



# PROCEEDINGS OF the First Central Africa Hydromet Forum

November 14-16, 2018



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The ECCAS Hydromet Forum was, among others, supported by the Result Area 2 of the Building Disaster Resilience to Natural Hazards in Sub-Saharan African Regions, Countries and Communities Program, an initiative of the African, Caribbean and Pacific Group of States, financed by the European Union, and implemented by the World Bank/Global Facility for Disaster Reduction and Recovery (GFDRR).



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# PROCEEDINGS OF the First Central Africa Hydromet Forum

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Marie-Thérèse Chantal Mfoula, ECCAS Deputy Secretary General speaks at the opening ceremony of the first ECCAS Hydromet Forum at the hotel Boulevard in Libreville, Gabon on November 14, 2018. The forum which took place from November 14-16, 2018 highlighted the benefits of hydromet service delivery across a range of sectors including agriculture, water, natural resource management, environment, transport, civil aviation, energy and disaster risk management.

# FOREWORD

Vulnerability to hydrometeorological and climate hazards in the Central African region has become a major issue for sustainable development, in view of the harmful impact of these hazards on livelihoods and development gains. More than 70 percent of natural disasters are hydrometeorological in nature, as can be seen in the recurring floods and droughts that cause great loss of property and life.

This gloomy outlook has been exacerbated by greater climate variability and severe weather conditions, which are compounded by the desperate lack of forecasting and management capacities.

In addition, agriculture is not adapted to climate conditions, food insecurity is growing, water resource management is inexact, and health services planning is inadequate, particularly in terms of seasonal epidemics.

ECCAS made climate change its signature issue by adopting the Regional Environment and Natural Resource Management Policy in 2007, and the Central Africa Strategy for Risk Prevention, Disaster Management and Climate Change Adaptation (SPRGC) in 2015.

An action plan to implement the African Program of Action and the 2015-2030 Sendai Framework for Disaster Risk Reduction in Central Africa was also adopted in accordance with the SPRGC, the Global Framework for Climate Services, and the Paris Climate Change Agreement.

As part of this extension, the Central Africa Climate Prediction and Application Center (CAPC-AC) was founded to provide substantial support for National Meteorological and Hydrological Services (NMHSs) in the subregion, with a view to effective and efficient integration in the climate field, with special emphasis on developing climate prediction capabilities and the delivery of high quality climate information products to Member States and other partners.

Policy and technical coordination mechanisms were also instituted for the purpose of facilitating holistic implementation of the instruments adopted.

These mechanisms include:

- Policy coordination mechanisms, such as the biennial African Ministerial Conference on Meteorology (AMCOMET), which is a high level coordination framework for meteorological action, the biennial Central Africa Ministerial Conference on Disaster Risk Reduction, which is the high level coordination framework for action on disaster risk reduction (DRR), and the Parliamentary Network for Disaster Resilience in Central Africa (REPARC), which encourages and proposes legislation on disaster resilience.
- Technical coordination mechanisms, such as the Annual Central Africa Disaster Risk Reduction Platform (CAPF-DRR), which is an annual meeting of stakeholders in regional coordination of partners, experts, and players with the goal of disseminating initiatives, sharing experiences, evaluating progress, and publicizing innovations

relating to DRR. The platform is generally preceded by the Annual Central Africa Consultation for Disaster Preparedness and Response, an annual meeting of emergency response experts and institutions. It is also a regional technical coordination meeting for evaluating and updating regional response measures.

Development and implementation of all these instruments, institutions, and mechanisms also contribute to achieving the objectives of the ECCAS Strategic Plan, the African Union's Agenda 2063 and the Sustainable Development Goals.

Despite this clear political determination, work has yet to start on developing planning and decision-making tools based on real and accurate data.

With a view to closing this gap the ECCAS General Secretariat, in collaboration with the World Bank's Global Facility for Disaster Reduction and Recovery (GFDRR), decided to hold the first Central Africa Hydrometeorological Forum as part of the ACP-EU project to support strengthening countries' coordination, planning, and advocacy capacities.

The Forum enabled participants from the private sector, academia, civil society, the media, and regional and sub-regional meteorological and hydrological institutions to learn about best practices and share their ideas with a view to a community plan of action setting out a common vision and mission for the modernization of hydrometeorological services in Central Africa.

ECCAS would like to thank all of the partners who participated directly and indirectly in this undertaking, which is bound to help sow the seeds for a meteorological service that can meet the challenges we face.

**Ms. Marie Chantal MFOULA**  
**Deputy Secretary General for the**  
**Physical, Economic and Monetary**  
**Integration Department (DIPEM)**

# EXECUTIVE SUMMARY

The Hydromet Forum, hosted by the Economic Community of Central African States (ECCAS) and the Government of Gabon, was organized by the World Bank in partnership with the Global Facility for Disaster Reduction and Recovery (GFDRR), the World Meteorological Organization (WMO), the African Development Bank (AfDB), the UNDRR and other development partners. It was financed under Result Area 2 of the ACP-EU Building Disaster Resilience to Natural Hazards in Sub-Saharan African Regions, Countries and Communities Program and managed by the World Bank's Global Facility for Disaster Reduction and Recovery (GFDRR). The Forum brought together high-level representatives of the ECCAS governments, all of the national focal points from the relevant sectors, civil society actors, including academia, the media, parliamentarians from the countries in the subregion, the private sector, sub-regional institutions and development partners. The purpose of the Forum was to deliberate and set priorities for strengthening weather, water, climate information and risk management strategies and services, as well as improving service delivery to achieve sustainable development and reduce disaster and climate risks in the ECCAS region.

The objectives of the first ECCAS Hydromet Forum were to:

- Develop sub-regional leadership for strengthening hydromet and climate services in their global public good function for climate risk management and climate adaptation;
- Serve as a platform for exchanging knowledge, information and ideas, and evaluating progress in modernizing hydromet services in Central Africa;
- Become a listening post for development partners on the needs of sectors and user groups to ensure ownership and customization of programs and investments;
- Build consensus and awareness among stakeholders about the benefits of investment in meteorological, hydrological, and climate services, along with early warning systems;
- Enhance countries' and stakeholders' ownership of programs and the results of meteorological and climate services to ensure sustainability;
- Convene a platform for governments, regional organizations, donors, the private sector, civil society, academia, technical communities, the media and journalists, along with youth and gender groups, to discuss and design the future course of hydromet service modernization in Central Africa.

