daily river level monitoring. They form the foundation for improved weather and climate services for all sectors that drive the economy. Unfortunately, Africa has the least developed weather, climate and hydrology observation network, with only 1/8 of the required density and less than 300 weather stations that meet the World Meteorological Organization (WMO) observation standards.

On the economic front, the costs of recorded weather related disasters in Africa over the last 20 years is estimated at US\$10 billion, a minimum given widespread under reporting of losses. These events can reduce the Gross Domestic Product (GDP) of a country by 10 –

20 percent, not only derailing economic development, but reversing economic gains. Improving hydromet services is integral to building resilience to natural disasters across Africa.

The value of committing to a better understanding of hydromet hazards and accurate weather forecasting cannot be overstated. For example, understanding impact-based early warning systems helps leaders in diverse economic sectors take weighted decisions, plan, and minimize human and material losses. The capability to issue early warnings based on accurate forecasts is especially essential to preserve the lives and households of millions of people across Africa. In general, the benefits of hydromet modernization have been estimated to be at least fivefold or higher.

The Horn of Africa drought of 2011 and 2012 is a prime example of understanding the value of early warning systems and remains a painful memory for us. Many factors contributed to the disaster, however, timely targeted forecasts and accurate early warning would have helped prevent the ensuing food crisis that led to the deaths of 260,000 people and negatively impacted an additional 9.5 million. Africa is currently recovering from an exceptionally strong 2015/2016 El Niño event that left at least 36 million Africans food insecure, here too impact-based early warning systems could have helped mitigate the disaster as they could have in last week's floods in the Democratic Republic of Congo and Sierra Leone.

This is why impact-based early warning systems have become the focus of many National Meteorological and Hydrological Services (NMHSs), which are mandated institutions instrumental in providing adequate weather and climate services. NMHSs are the building blocks of the regional and global weather and climate services. Under the auspices of the WMO, they are the government's authoritative source of hydromet information. Unfortunately, the current capacity of NMHSs in Africa is low, mostly due a capacity and resource crunch. NMHSs across Africa today, therefore, do not have the necessary means to deliver reliable and timely weather, water, and climate forecasts to end-users.

Conservative estimates place the need for high-priority hydromet modernization investments at more than US\$1.5 billion, a sum which does not include the additional US\$100-150 million per year as the minimum necessary to maintain the key infrastructure of NMHSs. Improved hydro-meteorological forecasting and early warning could save at least US\$13 billion per year in asset losses, US\$22 billion per year in losses to well-being, and up to US\$30 billion per year through increased productivity globally. Overall, every dollar invested has the potential to generate at least three dollars' worth of benefits in weather and climate services to the community and economy.

If national governments and their development partners in the international community, could commit to modernizing hydromet services, then we could change the African narrative on climate and disaster risk management, accelerate sustainable development, and increase jobs and shared prosperity. Put simply, farmers would better know when to plant seeds to maximize crop production, pastoralists would move their livestock to high ground before flooding, healthcare workers would provide mosquito nets to minimize malaria incidents, and fishermen would know when to avoid risking their lives at sea.

There is hope. The African Ministerial Conference on Meteorology (AMCOMET), an inter-governmental body endorsed by the African Union Heads of State and Government and jointly sponsored by WMO, provides a high-level coordination platform for the provision of weather, water, and climate services that meet societal needs. Initiatives such as the Africa Hydromet Program aim to support the modernization of hydromet services nationally and regionally. This ambitious program, put together by the WMO, World Bank, AfDB, AFD, UNDP, and WFP is raising US\$600 million in funding for end-to-end modernization of hydromet services in Africa with a focus on service delivery to end-users. It has the potential of bringing about a paradigm shift in the performance and value of hydromet services for all people in Africa, from village farmers to pastoralists to businesswomen.

Additionally, the first African Ministerial Conference on Meteorology (AMCOMET) Africa Hydromet Forum will take place in Addis Ababa at the African Union Commission Headquarters on 12-15 September, bringing together over 500 delegates from Africa and beyond, representing governments, development partners, technical agencies, regional bodies, civil society, academia, private sector and user groups. The Forum is a platform that underscores regional leadership, promotes stronger country and stakeholder ownership, and encourages collaboration, partnership and knowledge exchange.

At the end of the Forum, I anticipate strong commitments from continental and national stakeholders. Once we have this commitment, only then can we reconfirm the most important goal which is to strengthen the resilience of our communities and save lives.

I am confident that the Forum will culminate in a strong commitment from continental and national stakeholders to join forces for the modernization of hydromet services; this includes service delivery to end-users. Once we have this resolve, only then can we achieve the paramount goal of building sustainable development and climate resilience in Africa.