# Campbell
SCIENTIFIC®

Meteorology

National Weather Network Solutions

As a global leader in sustainable measurement networks, Campbell Scientific empowers National Meteorological and Hydrological Services (NHMS) to make informed, data-driven decisions and take decisive action in the face of increasingly frequent extreme weather events. Our "fit-for-purpose" automatic weather stations (AWS) and end-to-end monitoring solutions deliver **Measurements to Insights**™.
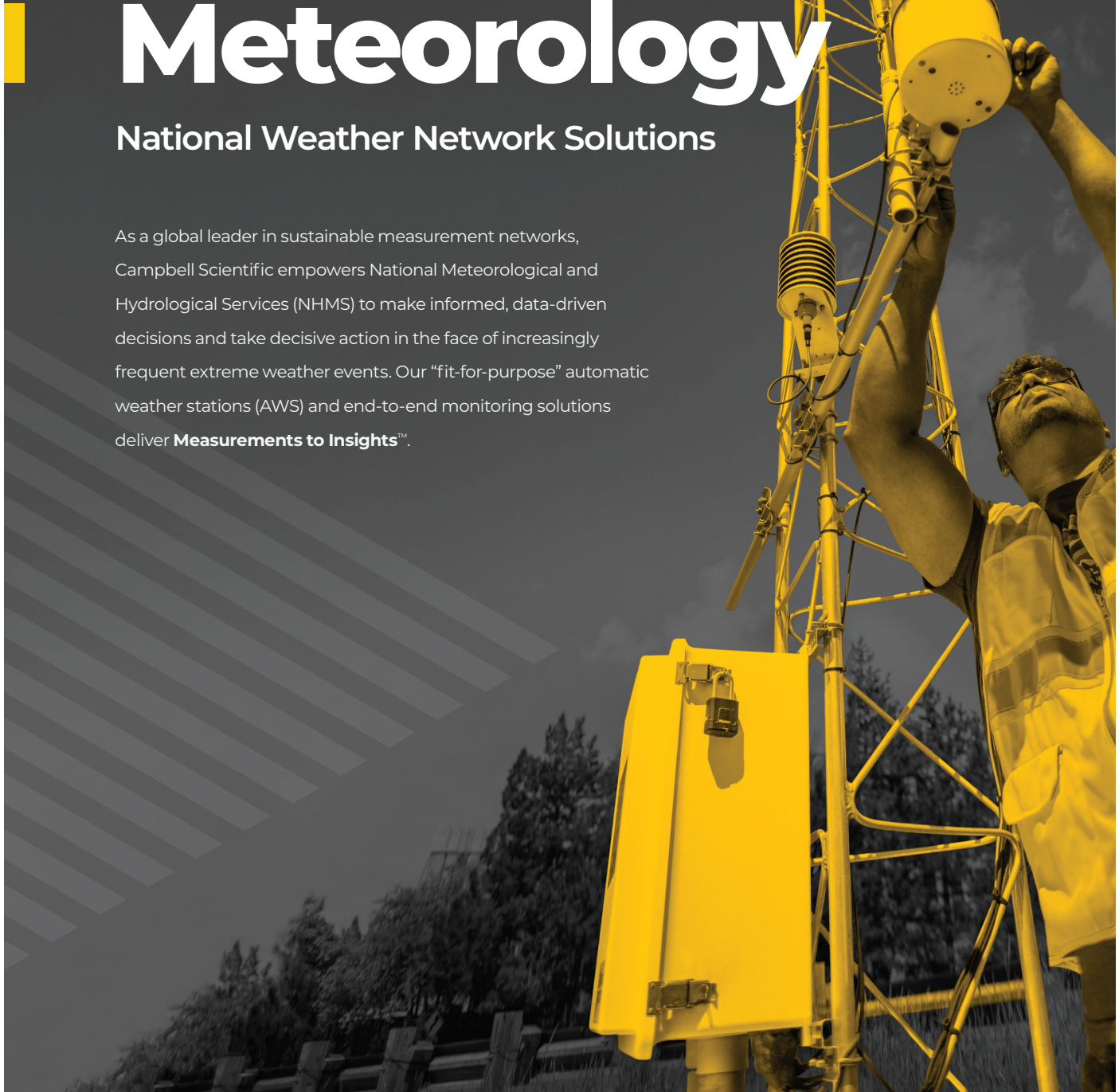
Plan · Warn · Mitigate · Adapt

Global Initiatives

The United Nations (UN) and World Meteorological Organization (WMO) is working to ensure every country operates an early warning system to help save lives and infrastructure. The Early Warnings for All Initiative (EW4All) is being funded to focus on early hazard warning and climate adaptation for Earth's most vulnerable populations.