# PROGRAM

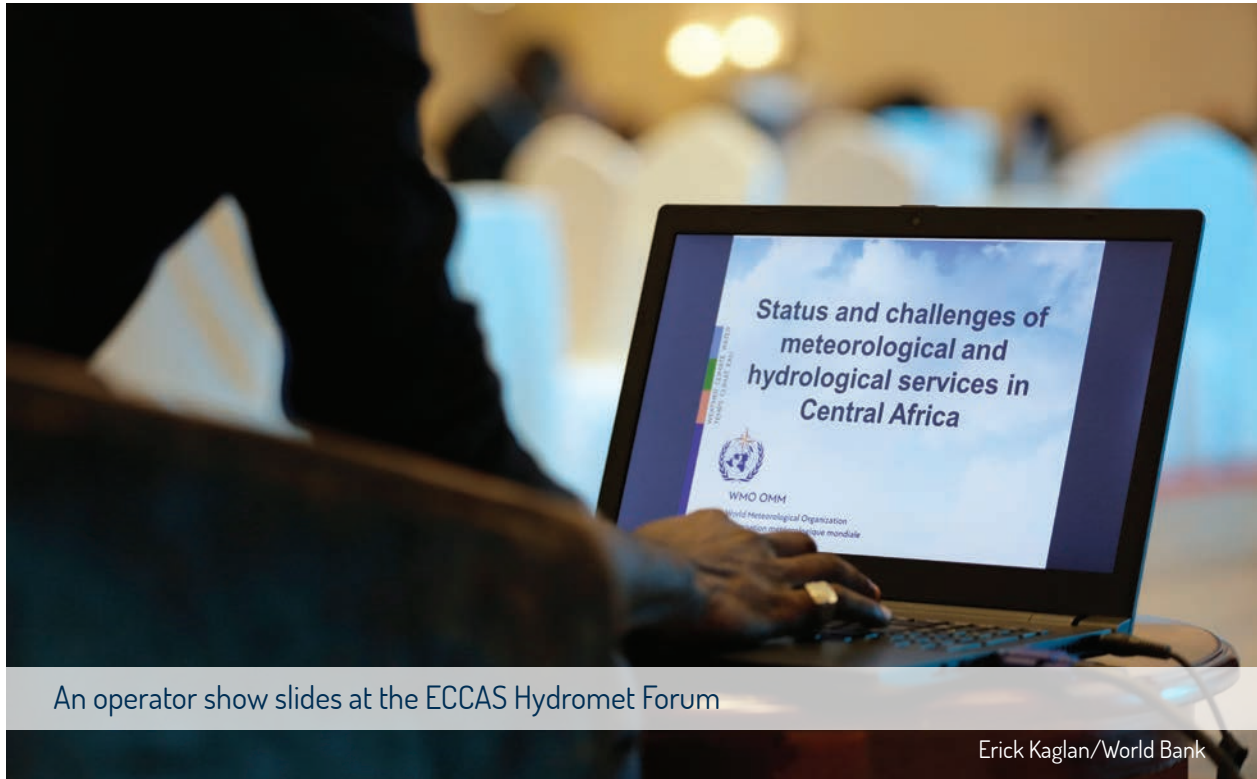
The ECCAS Hydromet Forum brought together representatives from ministries and government entities responsible for meteorology, hydrology, and disaster risk management, academia, civil society (including youth and gender groups), and the private sector. It was co-hosted by the Minister of Transport of Gabon and the ECCAS Deputy Secretary General for the Physical, Economic, and Monetary Integration Department, along with the heads of the European Union Delegation and the World Bank office in Gabon.

**The first day** of the Forum featured a plenary session, in which participants discussed the status and challenges of Hydromet and disaster risk management services in the region. Participants discussed possible ways of strengthening collaboration among regional institutions and how to finance Hydromet and early warning services. Several discussions addressed the impact of weather and climate phenomena on communities from the point of view of vulnerable groups, youth and women. There was also a knowledge-sharing and learning session on good practices for early warning systems.

**The second day** featured a series of technical discussions and knowledge-sharing and learning events on such issues as: engaging academic and research networks to support effective Hydromet and early flood warning services in the region, regional initiatives and programs to strengthen the capacities of climate, weather and water early warning services, Hydromet services for agriculture, forestry and sustainable natural resource management, along with inland navigation and hydroelectricity in Central Africa. A simultaneous session was also held, by invitation only, for the heads of national weather and water services on the second day and consisted of technical discussions.

**The third day** consisted of technical discussions on financing meteorological services and engaging partnerships and the private sector to support Hydromet services in Central Africa. The closing ceremony took place before a plenary session, followed by closing remarks from the World Bank, the World Meteorological Organization, the European Union Delegation and the ECCAS Secretariat. The high-level session was closed by the Minister of Transport of Gabon. This session included the presentation and adoption of the Forum Communiqué.





An operator show slides at the ECCAS Hydromet Forum

Erick Kaglan/World Bank

During these three days, the Forum addressed the following points:

**a. Policy dialogue**

- Status of national Hydromet services
- Sector needs: Agriculture – Water – Energy – Forests – Rivers
- High-level policy dialogue – Decision making

**b. Knowledge sharing and learning**

- Best practices for early warning
- Impact on gender, communities, and youth
- Academic networks

**c. Projects and programs**

- Financing Hydromet services
- Connecting projects and initiatives
- Partnerships and innovation



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# ABBREVIATIONS AND ACRONYMS

<b>AGEOS</b>	Agence Gabonaise d'Études et d'Observations Spatiales
<b>AGRHYMET</b>	AGRrometeorology, HYdrology, METeorology Center
<b>AMCOMET</b>	African Ministerial Conference on Meteorology
<b>ASECNA</b>	Agency for Air Navigation Safety in Africa and Madagascar
<b>AfDB</b>	African Development Bank
<b>CAPC-AC</b>	Africa Climate Prediction and Application Center
<b>ADRFI</b>	Africa Disaster Risks Financing
<b>CEFDHAC</b>	Conference on Dense and Humid Forest Ecosystems of Central Africa
<b>Central Africa RCC</b>	Central Africa Regional Climate Center
<b>CERGEP</b>	Centre d'études et de recherche en géosciences politiques et prospectives
<b>CICOS</b>	International Commission of Congo-Oubangui-Sangha
<b>CILSS</b>	Permanent Interstate Committee for Drought Control in the Sahel
<b>ClimDev</b>	Climate for Development
<b>COMIFAC</b>	Central Africa Forest Commission
<b>CREWS</b>	Climate Risk Early Warning System
<b>DRM</b>	Disaster Risk Management
<b>ECCAS</b>	Economic Community of Central African States
<b>ICPAC</b>	IGAD Climate Prediction and Applications Center
<b>IFRC</b>	International Federation of Red Cross and Red Crescent Societies
<b>IGEBU</b>	Burundi Geographical Institute
<b>IRD</b>	Institut de recherche pour le développement
<b>METTELSAT</b>	National Agency of Meteorology and Teledetection by Satellite

<b>ONACC</b>	National Climate Change Observatory
<b>NAPA Project</b>	National Adaptation Program of Action for Climate Variability and Change
<b>NMCs</b>	National Meteorological Centers
<b>NWP</b>	Numerical Weather Prediction
<b>PROPAC</b>	Regional Platform of Central Africa Farmers Organizations
<b>RCC</b>	Regional Climate Center
<b>REFADD</b>	African Women Network for Sustainable Development
<b>REPARC</b>	Parliamentary Network for Disaster Resilience
<b>RSMCs</b>	Regional Specialized Meteorological Centers
<b>SAWIDRA</b>	Satellite and Weather Information for Disasters Resilience in Africa
<b>TAHMO</b>	Trans African Hydro Meteorological Observatory
<b>UNISDR</b>	United Nations International Strategy for Disaster Reduction
<b>WASCAL</b>	West African Science Service Center on Climate Change and Adapted Land Use
<b>WIGOS</b>	WMO Integrated Global Observing System
<b>WMO</b>	World Meteorological Organization



# 1. INTRODUCTION

Along with the rest of Africa, Central Africa accounts for only 4 percent of global greenhouse gas emissions, yet it remains one of the most vulnerable regions to climate change because of its limited capacity for adaptation. More than 70 percent of natural disasters in the subregion are caused by hydrometeorological events. This means we should prioritize and consolidate the frameworks for elaborating consensus forecasts and information systems to enable policymakers to make decisions that will minimize disaster risks.

