

CLOSING THE CRITICAL WEATHER AND CLIMATE DATA GAP

Systematic Observations Financing Facility

The Missing Foundation of Climate Resilience

Resilience, adaptation and sustainable development begin with understanding the world around us. That begins with data.

Weather and climate data underpin decisions that protect lives and strengthen economies. Yet today, major weather and climate data gaps persist across developing countries, reducing forecast accuracy, weakening early warning systems and leaving governments and businesses less able to anticipate risks and make informed decisions in a changing climate.

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Weather data is economic data.

Kristalina Georgieva

Managing Director,
International Monetary Fund

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Recognizing this challenge, the international community adopted the Global Basic Observing Network (GBON), the mandatory standard defining the weather and climate observations every country must generate and exchange. To support countries to close this gap, the international community created SOFF.

What is SOFF

The Systematic Observations Financing Facility was established by WMO, UNDP and UNEP at the request of 193 countries and territories. It is the UN fund dedicated to supporting developing countries to generate and exchange weather and climate data in a sustained manner. SOFF combines long-term:

- 1 Investments in infrastructure
- 2 Peer support from advanced met offices
- 3 Results-based grant funding

Weather and climate data are a global public good.

SOFF translates the Paris Agreement's call to strengthen systematic observation into action.

Why Closing the Gap Matters

Closing these gaps is not only important for the countries where they exist. It strengthens the global weather and climate information system and [generates benefits worldwide](#).

Weather systems do not respect borders. Observation gaps in Africa, the Pacific and the Caribbean weaken forecasts globally. A significant weather data blind spot anywhere becomes a forecasting risk everywhere.



THE CHALLENGE

<10%

of GBON observations generated by SIDS and LDCs.

THE IMPACT

30%

Reduction in forecast uncertainty in Africa and 20% in the Pacific.

([ECMWF](#), Europe's leading forecasting centre, 2025)

THE RETURN

USD 5 billion

“Helping developing countries to collect and share minimum quality weather data could result in USD 5 billion in global benefits annually.”

Lord Nicholas Stern

Professor of Economics, London School of Economics

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What happens when we lack data?

In October 2023, Hurricane Otis intensified from a tropical storm to a Category 5 hurricane in less than 24 hours. Forecast models failed to anticipate this rapid intensification due to limited data over the Pacific. The hurricane caused about USD 12 billion in damages and multiple fatalities.

Otis demonstrated that better data means better preparedness.

The Systematic Observation Impact Bond

The [Systematic Observation Impact Bond](#) is being developed under the COP30-COP31 Action Agenda as an innovative climate finance solution for adaptation and resilience. The bond brings together governments, philanthropies, private sector and mission-aligned investors in a shared effort to strengthen the foundation of climate resilience.

How the bond works

1

Impact Funders

Governments, philanthropies and private sector partners provide upfront and forward grant commitments.

2

Systematic Observation Impact Bond

Transforms future commitments into immediate capital by frontloading it from mission-aligned investors.

3

SOFF

Invests in developing countries to strengthen the generation and international exchange of weather and climate data.

4

Investors

Are repaid at bond maturity, leaving behind a lasting foundation for climate resilience worldwide.

Why the bond matters

Closing the global weather and climate data gap is one of the most effective [investments in climate resilience](#). The Systematic Observation Impact Bond is designed to accelerate that investment at the scale and speed the world needs.

Join us in building the foundation of climate resilience.



Website
<https://www.un-soff.org>



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SOFF Action
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