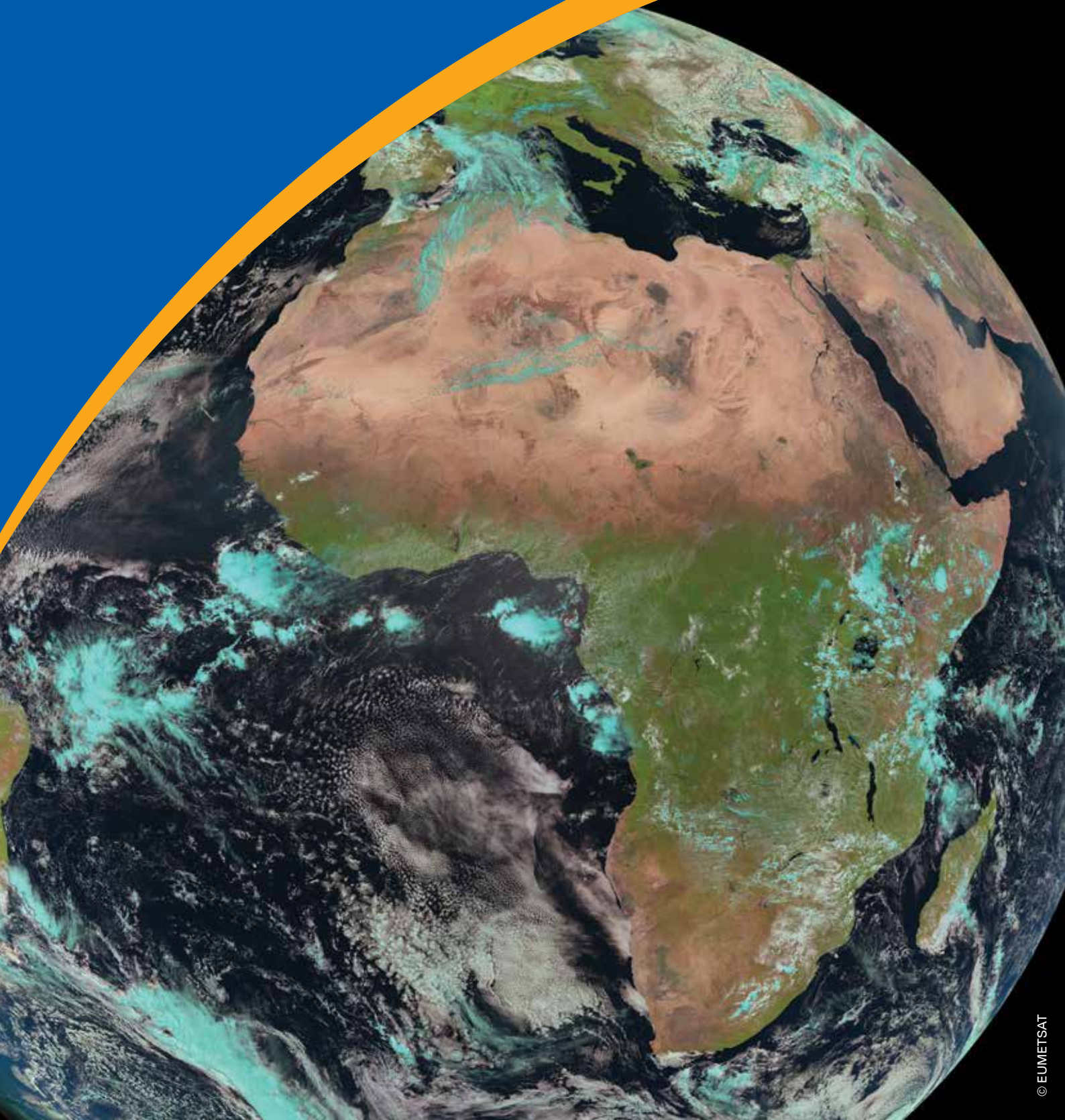


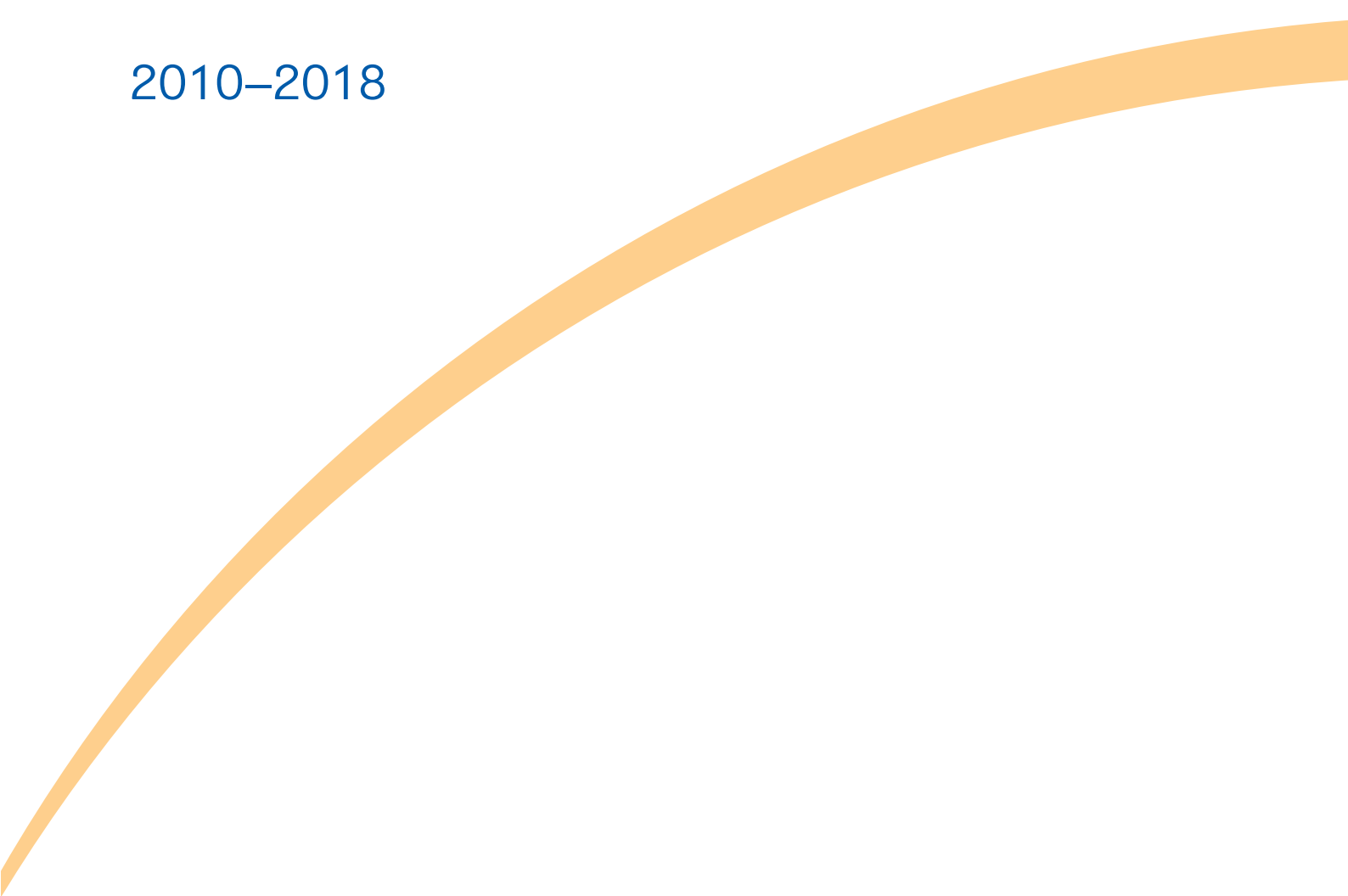
# AMCOMET Achievements

2010–2018



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2010–2018



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Chair, Publications Board  
World Meteorological Organization (WMO)  
7 bis, avenue de la Paix  
P.O. Box 2300  
CH-1211 Geneva 2, Switzerland

Tel.: +41 (0) 22 730 84 03  
Fax: +41 (0) 22 730 81 17  
Email: [publications@wmo.int](mailto:publications@wmo.int)

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# Foreword

Eight years ago, the African ministers responsible for meteorology came together to tackle a common concern: the continent's weather, water and climate services were inadequate to meet present and future needs in a changing climate.

National Meteorological and Hydrological Services are often underfunded and unable to provide timely and accurate warnings for safety of life and protection of property. The weather, climate and water services needed for the planning and management of the health, agriculture, tourism, transport, environment and energy sectors are often insufficient.