The weak capacity for adaptation to climate change is exacerbated by the fact that many of the ECCAS Member States are low-income countries. This means that governments often have to deal with competing investment priorities and National Meteorological and Hydrological services (NMHSs) are rarely at the top of the list. Inadequate funding means that these services are unable to provide critical services for disaster risk reduction, adaptation to climate change, and development planning in general.

Nonetheless, increasing climate variability and extreme weather, floods, and other climate events are jeopardizing development gains and efforts for industrialization and growth in Central Africa. Improving meteorological, hydrological, and climate services (hydromet services) is critical for strengthening the whole subregion's crosscutting climate change and disaster resilience. More specifically, reliable hydromet information is a key requirement for creating a favorable environment for private and public sector investment to ensure growth, sustainable development, and poverty reduction. The meteorological, hydrological, and climate information provided by the NMHSs, including early warnings, alerts, and advice on climate change adaptation is critical for the sectors that drive the ECCAS economies. These services provide direct support for (i) climate smart agriculture and food security; (ii) water resource management for irrigation, hydroelectric power, renewable energy, and water supply; (iii) better health service planning; (iv) improved access to safe air, sea, and road transport; and, (v) reducing the social and economic impact of floods, drought, and other natural hazards. Climate services also provide support for disaster and climate risk mapping, and for disaster and climate risk financing and insurance solutions. In addition, they help reduce vulnerability and encourage peace building by promoting sustainable natural resource management and growth, as well as boosting tourism and travel sectors that enhance economic development and employment.



A fishing boat at sea in Libreville, Gabon on November 13, 2018. Meteorological services are key for fishing in Central Africa where the first ECCAS hydrometeorological forum took place from November 14 through to 16, 2018. Effective and reliable hydromet services help ensure weather-dependent industries like fishing, electricity, and tourism can be more efficient.



## 2. OBJECTIVES

The objectives of the first ECCAS Hydromet Forum were to:

- Develop subregional leadership for strengthening the capacities of meteorological, hydrological, and climate services in their global public good function for climate risk management and climate adaptation;
- Serve as a platform for exchanging knowledge, information and ideas, and assessing progress in modernizing Hydromet services in Central Africa;
- Become a listening post for development partners on the needs of sectors and user groups to ensure ownership and customization of programs and investments;
- Produce a consensus and an awareness among stakeholders about the benefits of investment in meteorological, hydrological and climate services, along with early warning systems;
- Enhance the countries' and the stakeholders' ownership of programs and the results of weather and climate services to ensure sustainability;
- Convene a platform for governments, regional organizations, donors, the private sector, civil society, academia, technical communities, the media and journalists, along with youth and gender groups, to discuss and design the future course of Hydromet service modernization in Central Africa.



Obsolete equipment at the Meteorological Service of Gabon.

Erick Kaglan/World Bank



A panelist answers a question during the ECCAS Hydromet Forum in Libreville, Gabon on November 14, 2018. The forum, held from 14 to 16 November 2018, highlighted the benefits of providing hydromet services in various sectors, including agriculture, water, natural resource management, environment, transport, civil aviation, energy and disaster risk management.

### 3. PARTICIPANTS

The ECCAS Hydromet Forum attracted participants from diverse backgrounds, including experts from Member States representing the national hydrological and meteorological services, national disaster risk management bodies and other government agencies, regional academic institutions, the private sector, civil society, the ECCAS Secretariat, regional organizations, development partners, and international organizations. The table below provides an overview of the participants' various backgrounds.

CATEGORY	NUMBER OF PARTICIPANTS
<b>Academic institutions</b>	<b>14</b>
Women	3
Men	11
<b>Development partners</b>	<b>20</b>
Women	7
Men	13
<b>Government</b>	<b>45</b>
Women	6
Men	39
<b>International organizations</b>	<b>6</b>
Women	2
Men	4
<b>NGOs</b>	<b>4</b>
Women	1
Men	3
<b>Parliamentary network</b>	<b>6</b>
Women	1
Men	5
<b>Private sector</b>	<b>1</b>
Men	1
<b>Regional organizations</b>	<b>24</b>
Women	5
Men	19
<b>Other bodies</b>	<b>7</b>
Men	7
<b>GRAND TOTAL</b>	<b>127</b>
<b>GENDER</b>	<b>PARTICIPATION</b>
Women	25
Men	102
<b>GRAND TOTAL</b>	<b>127</b>

# 4. FORUM AGENDA



## FIRST CENTRAL AFRICA HYDROMET FORUM HÔTEL BOULEVARD, LIBREVILLE, GABON

### DAY 1 : WEDNESDAY, NOVEMBER 14, 2018

8:30 Registration

9:00

9:00 **OPENING AND WELCOME REMARKS** BY THE REPRESENTATIVES FROM ECCAS, THE GOVERNMENT OF GABON, THE EUROPEAN UNION DELEGATION, THE WORLD BANK, THE UNITED NATIONS AGENCIES AND WMO

**Introductory speech:**

ECCAS Secretary General

**Opening speech:**

Government of Gabon

*Moderator: ECCAS/Gabon Government Protocol Unit*

10:30 Coffee Break and Group Photo

11:15 **POLICY DIALOGUE: CURRENT STATUS OF METEOROLOGICAL, HYDROLOGICAL, AND DISASTER**  
12:45 **MANAGEMENT SERVICES IN CENTRAL AFRICA**

**Keynote speeches:**

- Current status and challenges for meteorological and hydrological services in Central Africa – *Bernard GOMEZ, WMO*
- Implementing a strategy for efficient and sustainable management of NMHSs in Central Africa – *Hyacinth BANSEKA, GWP*
- Current status of disaster risk management, the importance of early warning systems and priority needs of hydromet services in Central Africa – *Dominique KUITSOUC, ECCAS*

**Panel discussion : Challenges and opportunities for disaster risk management, meteorology, and hydrology in Central Africa**

- Laurent TCHELU MWENYIMALI (Secretary General for the Ministry of Social Affairs, Humanitarian Action and National Solidarity, DRC) – *Shortcomings of hydromet data for effective risk management: the DRC's experience*
- Augustin NGENZIRABONA (Hydromet Manager at IGEBU, Burundi) – *Services provided and priorities for strengthening and improving these services for effective and sustainable risk management: IGEBU's experience*
- Faustin BOBONGO-YBARAH (CICOS) – *The role of hydromet data in river basin management*
- Narcisse ODOUA (ECCAS) – *The ECCAS water information system and flood-related disaster management*

