COP31: AGRHYMET CCR-AOS Accelerates a New Climate Services Revolution in West Africa and the Sahel

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As climate extremes become more frequent and severe across West Africa and the Sahel, the Regional Climate Center for West Africa and the Sahel (AGRHYMET CCR-AOS) is spearheading a transformation in how climate risks are anticipated, monitored, and managed across the region. Speaking at a high-level side event at COP31 in Antalya, Türkiye, experts from AGRHYMET CCR-AOS unveiled breakthroughs from the World Bank-funded West Africa Food Systems Resilience Program (FSRP), marking a decisive shift toward next-generation climate services designed to better protect lives, livelihoods, and food systems. Dr. Alhassane Agali, regional coordinator of FSRP Component 1 and climate adaptation specialist, and Dr. Tinni Seydou Halidou, expert in meteorological and climatological forecasting, delivered presentations highlighting how AGRHYMET CCR-AOS has modernized climate information systems over the past two years through innovation, regional collaboration, and digital transformation. "*Climate resilience begins long before disaster strikes,*" *the experts emphasized. "It starts with the ability to anticipate risks, understand their impacts, and act early.*"

A New Era of Climate Forecasting

Among the most significant advances is the development of a new generation of objective seasonal forecasts that combine artificial intelligence, dynamic climate models, and advanced statistical techniques. These innovations provide more accurate and spatially detailed forecasts, enabling governments, farmers, humanitarian agencies, and planners to better anticipate rainfall anomalies, improve agricultural planning, and strengthen preparedness for extreme weather events. The enhanced forecasting capability represents a major leap forward in transforming climate data into practical decision-making tools for vulnerable communities and key economic sectors.

Regional Watchroom Strengthens Early Warning Capacity

AGRHYMET CCR-AOS has also launched a regional watchroom dedicated to monitoring extreme climatic, hydrological, and environmental events across West Africa and the Sahel. Serving as a regional hub for risk surveillance and early warning, the platform enhances the region's capacity to detect emerging threats, coordinate alerts, and support timely decision-making. The initiative reflects a strategic transition from reactive disaster response toward proactive risk management and prevention. By consolidating real-time monitoring and analysis, the watchroom is expected to play a critical role in reducing the human and economic impacts of floods, droughts, heatwaves, and other climate-related hazards.

Breaking Down Barriers to Data Sharing

Recognizing that effective climate services depend on access to quality data, AGRHYMET CCR-AOS has intensified efforts to strengthen regional cooperation and remove barriers to sharing meteorological and hydrological data. With support from the World Meteorological Organization (WMO) and ECOWAS, the Center is conducting high-level missions across member states to harmonize expectations and establish formal cooperation protocols with National Meteorological and Hydrological Services (NMHSs). According to AGRHYMET experts, climate systems do not recognize national borders, making data sharing a prerequisite for effective regional forecasting and early warning. The new collaboration agreements are expected to institutionalize data-exchange mechanisms, strengthen regional solidarity, and ensure the long-term sustainability of climate information services across West Africa and the Sahel.

Learning from the 2026 "Super" El Niño

Another key focus of the COP31 discussions was analyzing the impacts of the 2026 "super" El Niño event. AGRHYMET CCR-AOS experts presented lessons learned regarding forecasting performance, early warning systems, sectoral preparedness, and institutional responses. The event has provided valuable scientific and operational insights into how large-scale global climate phenomena influence regional weather patterns and socio-economic outcomes. These findings are helping scientists and policymakers refine forecasting tools and improve preparedness strategies for future climate shocks.

Building Regional Technical Capacity

Beyond forecasting and early warning innovations, AGRHYMET CCR-AOS is advancing one of the most ambitious projects ever undertaken in the region's climate services sector: creating a regional laboratory dedicated to maintaining and calibrating meteorological and hydrological equipment. The facility, the first of its kind in West Africa and the Sahel, will help countries ensure accurate, reliable, and continuous weather and climate observations. By strengthening technical autonomy, harmonizing operational standards, and developing regional expertise, the laboratory will help reinforce national observation networks and improve the quality of climate services available to governments and communities.

World Bank-Supported Programs Driving Transformation

These achievements form part of a broader regional effort supported by the Food System Resilience Program (FSRP) and the Accelerating Impacts of CGIAR Climate Research for Africa (AICCRA) program, both funded by the World Bank. Through investments in digital advisory services, infrastructure modernization, capacity building, and innovation, these initiatives are helping countries across West Africa and the Sahel develop more resilient food systems and stronger climate risk management capabilities.

Climate Resilience Through Anticipation

The strong message emerging from COP31 was clear: resilience is no longer defined solely by how societies respond to disasters, but by how effectively they anticipate them.

With cutting-edge forecasting technologies, stronger regional cooperation, advanced early warning systems, and strategic investments in climate infrastructure, AGRHYMET CCR-AOS is positioning West Africa and the Sahel at the forefront of climate services innovation on the African continent. As climate risks intensify, the Center's work shows that informed anticipation, backed by science and regional solidarity, remains one of the most powerful tools for safeguarding communities, strengthening food security, and building a climate-resilient future.









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