The African Ministerial Conference on Meteorology (AMCOMET) was established as a high-level mechanism to foster the development of weather and climate services and their applications in Africa. A critical first step was ministerial approval in 2012, and the subsequent endorsement by the African Union Heads of State and Government in 2013, of the Integrated African Strategy on Meteorology (Weather and Climate Services), confirming the continent's priority needs to strengthen meteorology, recognizing its contribution to socio-economic development and as a guide to investment.

AMCOMET, through the African Union Commission and the World Meteorological Organization (WMO), has refocused national attention on the urgent need to improve weather, climate and water services by strengthening African National Meteorological and Hydrological Services and Regional Climate Centres. AMCOMET and its partners have raised the political profile of meteorology through ministerial commitment and outlined the roadmap needed to empower the women, men, youth and children of Africa to safeguard their wellbeing through improved weather and climate services. The political spotlight of AMCOMET has in turn triggered international funding to support these efforts.

Many initiatives and partnerships have flourished under the umbrella of the African Union's Strategy on Meteorology by aligning their actions with its priorities and demonstrating coherence of efforts. This report highlights key initiatives that have been made possible as a result of the increased visibility AMCOMET has brought to weather, climate and water services in Africa. The report gives us an opportunity to review the first eight years of AMCOMET and to give recognition to its many achievements.



H.E. Josefa Lionel Sacko  
Commissioner of Rural Economy  
and Agriculture  
African Union Commission



Prof. Petteri Taalas  
Secretary-General  
World Meteorological Organization

## About AMCOMET

### WHO

The African Ministerial Conference on Meteorology (AMCOMET) was established in 2010 to provide political leadership for the development, provision and uptake of weather, water and climate services that meet sector-specific societal needs.

### WHAT

This high-level coordination platform enables the harmonization of sustainable development programmes and encourages collaboration among partners through sound governance of meteorology and its applications.

### HOW

AMCOMET provides guidance through the African Union - endorsed Integrated African Strategy on Meteorology (Weather and Climate Services) that calls for support from governments and partners to provide the legislative framework and financial resources to support delivery of accurate meteorological services.

### WHY

Most African institutions dealing with weather, water and climate service provision are often unable to deliver sector-specific information that meets the needs of end-users. Hydrometeorological services are under-resourced because their socio-economic value has not been well articulated, understood or sufficiently recognized.

## AMCOMET Contributes to Sustainable Development



### Goal 13 – “Take urgent action to combat climate change and its impact”

AMCOMET contributes to the achievement of many of the United Nations Sustainable Development Goals and in particular Goal 13, as the strengthening of hydrometeorological services enables climate change adaptation and disaster risk reduction in the individual Member States and the continent overall.



# AMCOMET Major Milestones



## AMCOMET in Numbers

500

Participants from civil society and economic sectors met with weather, water and climate service providers at the AMCOMET-Africa Hydromet Forum in Addis Ababa in 2017

44

Million US\$ raised since 2010 to support the implementation of the AMCOMET Strategy, 94% of which are invested in projects

14

African countries contributed to AMCOMET funds

13

Beneficiary countries supported with AMCOMET project funds

12

Strategic plans for national hydrometeorological services developed with AMCOMET guidance

*For the Africa Hydromet Program, the partnership with AMCOMET and the World Meteorological Organization has been instrumental in amplifying the Program's political reach, as ministerial commitment is key for sustainability. While other partners contribute scale, AMCOMET contributes a fertile political environment to strengthen weather, climate and water services in Africa for the African end user.*



**Mr Prashant Singh**  
Programme Coordinator Africa Hydromet Forum  
The World Bank



*Stream Gauging: Ms Maneh (Gambia) successfully completed her Diploma in Hydrology at the Caribbean Institute for Meteorology & Hydrology before returning to her home office in Gambia.*

## Integrated African Strategy on Meteorology (Weather and Climate Services)

Endorsed by African Union Heads of State in 2013, the AMCOMET Integrated African Strategy on Meteorology (Weather and Climate Services) provides strategic direction to strengthen the capacity of weather, water and climate services in Africa through policy integration and coordination.

The Strategy positions weather, water and climate services as an essential component of governments' and regional institutions' sustainable development plans. It promotes increased national investment in national and regional hydrometeorological services and is an important reference point for financial institutions and development partners to coordinate interventions to strengthen weather, climate and water services in Africa. The Strategy also promotes the structured implementation of the Global Framework for Climate Service (GFCS) in Africa.