*Moderator: ECCAS*

12:45 Lunch Break

14:00 **POLICY DIALOGUE: IMPACT OF EXTREME WEATHER AND CLIMATE EVENTS ON COMMUNITIES,**  
15:30 **COUNTRIES, AND REGIONS WITH PARTICULAR EMPHASIS ON VULNERABLE GROUPS – VIEWS AND BEST PRACTICES FROM REPRESENTATIVES OF WOMEN AND YOUTH**

**Keynote speech:**

Forecast-based action: Links between early hydromet warnings and early community action, African countries' experience – *Cheikh KANE (Red Cross Red Crescent Climate Center)*

**Panel discussion:** Views of community, gender, and youth representatives from the region.

- Nkom Marie TAMOIFO (Central Africa Forest Youth Network)
- Gloria LOMBO (Red Cross, Democratic Republic of Congo)
- Monique Catherine BISSECK (African Women Network for Sustainable Development)
- Tabi H. JODA (Green Aid)

*Moderator: CEFDHAC*

15:30 Coffee Break

16:00 **KNOWLEDGE AND LEARNING: GOOD PRACTICES FOR EFFECTIVE EARLY WARNING SYSTEMS -**  
17:30 **INTRODUCTION TO IMPACT-BASED FORECASTING AND SEVERE WEATHER FORECASTING**

**Keynote speeches:**

- Introduction to effective early warning systems and the Severe Weather Forecasting Demonstration Project – *Abdoulaye HAROU (OMM)*
- Examples of impact-based forecasting from the IFRC – *Cheikh KANE ((Red Cross Red Crescent Climate Center)*
- Flood forecasting in Douala - Douala durable – *Jean-Jacques BRAUN (IRD)*

**Panel discussion:** Lessons learned and best practices for effective early warning systems; discussion with experts from the IFRC, WMO, IRD, and Member States.

*Modération : CILSS / ECCAS*



Delegates pose for a family photograph following the opening ceremony of the first ECCAS Hydromet Forum.

Erick Kaglan/World Bank

## DAY 2: THURSDAY, NOVEMBER 15, 2018

9:00 : **KNOWLEDGE AND LEARNING: ENGAGING**  
10:30 : **ACADEMIC AND RESEARCH NETWORKS TO**  
**SUPPORT EFFECTIVE HYDROMET AND EARLY**  
**WARNING SERVICES**

**Presentations and panel discussion:**

- Prof. Samuel AYONGHE (Periperi U/University of Buea)
- Prof. Eric FOTO (University of Bangui)
- Prof. Wilfried POKAM (University of Yaoundé)
- Prof. Fils MAKANZU IMWANGANA (University of Kinshasa)
- Jean Damien MALOBA MAKANGA (CEREP, Gabon)
- Prof. Daouda KONE (WASCAL)
- Dr. Mohamed HAMATAN (CILSS/ AGRHYMET)

*Moderator: ECCAS/WB*

**POLICY DIALOGUE (BY INVITATION):**  
**MEETING OF HEADS OF NATIONAL HYDROMET**  
**SERVICES IN CENTRAL AFRICA**

Heads of National Meteorological and Hydrological Services

*Moderator: ECCAS and WMO*

10:30 : **Coffee Break**

11:15 : **PROJECTS AND PROGRAMS: REGIONAL**  
12:45 : **INITIATIVES AND PROGRAMS TO STRENGTHEN**  
**CAPACITIES FOR SUPPORTING CLIMATE,**  
**WEATHER, AND WATER EARLY WARNING**  
**SERVICES**

**Présentations et discussion en panel :**

- Dr. Joseph AMOUGOU (ONACC) – *Mainstreaming climate, water and weather issues in planning and decision-making*
- Jean-Paul GAUDECHOUX (WMO) – *National frameworks for implementing climatology services*
- Elie MBAITOUBAM (RCC Central Africa) – *Building a Regional Climate Center for Central Africa*
- Vanessa BUCHOT (UNISDR) – *DESINVENTAR and regional initiatives for supporting climate risk management*

*Moderator: Commission of the African Union*

**POLICY DIALOGUE (BY INVITATION):**  
**MEETING OF HEADS OF NATIONAL HYDROMET**  
**SERVICES IN CENTRAL AFRICA**

Heads of National Meteorological and Hydrological Services

*Moderator: ECCAS and WMO*

12:45 : **Lunch Break**

14:00 **POLICY DIALOGUE: HYDROMET SERVICES FOR AGRICULTURE, FORESTRY, AND SUSTAINABLE NATURAL**  
15:30 **RESOURCE MANAGEMENT IN CENTRAL AFRICA**

**Keynote speeches:**

Hydromet services for agriculture and natural resources management in the context of climate change –  
*Honoré TABUNA (ECCAS), Oliver KIPKOGEI (ICPAC)*

**Panel discussion:** Challenges, constraints, and opportunities relating to hydromet services for sustainable natural resources management and agriculture in Central Africa in the context of climate change.

- Michel NDJATSANA (COMIFAC)
- Moudi Pascal IGRI (ECCAS Climate Center, Douala)
- Célestin NGA (Regional Platform of Central Africa Farmers Organizations - PROPAC)
- Tanguy GAHOUMA (Agence gabonaise d'études et d'observations spatiales - AGEOS)
- Emmanuel MAMBELA (The Nature Conservancy)
- Jean Claude BOMBULA MALASSAY (Projet PANA, DRC)

*Moderator: ECCAS*

15:30 **Coffee Break**

16:00 **POLICY DIALOGUE: HYDROMET SERVICES FOR EFFICIENT WATER RESOURCE MANAGEMENT, INLAND**  
17:30 **NAVIGATION, AND HYDROELECTRICITY IN CENTRAL AFRICA**

**Presentations and panel discussion:**

- Hyacinth BANSEKA (GWP) – *Introduction to hydromet services for effective management of water resources*
- Jean KOUTELE (ECCAS) – *Hydromet services for energy and hydroelectricity*
- Gabriel MOKANGO MAMY KOBO (RVF, RDC) – *Services hydromet pour une navigation fluviale efficace*
- Mohamed HAMATAN (AGRHYMET) – *Hydromet services for irrigation*
- Jacqueline NYIRAKAMANA (Ministry for the Environment, Rwanda)

*Moderator: World Bank*

18:00 **Drinks and buffet**  
20:00



World Bank's Africa Hydromet Program Coordinator Prashant Singh speaks during the closing ceremony of the ECCAS Hydromet Forum.

