

PACIFIC OBSERVATIONS, GLOBAL IMPACT



Closing critical weather and climate data gaps through SOFF

August 2026

The Systematic Observations Financing Facility (SOFF) is a UN fund created by WMO, UNEP and UNDP to help resource-constrained countries generate and internationally share the basic weather and climate data required under the Global Basic Observing Network (GBON).

Systematic weather and climate observations are a global public good, underpinning forecasts, early warnings and climate action everywhere.

Observations from the Pacific are critical for global forecasts.



Why Pacific observations matter

By generating and sharing observations from some of the world's most data-sparse areas, Pacific countries not only strengthen their own forecasts and early warnings, but also make a critical contribution to the global forecasting system.



15%

of the world's surface is covered by the Pacific



~90%

of internationally required observations missing or incomplete across LDCs and SIDS, including in the Pacific



20%

reduction in forecast uncertainty in the Pacific of 12 hours forecast, if observation gaps are filled.

ECMWF SOFF Impact Experiments, 2025



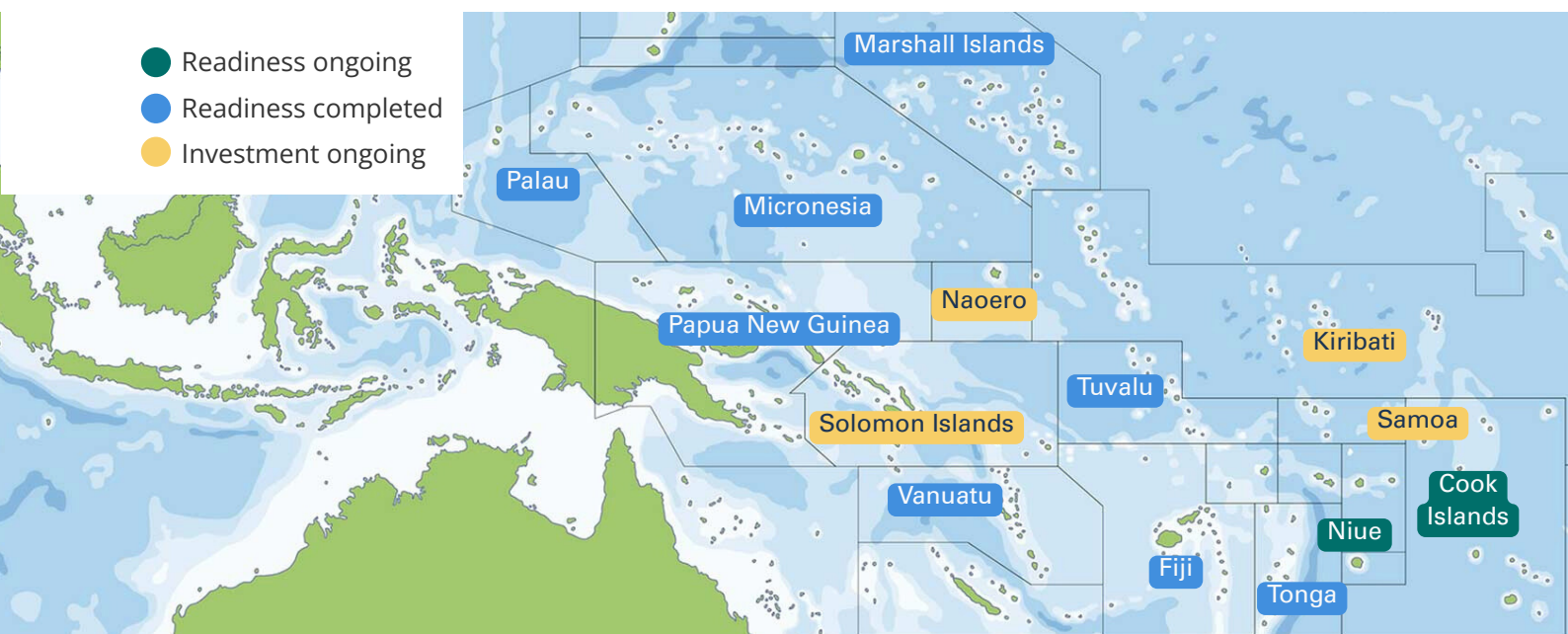
Up to
50x

higher value for global forecasts from a single weather balloon launched over the data-sparse Pacific than over data-rich Europe.

ECMWF, 2018

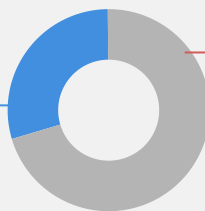
SOFF in the Pacific

- Readiness ongoing
- Readiness completed
- Investment ongoing



- **Readiness Phase:** Identifying gaps and planning for investments
- **Investment Phase:** Investments in observing infrastructure and capacity
- **Compliance Phase:** Result-based annual payments to sustain investments

Approved funding
USD 33.4 million
10 countries in Readiness Phase
4 countries in Investment Phase



Funding gap
~USD 80 million
for moving 10 remaining
countries to Investment phase

SOFF partners in the Pacific

Technical Authority



Peer Advisors



Implementing Entities



Regional Partners

Weather Ready Pacific

(MoU signed at COP29)



The next frontier: Pacific Ocean Observations

Major gaps also persist in GBON-compliant ocean observations across the Pacific. These weather and climate data support cyclone forecasting, coastal risk management, fisheries, maritime safety and global weather prediction.

SOFF does not currently finance marine observations. Pacific stakeholders are seeking support for SOFF to explore, as resources permit, an expansion that will strengthen both regional resilience and the global forecasting system.

The Pacific's scale and geography call for regional solutions. That is why in addition to its

operational partners SOFF is strengthening coordination with Weather Ready Pacific and exploring shared approaches to sustain observations.

For GBON-compliant marine observations, WMO and SPC are working with SOFF on a regional model that can pool capacity, reduce duplication and lower costs.

A purely national approach to marine observations could cost more than twice as much as a regionally supported approach.

How to contribute

Partners can support SOFF's work in the Pacific through:

Direct grants to SOFF

Provide immediate funding for countries to close observation gaps, build and operate GBON infrastructure, strengthen national capacity and sustain observations over the long term.

Innovative finance

SOFF is establishing a Financing Platform to mobilize additional capital for systematic observations. By combining catalytic grants with private investments, it will allow to frontload resources through tailored impact bonds. This will enable countries to accelerate progress, avoid the costs of inaction and realize the benefits of improved observations sooner.

Two potential innovative financing instruments for the Pacific



Pacific Observation Impact Bond

~USD 80 million

To finance the remaining GBON surface observation investments across SOFF-eligible Pacific Island countries.



Pacific Ocean Observation Impact Bond

~USD 15 million

To support a potential expansion of SOFF to GBON marine observation through a regionally coordinated approach.