Supported by its Implementation and Resource Mobilization Plan (2016-2027), the Strategy focuses on five interrelated strategic pillars:

- Increase political support and recognition of National Meteorological and Hydrological Services and regional climate centres
- Improve access to meteorological services (especially marine and aviation sectors)
- Strengthen partnerships with institutions and funding mechanisms
- Enhance weather and climate services for sustainable development
- Support the provision of weather and climate services for climate change adaptation and mitigation

*AEROMET Engineers at the meteorological enclosure at Lagos airport, Nigeria*



*Effective hydrometeorological services are basic building blocks of development and green growth. The African Development Bank fully supports the AMCOMET's objective of strengthening the capacity of National Meteorological and Hydrological Services. The clear guidance AMCOMET has given to Member States to prioritize these services has promoted investment by the African Development Bank and other partners.*

**Dr Anthony Nyong**  
**Director for Climate Change and Green Growth**  
**African Development Bank**

## AMCOMET Aligned Initiatives

International development partners in collaboration with WMO support a number of initiatives that contribute directly or indirectly to the implementation of the Integrated African Strategy for Meteorology (Weather and Climate Services).



The Adaptation Fund supports the *Agricultural Climate Resilience Enhancement Initiative* in Ethiopia, Kenya and Uganda



The African Development Bank supports the project *Climate Data Rescue and Database Enhancement for Improved Climate Information Services* benefitting Djibouti, Swaziland, Uganda and Zambia



The Climate Risk and Early Warning Systems (CREWS) initiative, supported by Australia, France, Germany, Luxembourg, Netherlands and Switzerland, strengthens early warning systems in Burkina Faso, Democratic Republic of Congo, Mali, Niger and West Africa region



The European Union's *Intra-Africa, Caribbean and Pacific (ACP) Climate Services Action* supports the improvement of climate services provided by Regional Climate Centers and National Meteorological and Hydrological Services



IrishAid supports improved agrometeorological information for small-scale agricultural production in Ethiopia



Italy supports West Africa through the *Training Programme on Climate Change Adaptation and Disaster Risk Reduction in Agriculture*



Korea Meteorological Administration supports Djibouti, Rwanda and Uganda through the project *Establishment of a Climate Prediction Analysis System*



The Norwegian Agency for Development Cooperation finances the *GFCS Adaptation Programme for Africa*



The Spanish Meteorological Agency (AEMET) supports the regional *Programme of Cooperation for Meteorology and Hydrology for Iberoamerican National Meteorological and Hydrological Services in Africa*



USAID and the Office of the U.S. Foreign Disaster Assistance support the project *Climate Services for Increased Resilience in the Sahel region*



*All countries need strong weather and climate information services. African countries that already experience extreme weather events also face increased risk from climate change impacts, requiring international support to build capacity in this area, and especially for early warning and preparedness systems. Norway's support to AMCOMET is expected to have a positive impact and promote national and regional ownership of global efforts to strengthen climate services.*



**Norway**



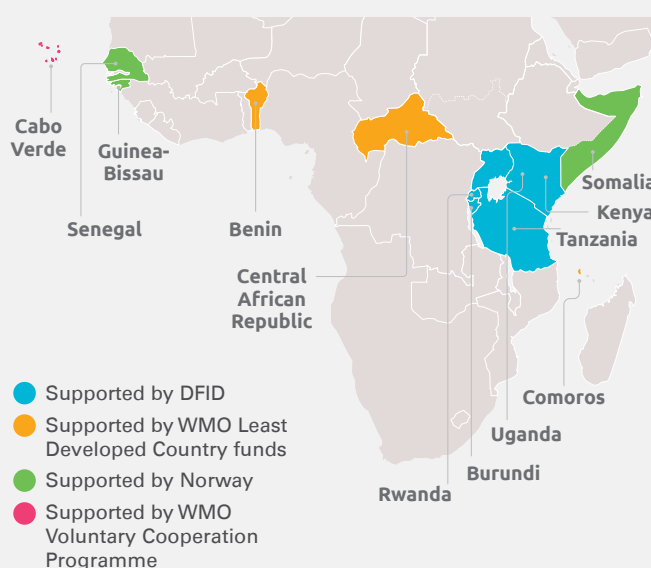
# AMCOMET Achievements 2010–2018

Under AMCOMET's strategic and political leadership, many activities contribute to the implementation of the Integrated African Strategy on Meteorology (Weather and Climate Services) as described in this section.