Erick Kaglan/World Bank

## DAY 3: FRIDAY, NOVEMBER 16, 2018

9:00 **PROJECTS AND PROGRAMS: FINANCING METEOROLOGICAL, CLIMATE, WATER, AND EARLY WARNING SERVICES IN CENTRAL AFRICA**  
10:30

### Keynote speeches:

- Nestor NIANGA (METTELSAT, DRC) – *Modernizing Hydromet services: DRC's experience*
- Prashant SINGH (World Bank) – *Africa Hydromet Program*
- Jean-Paul GAUDECHOUX (WMO/ CREWS) – *CREWS Initiative*
- Justus KABEYEMERA (AfDB) – *ClimDev-Africa*

### Panel discussion:

- Nestor NIANGA (METTELSAT, DRC)
- Prashant SINGH (World Bank)
- Jean-Paul GAUDECHOUX (WMO/CREWS)
- Justus KABEYEMERA (AfDB)

**Observations :** REPARC (Parliamentary Network): Sharing remarks on financing for weather, water, climate, and disaster risk management services

*Moderator: African Development Bank*

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10:30 **Coffee Break**

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11:15 **POLICY DIALOGUE: MOBILISER LES PARTENARIATS ET LE SECTEUR PRIVÉ POUR LES SERVICES**  
12:45 **HYDROMET EN AFRIQUE CENTRALE**

### Presentations and panel discussion:

- Jean-Paul GAUDECHOUX (WMO) – *Global Weather Enterprise*
- Prof. Ahmed BALOGUN (TAHMO) – *Innovations and partnerships to promote cost-effective equipment*
- Jean-Jacques BRAUN (IRD/Orange Cameroun) – *Raincell Africa and collaboration with the telecommunications sector*
- Yvette ZAME NDONG (ASECNA) – *Partnership with the aviation sector*
- Mohammad CHECK (EARTH NETWORKS) – *Examples for private sector meteorological services*

*Moderator: UNISDR*

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12h45 **Lunch Break**

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14:00 **HIGH-LEVEL SESSION: PLAN OF ACTION FOR MODERNIZING NATIONAL HYDROMET SERVICES IN**  
15:30 **CENTRAL AFRICA - PRESENTATION AND DISCUSSION WITH THE ECCAS PARLIAMENTARY NETWORK FOR NATURAL DISASTER RESILIENCE IN CENTRAL AFRICA (REPARC)**

### Keynote address:

Rapporteur I : *Key recommendations from the meeting of the heads of national hydromet services*

Rapporteur II : *Key recommendations from the dialogue on policy, knowledge and learning and the plenary sessions*

**High-Level Panel with the REPARC Parliamentary Network** and the representatives from ECCAS, the African Union, WMO and the World Bank

*Moderator: CILSS/ECCAS*



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15:30 Coffee Break

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16:00 **CLOSING CEREMONY**

17:00

**Presentation and adoption of the roadmap for modernizing hydromet services in Central Africa (ECCAS)**

**Closing remarks:** World Bank, WMO, European Union Delegation, ECCAS Secretariat

**Summary Speech by ECCAS**

**Closing Speech:** Government of Gabon

*Moderator: ECCAS/Gabon Government Protocol Unit*

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17:00 **END OF FORUM**

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JAPANGOV  
THE GOVERNMENT OF JAPAN





An orange retailer in Libreville protects herself from the sun with an umbrella on November 16, 2018. The lack of adequate equipment hinders the work of meteorologists in Central Africa. This is one of the points highlighted by the ECCAS hydromet forum held from 14 to 16 November 2018. The forum highlighted the benefits of providing hydrometric services in various sectors, including agriculture, water, natural resource management, environment, transport, civil aviation, energy and disaster risk management.

**estral**

Erick Kaglan/World Bank

## 5. CHALLENGES

The Forum enabled us to identify the key challenges for:

Challenges		
Actors and stakeholders	Mechanisms and services provided	Advocacy and financing
Focus efforts on women, youth, and other vulnerable groups that are particularly affected by extreme weather events and disasters	Develop an efficient and operational weather station network	Raise awareness of all actors, particularly decision makers
Enhance coordination and information sharing between national institutions, NGOs, and academia	Provide a multisector approach: sharing data on vulnerability, exposure, and risks	Provide a consistent and adequate budget appropriation for Hydromet services and DRM
Make sure that early warning systems are closely connected for rapid implementation of disaster response measures	Provide complementary data collection both on the ground and by satellite	Strengthen and promote parliamentary networks addressing these issues
Enhance regional cooperation by cross-border river basins (Congo River, Lake Chad) and provide coordination between regional initiatives to make them fully effective	Develop processes for easy access to climate information by local users (communities and small holding farmers)	
Include public services and the local communities concerned in the sharing and dissemination of information about Hydromet initiatives	Develop impact-based early warning systems	

## 6. OPPORTUNITIES

### FOR ECCAS

- Diverse range of research and teaching programs in Central Africa: Universities of Bangui, Buea with Periperi U, Kinshasa, Libreville, Yaoundé, AGRHYMET, and others
- Many women-led community initiatives for disaster risk reduction and use of meteorological and climate services
- Regional Climate Center for Central Africa established in Douala and working on the SAWIDRA Project

### AT THE INTERNATIONAL LEVEL

- Global Framework for Climate Services (GFCS) to meet the needs of NMHSs
- Private Sector initiatives: cell phones, equipment providers
- Future innovations: low-cost equipment
- Development Partners, including the AfDB and the World Bank willing to support governments with financing for modernizing meteorological, hydrological, and disaster risk management services



The lack of adequate equipment hinders the work of meteorologists in Central Africa.

Erick Kaglan/World Bank

## 7. OUTCOMES

The main outcome expected was the preparation of a roadmap or a plan of action, with the accompanying timetable, for modernizing Hydromet services in the ECCAS region and in the Member States.

The outcomes of the First Central Africa Hydromet Forum will be submitted to the 17th ECCAS Conference of Heads of State and Government in Libreville, Gabon in March 2019.

The three-day Forum had two parts: the technical part for experts and the high-level part for senior executives from ministries and technical and financial partners. Invitations were also extended to sub regional and international organizations, corporations involved in green economies, private sector entities, civil society entities, national, sub regional and international media, resource persons, and consultants.

In summary, one the aim of the first ECCAS Hydromet Forum was to strengthen cooperation between partners for implementation of the roadmap for modernizing Hydromet services in Central Africa and for strengthening engagement of stakeholders in monitoring and implementing DRR projects.



World Meteorological Organization's Bernard Gomez.

Erick Kaglan/World bank



A man carries in his hands some fish he just received from the fishermen at the sea near the Kapal fish market, Libreville, on November 13, 2018. Meteorological services are key for fishing in Central Africa where the first ECCAS hydrometeorological forum took place from November 14 through to 16, 2018. Effective and reliable hydromet services help ensure weather-dependent industries like fishing, electricity, and tourism can be more efficient.

# 8. RECOMMENDATIONS

## FOR ECCAS

- ECCAS should create a platform with Member States for sharing information and data, setting standards, formulating policies, and supporting capacity building
- The Central Africa Regional Climate Center in Douala should be fully supported to ensure regional collaboration and provide information about climate predictions and extreme weather events
- The various research and capacity-building initiatives should be effectively coordinated through the ECCAS Secretariat

## AT THE NATIONAL LEVEL

- Member States should commit to providing adequate financing for meteorological, hydrological and climate services, along with disaster risk management services, including (i) human resources, (ii) equipment and maintenance, (iii) capacity building for data producers and users
- Take measures to ensure coordination and collaboration between hydromet services and other relevant services
- Set up a national mechanism including all of the actors concerned by climate change to benefit from synergy and share knowledge and information that everyone can access and understand
- Promote gender- and youth-inclusive initiatives, particularly for early warning systems, and provide greater promotion and support for ongoing local initiatives

## AT THE INTERNATIONAL LEVEL

- Do more than projects and support financing for hydromet services and their modernization, with the backing of development partners, such as the African Development Bank, the World Bank, and bilateral cooperation agencies
- Enhance the international dissemination of existing good and best practices
- Promote South-South dialogue



A trader walk on the beach in Libreville on November 16, 2018. The lack of adequate equipment hinders the work of meteorologists in Central Africa. This is one of the points highlighted by the ECCAS hydromet forum held from 14 to 16 November 2018. The forum highlighted the benefits of providing hydrometric services in various sectors, including agriculture, water, natural resource management, environment, transport, civil aviation, energy and disaster risk management.