By 2027, an expected USD $3.1 billion will be invested globally in early warning systems.*

Combined with EW4All, the WMO is ramping up a mission to improve its Global Basic Observing Network (GBON) by offering continued operational funding for Small Island Developing States (SIDS) and Least Developed Countries (LDC) through the Systematic Observations Financing Facility (SOFF).

SOFF funding will allow many NMHS managers to alleviate several operational challenges in providing better data for improved early warnings.

Network Challenges

Inadequate capacity building undermines the continued successful operation of weather networks, which often requires a team of highly skilled technicians who benefit from a regular training regimen. High personnel turnover driven by budgetary constraints is amplified when system solutions are complex, requiring specialized skills. Closed ecosystem solutions also limit the ability for organizations to build in-house, long-term expertise.

Many surface weather networks struggle to continually produce high-quality data products due to budgetary limitations for operations and maintenance. Although new funding mechanisms like SOFF are beginning to address long-term funding issues, networks need to find long-lasting solutions that have a high return on investment over the lifespan of the equipment.

Operations and maintenance challenges are often compounded by difficult environmental conditions out of the weather network operator's control. Equipment needs to be durable to withstand hazardous or extreme weather, interactions with wildlife and insects, security concerns, and unreliable remote communications infrastructure.

*UN EARLY WARNINGS FOR ALL
Executive Action Plan 2023–2027

Campbell Scientific Solutions

Campbell Scientific offers WMO-compliant and GBON-ready AWS solutions designed for years of dependable service.

WMO Complete Station

Campbell Scientific's WMO-compliant, complete AWS offers a comprehensive range of environmental measurements for NMHS organizations serving a diverse set of stakeholders.

Durable and long-lasting systems and sensors are vetted by weather networks globally and field tested for durability in extreme environments. Our stations consistently return high-quality data suitable for numerical weather prediction, early warning systems, and climate science.

Campbell Scientific systems offer a tremendous lifetime value proposition as a sensor-agnostic, future-proof, and open-platform solution—ideal for both modernizing legacy AWS networks and implementing new stations. Our AWS are GBON ready and implement WMO Information Systems (WIS) 2.0 through CampbellCloud data services.

WMO Basic (GBON) Station

Campbell Scientific's WMO-compliant, basic AWS offers a select range of environmental measurements designed for NMHS organizations to meet the minimum standards for GBON requirements. Our stations deliver high-quality data for surface wind, air temperature, relative humidity, precipitation, atmospheric pressure, and snow depth measurements, where applicable.

Campbell Scientific GBON-ready stations are designed specifically for SIDS and LDC weather networks seeking SOFF funds and implement WIS 2.0 through CampbellCloud data services.
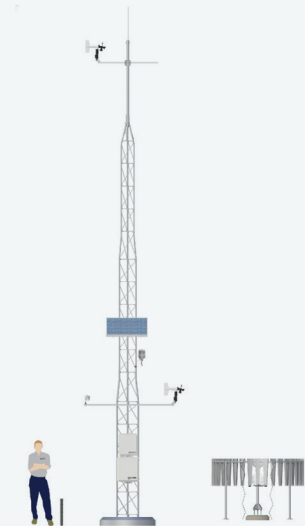
Professional Services

As an ISO-certified organization, Campbell Scientific offers extensive professional services to ensure successful deployments and operations for our clients. Our extensive training program empowers clients with the necessary local knowledge, confidence, and capacity to maintain their networks. Our global project team also delivers support and calibration services to ensure accurate and reliable system performance.

Malawi Meteorological Services Network Modernization

Campbell Scientific is completing an end-to-end network addition of 35 stations for Malawi's Meteorological Services, including design, installation, commissioning, and software services. The project scope also includes a modernization of data delivery for Malawi's entire weather network to be fully GBON compliant. Malawi's data transfer method represents the world's first implementation of the new WIS 2.0 protocol, which will aid neighboring Zambia's upcoming data-delivery upgrade, and serve as a model for global implementation of GBON.

SHOM Coastal Hydrologic Early Warning Systems

Campbell Scientific recently completed a systemwide modernization for weather and water instruments and supporting software for SHOM, the Naval Hydrographic and Oceanographic Service of France. MESSIR-NEO provides SHOM with remote data collection, visualization, quality checking, analysis, and alarms. The high-quality data from these stations aid in SHOM's mission to analyze and disseminate coastal weather and water information to varied stakeholders. These stations function as a coastal early warning mechanism for emergency managers.

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