## Development of National Strategic Hydrometeorological Plans

The National Meteorological and Hydrological Services of 12 countries in Africa have developed their National Strategic Plans as called for in the Integrated Strategy based on the template and guide developed by the WMO and AMCOMET. National Strategic Plans identify priority actions in the short and longer term to meet each country's specific demands for hydrometeorological information and services. The Plans are particularly important in making a strong case for adequate governmental resource allocation for hydrometeorological services and for attracting additional investment.

*Countries supported to develop National Meteorological and Hydrological Services Strategic Plans*



## Climate Application and Prediction Centre of Central Africa



At the first meeting of AMCOMET in 2010, Ministers responsible for meteorology requested the establishment of a regional climate centre in Central Africa. AMCOMET, with the support of WMO, and in collaboration with the Economic Community of Central African States (ECCAS) and the Central African Economic and Monetary Community (CEMAC), developed the strategy and statutes of the Centre. The 16<sup>th</sup> Ordinary Conference of Heads of State and Government of ECCAS established the Climate Application and Prediction Centre of Central Africa (CAPC-AC), hosted in Douala, Cameroon, filling a community, regional and continental gap.

The Centre, the fifth in the continent, aims to provide substantial support to the National Meteorological and Hydrological Services of the sub-region for the development of climate prediction capacity and the provision of climate forecasts and information. The Centre has received financial support and a project team is operating at the Centre implementing the Satellite and Weather Information for Disaster Resilience in Africa (SAWIDRA) project.

*The establishment of the Climate Application and Prediction Centre of Central Africa (CAPC-AC), in Douala, Cameroon, is a great achievement for the sub-region and a demonstration of AMCOMET's critical role in harnessing high-level political leadership for the improvement of weather and climate services for all of Africa.*



**Ms Marie Thérèse Chantal Mfoula**  
**Deputy Secretary General**  
**Department of Physical,**  
**Economic and Monetary Integration,**  
**Economic Community of Central**  
**African States**



### Climate Research for Development in Africa

Many knowledge gaps remain in understanding climate and its interaction with society, in particular vulnerabilities and capacities. These gaps need to be closed through a coordinated social and biophysical research agenda led by African researchers.

The Climate Research for Development (CR4D) is a platform for scientists and institutions in Africa to work on the priorities set by users of climate and weather information, using a bottom-up approach. The initiative brings together experts from the natural, biophysical and social sciences to catalyse research to support policy planning for sustainable development.

AMCOMET is part of CR4D's Oversight Board, which guides its strategic direction. The initiative is also supported by the African Climate Policy Centre of the United Nations Economic Commission for Africa (which hosts the Secretariat), WMO and GFCS. A five-year strategic plan (2018–2022) is financed partly by the United Kingdom's Department for International Development (DFID).



Interior of the Mt. Kenya GAW Global station (Kenya)



### European Organisation for the Exploitation of Meteorological Satellites

Since 2010 AMCOMET has provided the institutional framework for the European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT) to help the meteorological community and the National Meteorological and Hydrological Services in Africa to access and exploit EUMETSAT data, products and services.

The Integrated African Strategy on Meteorology (Weather and Climate Services) adopted in 2012 allowed EUMETSAT to place its activities firmly within the African agenda on weather, water and climate services. The Integrated Strategy has also been an important vehicle for catalysing funding and technical support for projects in Africa, related to the use of remote sensing data.

EUMETSAT has been actively involved in a number of processes relating to space and meteorology in Africa, including the development of the African Space Policy and Strategy and the technical specifications needed for the Climate Application and Prediction Centre of Central Africa.



*The Meteosat third-generation satellites will provide an unprecedented wealth of meteorological observations over Africa for the next two decades. The Abidjan Declaration is an invitation to invest in African users' capacities, which will ensure access to and exploitation of the new generation of satellite products in support of sustainable development.*

**Mr Alain Ratier**  
Director-General  
EUMETSAT

## African Space Programme

AMCOMET Ministers identified the development of an African Space Programme, with inputs from the meteorological sector, as one of their priority activities. The African Union approved the African Space Policy and Strategy in Addis Ababa in 2016, taking a step towards formalizing an African Space Programme.

AMCOMET established a task force in collaboration with the African Space Stakeholders Working Group to ensure meteorological needs are appropriately integrated. The AMCOMET's coordinating role is essential in the ongoing process.