# 9. SESSION PROCEEDINGS

## 9-1- Policy Dialogue: Current status of weather, water, and disaster management services in Central Africa

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### **9-1-1- Current status and challenges for Hydromet services in Central Africa (Bernard GOMEZ)**

Most livelihoods in ECCAS countries depend on environmental resources. However, extreme climate events, such as drought, floods, dust storms and sand storms, heat lightning, wind storms and desertification, often have consequences for communities, leading to loss of life, livelihoods and property. Hence the need for weather, climate and water institutions and services that are sound, responsive and equipped with the latest technology.

The following points were addressed:

#### ► **Capacities of NMHSs in ECCAS**

These capacities are close to Category 2. They are primarily based on observations, data management, interaction with users, medium-term forecasts and warnings, DRR links with media and communities, seasonal climate outlooks, climate monitoring, hydrological data products for designing and operating water supply structures, monitoring water levels and flows, short-term flow forecasts, and flood forecasts.

#### ► **Challenges**

- The density of the weather observing networks falls short of the WMO standard in all countries, except for Sao-Tomé and Príncipe (given the country's small size) and Equatorial Guinea, which is not a WMO member.
- A large number of the existing stations are “dumb” and do not contribute to global weather surveillance, which is a global public good. This has an impact on the quality of forecasts around the world and in the ECCAS region.
- Very few NMHSs have the capacity to use information on flood risks, exposure, and vulnerability in the country for risk assessments at the national, provincial, and local levels.

#### ► **Opportunities**

- The WMO Integrated Global Observing System (WIGOS) calls for collaboration between sectors that measure key climate variables.
- The benefits include partnerships between NMHSs and other actors, greater spatial coverage, greater cost-effectiveness, etc.
- Support from WMO/AMCOMET for drawing up national strategic plans for NMHSs (Burundi, Central African Republic, etc.).
- Climate Risk Early Warning System (CREWS)/World Bank in the Democratic Republic of Congo, with the potential to expand actions.

- WMO supported the feasibility study for the creation of the ECCAS Climate Center (CAPC-AC).

**9-1-2- Implementing a strategy for efficient and sustainable management of NMHSs in Central Africa (Hyacinth BANSEKA, GWP)**

ECCAS chose to implement a water information system as a decision-making tool for sustainable management of water resources in Central Africa and to ensure effective implementation of the regional water policy. The objective of the system is to provide accurate data and information about the use of water resources in the ECCAS countries, with a view to establishing a dynamic water monitoring system and sharing water data and information with the various water sector actors.

▶ **Key steps in elaborating the regional strategy for NMHSs:**

- Drawing up status reports on the national Hydromet services in four countries of Central Africa (Burundi, Equatorial Guinea, Rwanda, and Angola) and the regional summary of the status reports;
- Drawing up the research report for defining the optimum multidimensional water monitoring network for each of the eleven countries in the Central Africa sub-region;
- Drawing up a strategy for Hydromet data management and NMHS management to promote social and economic development and climate change resilience in the region;
- Drawing up project document for “Implementation of an Optimum Multidimensional Water Monitoring Network in the Sangha River Basin.”

**9-1-3- Current status of disaster risk management, the importance of warning systems and priorities for Hydromet services in Central Africa (Dominique KUITSOUC, ECCAS)**

▶ **Current status**

The types of risks we are facing are: floods, forest fires, weather events, landslides, etc. The types of natural disaster we are facing include floods, landslides, drought, etc

▶ **Climate impacts**

Impact on food production, biodiversity on land and in the sea, health, extreme weather events (heatwaves, floods, storms, etc.), economic and social inequality.

▶ **Regional response measures**

**At the institutional level:**

- Disaster Risk Management and Climate Change Adaptation Unit
- Central Africa Climate Prediction and Application Center (CAPC-AC))

**Coordination and multisector dialogue:**

- Annual Central Africa Regional Platform for Disaster Risk Reduction (CAPF-DRR)
- Annual Central Africa Consultation for Disaster Preparation and Response
- Biennial Regional Climate Outlook Forum for Central Africa (PRESAC)
- Biennial Ministerial Conference on Disaster Risk Reduction in Central Africa

- Biennial Ministerial Conference on Meteorology in Central Africa
- Parliamentary Network for Disaster Resilience (REPARC)

### Importance of early warning systems

- Knowledge of risks
- Risk monitoring
- Response capacities
- Communication and dissemination

### Hydromet services' needs

#### ► Tangibles

- Data collection equipment using modern technology
- Innovative data processing equipment

#### ► Intangibles

- Reliable global data collection
- Data production
- Optimization of conditions for public and private investment in sustainable development

#### ► Financing

- Governments' difficulty prioritizing the needs of this critical service for their countries' development strategies in programs and activities
- Lack or absence of fiscal resources for this critical sector

## 9-2- Policy Dialogue: Impact of extreme weather and climate events on communities, countries and regions, with particular emphasis on vulnerable groups

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### **9-2-1- Views and best practices from representatives of women and youth (Monique Catherine BISSECK, REFADD)**

Women are more vulnerable to natural disasters than men so far as women's access to means of production is limited.

Much of the literature shows that gender equality is closely linked to vulnerability and poverty, since women are more likely to be natural disaster victims.

How can gender equality be mainstreamed more effectively? (perhaps in the guidelines for DRR policies, particularly through education)

How can policies be drawn up with special attention for the key role of women play in leading groups in disaster prevention awareness programs?

Representation of gender in platforms should be equitable (equal) so that each gender can express their needs, with consideration of the various activity sectors exposed to disaster risks in order to account for the specific features of each group of actors.

The impact of disasters should be differentiated according to gender.

Disaster risk information, communication, and knowledge should also consider marginalized groups since these groups contribute to preventing these risks in one way or another.

**9-2-2- Hydromet services for agriculture, forestry, and sustainable natural resources management in Central Africa (Honoré TABUNA, ECCAS)**

Some of the monitoring deliverables from the campaign (ten-day briefings, monthly bulletins):

- Climate monitoring: rainfall, surface temperature,
- Environmental monitoring: surface water, brush fires,
- Grazing resources monitoring: grass biomass, pasture land, vegetation index,
- Farming monitoring: meeting crop watering needs, yield forecasts,
- Plant health monitoring: services.

**9-2-3- Hydromet services for efficient water resource management, inland navigation, and hydroelectricity in Central Africa (Gabriel MOKANGO MAMY-KOBO, Technical Manager, RVF)**

Inland navigation is a major means of transportation for countries' social and economic development through trade. It is a factor for the mobility of people, their property and merchandise. It also contributes to national and regional integration to strengthen fraternal bonds and social peace between countries in the same river basin.