The Meteosat third generation of geostationary satellites can provide data to improve essential services, including in weather, water and climate. Securing access to this information is critical for Africa. Representatives of the African Union Commission, the Regional Economic Communities, AMCOMET, WMO and EUMETSAT adopted in 2018 the Abidjan Declaration on the Next Generation of Satellite Products for Weather and Climate Services. They agreed to strengthen African capacities at regional and national levels in particular in the National Meteorological and Hydrological Services to ensure a smooth transition to a new generation of satellites, and to secure the exploitation of data and generation of African-made products in support of the objectives set out in the AMCOMET's Integrated Strategy.

*In the process of drafting the African Space Policy and African Space Strategy, very specific reference was made to the importance and relevance of meteorology to the envisioned African space programme and the manifold priorities on the continent. Meteorology is central to the food, energy and water nexus and how this triple challenge on the African continent is influenced by global climate change. The long term sustainability of the African continent is critically reliant on its climate and weather conditions, which invariably determines our future comparative socio-economic standing in the global arena.*

**Dr Valanathan Munsami**  
Chief Executive Officer  
South African National  
Space Agency







The following are two flagship projects under the AMCOMET umbrella financed by DFID through its Weather and Climate Information Services for Africa (WISER) Programme.

### HIGH impact Weather Lake System Project in Lake Victoria Region

The HIGHWAY project aims to increase use of weather information to improve resilience and reduce the loss of life and damage to property in the Lake Victoria basin. The project is implemented by WMO, in collaboration with the National Meteorological and Hydrological Services of Kenya, Rwanda, Tanzania and Uganda, as well as the East African Community, the Lake Victoria Basin Commission and the United Kingdom Met Office.

Lake Victoria has the largest inland fishery in the world. The East African Region is experiencing severe weather conditions affecting the safety of more than 200 000 small scale fishermen that fish on the lake every day. Severe weather also endangers the safety of ferry passengers. More than 600 000 people living on islands on the lake depend on daily ferry services. Weather related disasters involving fishing boats and small commercial vessels result in many deaths each year. The HIGHWAY project intends to build on existing meteorological services for the Lake and its basin, with potentially one centralized operational centre gathering and processing all available information and data. By 2020, the project aims to have put in place a regional early warning system that is accessible to all users, sustainable and based on a regionally agreed institutional framework.



Fishers at Lake Victoria

### Aircraft Meteorological Data Relay

AMDAR is a public-private partnership between WMO, Kenya Meteorological Department and Kenya Airways.

AMDAR utilizes aircrafts' onboard instruments and avionics systems to provide accurate meteorological measurements, such as air temperature and wind. These observations are then used in the production, verification and assessment of predictive weather models and forecast products. AMDAR data has been proven effective in improving the quality and accuracy of weather reports, reducing forecast errors by up to 20%.

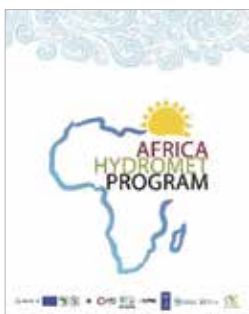
Improved forecasting services and meteorological products have a significant positive impact on aviation operations. This includes optimized flight plans to avoid turbulent weather and unplanned diversions. Such measures can reduce an airline's fuel consumption by approximately 0.4% or US\$ 100 000 per aircraft per year. Moreover, lower aircraft fuel burn reduces CO<sub>2</sub> emissions and related environmental impacts.



*Collaboration between national hydrometeorological services, governments, development agencies, non-government organisations and platforms such as AMCOMET is essential to develop services that protect against disasters, inform policy and help societies to become more resilient. The Met Office, through UK aid funded programmes such as WISER (Weather and Climate Information Services for Africa), builds the capacity of national hydrometeorological services to deliver transformational change in the quality, accessibility and use of weather and climate information services.*

**Ms Helen Bye**  
**Head of International Development**  
**& Principal Advisor to DFID and Foreign**  
**& Commonwealth Office**  
**UK Met Office**





### Africa Hydromet Program Partnership

The Africa Hydromet Program Partnership brings together the World Bank, WMO, the African Development Bank, the United Nations Development Programme, Agence Française de Développement and the World Food Programme to support the

implementation of the AMCOMET's Integrated African Strategy on Meteorology (Weather and Climate Services).