Efficient inland navigation requires using or installing measurement instruments throughout the river network according to event patterns so as to collect Hydromet data on site to produce forecasts of high and low water, wind speeds, and waves that will ultimately be used for building hydrological models.

Navigators can use the following data and information:

- Water levels: to determine flow depth, which is critical for loading vessels according to the hydrological state of the waterway;
- Minimum depths: to locate anchorages in sandy and rocky areas in accordance with low water data;
- Flow speeds: to avoid resistance to normal vessel speeds.

## 9-3- Knowledge and learning

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**9-3-1 Introduction to effective early warning systems and the Severe Weather Forecasting Demonstration Project (Abdoulaye Harou, WMO)**

The WMO Congress outlined the way forward for improving dangerous weather warning and forecasting services in developing countries. This will be achieved through collaboration between the Global Data-Processing and Forecasting System (GDPFS) and the Public Weather Services (PWSs), with contributions from other programs, with the objective of establishing the cascading forecasting process by means of a project on forecasting extreme weather conditions.

- The Global Prediction Centers offer Numerical Weather Prediction (NWP)/Ensemble Prediction and satellite products, including probabilistic forecasts under the project;
- The Regional Centers interpret the information from the Global Centers, draw up prediction guidance (up to five days) for National Meteorological Centers (NMCs), run limited area models to refine the products, update the websites of Regional Specialized Meteorological Centers (RSMCs) and communicate with the participating NMCs;
- The NMCs produce warnings, weather bulletins and severe weather advisories, communicate with users and contribute to project assessment;
- The NMCs have access to all of the products and are responsible for national advisories and services.

► **The strengths of the Demonstration Project include**

- Cost-effectiveness;
- Simplicity;
- The NMHSs only need a good Internet connection;
- Focus on operational efficiency;
- Capacity development through training programs;
- Improved predictions and more timely warnings.

► **Implementation process**

- Phase I: Overall Project Planning
- Phase II: Regional Subproject Implementation Planning and Execution
- Phase III: Regional Subproject Evaluation
- Phase IV: Regional Subproject Long-term Sustainability and Future Developments

► **Roles and responsibilities of the participating countries**

- Choosing national representatives
- Agreeing on criteria for warnings
- Agreeing on the launch timeline
- Submitting quarterly reports
- Agreeing on the structure

## 9-4- Projects and programs

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### **9-4-1- Financing Meteorological, Climate, Water, and Early Warning Services in Central Africa**

Climate financing under the Paris Agreement calls for developed countries to provide at least 100 billion dollars per year by 2020, but a recent analysis shows that it will be difficult to meet this goal.

African countries made bold commitments in their Nationally Determined Contributions (NDCs) to strengthen their climate change resilience and put their economies on a path toward low carbon emissions.

However, most of these commitments require substantial financial support from developed countries to fund climate action.

### ► Financing mechanisms for the Nationally Determined Contributions

The AfDB set up the Africa NDCs Hub to act as a resource pool for Regional Members and to coordinate various sector activities with a view to fulfilling obligations related to the Paris Agreement.

The hub focuses on three key support areas:

- Fostering long-term climate action:

This entails analytical work to align countries NDCs with their national development agendas, their voluntary contributions, and to explore options for create the necessary ambitions for low-carbon and climate-resilient growth on a long-term trajectory.

- Mobilizing means for implementation – financing, capacity building, and technology development and transfer.

The hub will engage global climate funds and the private sector to cater for both conditional and unconditional pledges of African NDCs;

- Coordination, advocacy, and partnerships:

The Hub will provide a platform for coordination of NDC support activities on the continent for the efficient use of limited resources



Obsolete equipment at the Meteorological Service of Gabon.

Erick Kaglan/World Bank

### ► Existing AfDB climate funds

Trust funds managed by the Bank:  
Africa Climate Change Fund  
Sustainable Energy Fund for Africa  
Special Africa ClimDev Fund  
African Water Facility

### ► International funds for which the Bank is the execution agency

Green Climate Fund (GCF)  
Global Environment Facility (GEF)  
Climate Investment Funds (CIF)  
Adaptation Fund (AF)

### ► Challenges

Some major challenges (risks and obstacles) restrict access to climate financing, including:

- Noninstitutional installations by most basic institutions/agencies
- High initial costs for infrastructure, skills development, and institution building
- Difficult access to relevant data and information
- Special requirements for access to global environment funds

### ► Opportunities

- New and additional climate financing mechanisms under the NDCs
- Need to mobilize new and additional resources at the national and international levels, both public and private
- Tapping national and international financial flows
- Mixed funds
- Cofinancing
- Weather Index Insurance/Africa Disaster Risks Financing (ADRFi) Program to strengthen climate risk financing and insurance for African countries, in collaboration with ARC

#### ***9-4-2- Central Africa Climate Prediction and Application Center: Building a Regional Climate Center for Central Africa (Elie MBAITOUBAM)***

Up until 2020, Central Africa was the only region in Sub-Saharan Africa that did not have a Regional Climate Center (RCC). This situation led the Central Africa countries to express their concern about the vulnerability of African societies, economies, and production systems to climate variability and climate change.

In April 2010, AMCOMET1 in Nairobi, with the support of the WMO, recommended the creation of an RCC for Central Africa. This recommendation was made official by Decision 02/2 of AMCOMET2 in Victoria Falls, Zimbabwe in October 2012, where WMO, the AUC, and other partners were asked to support the creation of the RCC. AMCOMET3 in Praia in February 2015 noted with satisfaction the launch of the creation process at the October 2014 meeting on the subject in Ndjamena.

Approval for the creation of the Central Africa RCC was officialized in the Final Communiqué of the Conference of Central Africa Ministers Responsible for Meteorology in Yaoundé on April 24, 2015. The CAPC-AC was created by Decision No. 72/CEEAC/CCEG/XVI/15 of May 25, 2015 of the 16th Conference of ECCAS Heads of State in Ndjamená. This decision took concrete form with the adoption of an approach based on pooling efforts to achieve a critical mass that can provide information to the NMHSs, which explains the value of making the CAPC-AC operational once it has been created.



## 10. CONCLUSION

The discussions at this one-of-a-kind event for Central Africa confirmed the region's obvious extreme vulnerability to the current climate disorder owing to its very weak capacity to adapt, anticipate, or respond.

The findings, suggestions, and commitments made make it possible to consider a future solution with optimism. This would involve strengthening the institutional, human, and material capacities of the mechanisms responsible for managing these issues.

With this in mind, the Economic Community of Central African States (ECCAS) should play a major role as part of its regional integration mission by developing a plan of action and support for national mechanisms, by engaging in partnerships and by developing coordination between the various actors.



Weather information is essential for air navigation.

Erick Kaglan/World Bank



ECCAS's Dominique Kouitsouc speaks at the ECCAS Hydromet Forum at the hotel Boulevard in Libreville, Gabon on November 14, 2018. The forum which took place from November 14-16, 2018 highlighted the benefits of hydromet service delivery across a range of sectors including agriculture, water, natural resource management, environment, transport, civil aviation, energy and disaster risk management.