Today it is estimated that only 10 African countries provide adequate forecasting and early warning services to prevent and mitigate disasters. The Africa Hydromet Program foresees a total investment of US\$ 600 million over 8 years for modernization of 15 countries' hydrological and meteorological services and systems and strengthening of their early warning and response systems.

The program invests in three main components:

- Strengthening national hydromet systems (including local early warning systems)
- Modernizing regional centres
- Integrating regional systems and facilitating global knowledge exchange



### AMCOMET-Africa Hydromet Forum

The first AMCOMET-Africa Hydromet Forum in Addis Ababa brought together five hundred representatives from government, United Nations agencies, development agencies, academia, civil society and the private sector. During the four-day event, Ministers committed to prioritizing the modernization of hydromet services in their National Action Plans. They also urged development partners to scale up their support and integrate interventions to strengthen weather, water and climate services in Africa.

The Forum was jointly organised by AMCOMET, the African Union Commission, the World Bank, the African Development Bank and WMO.



*Hydromet Forum*

# CALL TO ACTION

In the Africa we want everyone is prepared for the weather and climate risks of today and tomorrow. In the Africa we want, people have information vital to protecting their lives and livelihoods from recurrent droughts and floods. In the Africa we want, people adapt to the increased risks that climate change has imposed upon the continent. In the Africa we want, women, men, youth and children thrive in resilient communities, enjoying a sustainable high quality of life.

This future is possible if we redouble our efforts to manage climate risks. Never has the urgency to strengthen national and regional climate services been greater. Africa is hit hardest by climate change, though its contribution to this global problem is minimal.

Weather and climate information supports virtually all sectors of the economy and is crucial to our achievement of the Sustainable Development Goals. Conscious of the catalytic role of National Meteorological and Hydrological Services in meeting sustainable development aspirations, AMCOMET provides the political imperative and the strategic framework to strengthen weather and climate services in Africa.

In partnership with the African Union Commission, AMCOMET has made great strides in its first eight years. The establishment of the Climate Application and Prediction Centre of Central Africa, the development of strategic plans by many National Meteorological and Hydrological Services and the fruitful partnerships with Norway, UK's DFID, African Development Bank and World Bank are shining examples of what we can accomplish together. Yet consolidating and nurturing AMCOMET efforts will require continued and increased support to meet the needs of end-users in all sectors of the economy.

I urge Member States to engage politically and to contribute financially to AMCOMET. I call on Member States to strengthen National Meteorological and Hydrological Services through adequate, yearly budget allocations and continuous political support, guided by the priorities set out in the Integrated African Strategy for Meteorology (Weather and Climate Services). I encourage Member States to support the regional climate centres. I invite the private sector to invest in strengthening Africa's climate capacity to enhance longer-term sustainability of hydromet systems and services through cost- and revenue-sharing arrangements. The revitalized commitment of Member States is needed not only to consolidate our achievements to date but to face together the challenges that lie ahead.

I gratefully acknowledge not only the technical and financial support provided by governments and development partners but also the commitment demonstrated to information sharing and synergistic collaboration. A coordinated approach will enable communities to reap the benefits of our joint hydrometeorological investments. It is ultimately the children, youth, women and men of Africa that require our coordinated and continued support.

Through partnership, collaboration and political leadership, we can forge the future we want for a climate-resilient Africa.



H.E. Mr. Gilberto Correia Carvalho Silva, AMCOMET Bureau Chair and Minister of Agriculture and Environment  
Republic of Cabo Verde









AMCOMET gratefully acknowledges the support of its contributors:



African Union Commission



WORLD  
METEOROLOGICAL  
ORGANIZATION

World Meteorological Organization



African Development Bank



Algeria



Angola



Benin



Burkina Faso



Cabo Verde



Central African Republic



Egypt



European Union



EUMETSAT  
EUMETSAT



Finland



**GFDRR**  
Global Facility for Disaster Reduction and Recovery



WORLD BANK GROUP



Kenya



Madagascar



Mali



Nigeria



Norway



Senegal



Uganda



United Kingdom



Zimbabwe

Other development partners contributing to AMCOMET:



ADAPTATION FUND



CLIMATE RISK & EARLY  
WARNING SYSTEMS



Ireland



Italy



Republic  
of Korea



Spain



United States  
of America

For more information please see [www.wmo.int/amcomet](http://www.wmo.int/amcomet)  
or contact us at [amcomet@wmo.int](mailto:amcomet@wmo.int)