# 11. COMMUNIQUÉ

## Adoption of the Final Communiqué of the ECCAS Hydromet Forum and the Closing Ceremony

Phillipe Richard BANGAWA, Head of Meteorology in Cameroon, read the Final Communiqué of the ECCAS Forum, which had been drafted jointly and approved by the representatives of ECCAS, WMO, AMCOMET, the Commission of the African Union, the World Bank, Gabon, and all of the participants. Louis Roger ESSOLA, the REPARC Facilitator, moderated the closing ceremony. The speeches at this event were given by the various delegations from the European Union, the World Bank, WMO, AMCOMET, the Commission of the African Union, and ECCAS, and the Minister for Transport of Gabon.

The members of the closing panel agreed that climate variability and climate change, along with changing weather patterns, are jeopardizing development gains. In addition, the frequency of climate-related natural disasters has increased. These have major repercussions for economic development of the subregion and the continent. They also threaten Africa's efforts to achieve the Sustainable Development Goals (SDGs) and the African Union's Agenda 2063 development plan. The meteorological sector has a major responsibility to contribute to Africa's social and economic development. The Commission of the African Union highlighted the unwavering determination of Africa's political leaders to ensure the development of hydromet services in Africa, as manifested by their approval of the AMCOMET Integrated African Strategy on Meteorology (Weather and Climate Services) at the Twentieth Ordinary Session of the African Union held in January 2013.

The members of the panel also noted that ECCAS and the continent as a whole benefit from close collaboration with their international partners, including the African Development Bank, the World Bank, WMO, and the European Union. They emphasized the need to continue this cooperation. By endorsing the ECCAS Communiqué, they reaffirmed their determination to take all necessary short-term and long-term measures to ensure that countries benefit from Hydromet services on a sustainable basis.

The participants expressed their deep gratitude to the Government and the people of the Gabonese Republic for organizing this Forum and thanked them for the warm hospitality extended to the different delegates.

We, representatives of the Economic Community of Central African States (ECCAS) Member State institutions, the Parliamentary Network for Disaster Resilience, and Climate Change Adaptation (REPARC) and other stakeholders in building disaster and climate change resilience; representing meteorology, hydrology, and disaster risk management practitioners in Central Africa, delegates at the ECCAS Hydromet Forum convened in Libreville from November 14 to 16, 2018 by ECCAS and the Government of the Gabonese Republic with the support of the European Union, the ACP (Africa, Caribbean, Pacific) Group of States, the World Bank, the World Meteorological Organization, and other development partners and technical partners;

Thank the Gabonese Government and people for the hospitality and warm welcome extended to the Forum delegates and commend them for their commitment to disaster risk reduction and climate risk management;

Consider the comparative advantages, mandates, and capacities of different stakeholders, who collectively aim to enhance the production, delivery, and use of meteorological, hydrological, and climate early warning services to reduce vulnerability to hydrometeorological disasters, reduce extreme poverty, and build shared prosperity in the Central Africa region;

Note that targeted capacity building for national and regional weather services using an approach that focuses on end users, service delivery, and seamless connection of the whole production chain is critical for the delivery of meteorological, hydrological, and early warning services for sustainable development and climate change resilience;

Acknowledge the continued need for adequate investment in modernizing and integrating hydrological, meteorological, and early warning services by relying on partnership programs and initiatives such as the Africa Hydromet Program, a partnership of the World Bank, WMO, AfDB, and other organizations, to enhance current progress on climate prediction and effective early warning systems in the ECCAS region;

Further acknowledge that collaboration on meteorological, hydrological and climate early warning systems must be supported by various national and regional policies and strategies, such as the Integrated African Strategy on Meteorology (IASM) under the auspices of the African Ministerial Conference on Meteorology (AMCOMET), and the Central Africa Strategy for Risk Prevention, Disaster Management, and Climate Change Adaptation;

Acknowledge that, alongside National Meteorological and Hydrological Services (NMHSs), the private sector, academia, civil society, the media and other non-State stakeholders have a key role in strengthening regional and national hydromet, early warning, and disaster risk management systems;

Note the importance of hydromet and disaster risk management services for meeting the objectives of the Regional Strategy on Disaster Risk Reduction, Disaster Risk Management and Climate Change Adaptation, the Subregional Policy on the Environment and Natural Resources Management and the Regional Water Policy, building on the Africa Agenda

2063, Integrated African Strategy on Meteorology (IASM), the Sustainable Development Goals, the Africa Program of Action for the Implementation of the Sendai Framework for Disaster Risk Reduction, and the Paris Agreement commitments;

Having considered the extensive discussions and recommendations of international, regional, and national stakeholders and experts who participated in the forum, we:

- Urge Technical and Development Partners, including the World Bank, the African Development Bank, the European Union, UN Organizations and bilateral partners to scale up their support for modernizing hydromet services, early warning systems and disaster risk management services, according to the needs and priorities expressed by ECCAS, the NMHSs, river basin organizations, and national governments in Central Africa, in order to contribute to better understanding and better prediction of climate patterns;
- Call for continued support from the respective governments to ensure that national meteorological and hydrological services, early warning systems, and disaster risk management services benefit from a political and financial environment that enables them to fulfill their mandate to promote resilient development for all sectors of the economy and all segments of society, particularly the vulnerable and the poor;
- Request that partners work together closely for the convergence of meteorological, hydrological, and early warning systems and services to maximize synergy, economies of scale, and efficiency and ensure delivery of reliable services to the communities and people of Central Africa;
- Recognize the Parliamentary Network for Disaster Resilience and Climate Change Adaptation (REPARC) and its influence in the mainstreaming of climate change and disaster resilience in national choices and policies, and ask REPARC to support investment by the ECCAS Member States in climate change and disaster resilience programs;
- Call for stronger horizontal and vertical integration of policies, strategies, and programs to strengthen meteorological, hydrological, climate, and early warning services at the national, regional, and continental levels, encouraging development of inclusive disaster risk management strategies under the Sendai Global Framework for Disaster Risk Reduction and with reference to National Adaptation Programs of Action, Nationally Determined Contributions (NDCs) for climate action under the UNFCCC and the Global Framework for Climate Services (GFCS);
- Request the prompt opening of the ECCAS Climate Prediction and Application Center (CPAC-AC) that was created for the ECCAS region in 2015, with its headquarters in Douala;;
- Urge ECCAS and the Member States to strengthen their support for applied research and professional training in meteorology, hydrology, and climate, along with early warning systems;
- Encourage mainstreaming the inclusion of women, youth, vulnerable groups, and community organizations in the design and implementation of integrated approaches to meteorological, hydrological, climate, and early warning services to support sustainable development;

- Reaffirm our support for promoting national and regional ownership for strengthening regional and national meteorological, hydrological, and early warning services;
- We further commit to ensuring that modernization of hydromet services is one of the national and regional development priorities and backed by sufficient investment;
- Request that the ECCAS Secretary General submit this Communiqué to the Council of Ministers and bring it to the attention of the ECCAS Heads of State and Government for action;
- Request that the Commission of the African Union bring this Communiqué to the attention of the decision-making structures of the African Union for endorsement and action;
- Unanimously adopt this Communiqué to show strong collective commitment to the development of sustainable meteorology, hydrology, and climate services and delivery of their products and services to end-users in Central Africa.

*Libreville, Gabonese Republic, November 16, 2018*



