

Pacific GCOS Station Reporting from April 2025 to March 2026

Reporting period: April 2025–March 2026

Executive Summary

This report summarises Pacific Global Climate Observing System (GCOS) station reporting for the period April 2025 to March 2026. The analysis covers 40 GCOS stations across 17 Pacific countries and territories. Of the 480 monthly reports expected during the reporting period, 246 reports were recorded as received through the WDQMS monitoring system, representing an overall reporting performance of 51%.

In order to serve specifically the needs of global climate applications, two networks of observing stations have been established as Global Climate Observing System (GCOS) Baseline Networks, mainly on the basis of existing GOS networks.

These are:

- the GCOS Surface Network (GSN) (1028 stations internationally as of 01/01/2010)
- the GCOS Upper-Air Network (GUAN) (169 stations internationally as of 01/01/2010)

1. Background

The Global Climate Observing System (GCOS) is co-sponsored by WMO, IOC-UNESCO, UNEP and the International Science Council. Its purpose is to support accurate, sustained and accessible climate observations across the atmosphere, ocean and land. In the Pacific, GCOS activities are especially important because island countries rely on long-term observations for climate monitoring, early warning, seasonal forecasting, disaster preparedness and adaptation decision-making.

The Pacific Islands GCOS programme was initiated following the first regional GCOS workshop held in Apia, Samoa in 2000. It was designed to address the observing needs of Pacific Island countries and territories and to strengthen regional coordination, station operations, data exchange and climate data management.

2. Purpose and Scope

The purpose of this report is to document GCOS station reporting availability from April 2025 to March 2026 and identify priority actions for improving report receipt, continuity of station reporting and follow-up coordination.

The scope covers surface and upper-air climate station reporting where applicable, with emphasis on whether monthly GCOS reports were received internationally through WDQMS. The current analysis does not assess the completeness, timeliness or quality of the underlying climate observations; these areas are identified as future follow-up work.

3. Reporting Summary

During the reporting period, Pacific GCOS station reporting contributed to regional and global climate monitoring by supporting routine observations and international data exchange. The reporting dataset covers 40 GCOS stations across 17 Pacific countries and territories, with 480 expected monthly reports for the 12-month period.

The analysis focuses on report availability. A value of 1 in the station availability table indicates that a monthly report was received through WDQMS, while 0 or a blank cell indicates that no report was received or recorded for that month. Overall, 246 of 480 expected reports were received, giving an overall reporting performance of 51%.

Reporting area	Status for April 2025– March 2026	Comments / evidence required
Station availability	included	List operational, partially operational and non-operational stations.
Monthly reporting completeness	Report availability included; data completeness not assessed	Monthly report receipt totals are included; completeness of observations within reports requires further review.
Data timeliness	Not assessed	Delayed transmission and communications issues should be reviewed as a follow-up activity.
Data quality	Not assessed	Quality-control flags, gaps and suspect values were outside the scope of this reporting availability review.
Climate variables		

The current analysis is specifically on reports received, it does not include completeness and quality of data. These may be included in future reports should it be requested.

Row Labels	No. of Stations	Total reports received	Average reports received per station	Expected reports per year	Performance
American Samoa	1	6	6	12	50%
Cook Is.	2	0	0	24	0%
Fiji	4	44	11	48	92%
French Polynesia	8	84	10.5	96	88%
FSM	3	12	4	36	33%
Guam	1	6	6	12	50%
Kiribati	3	0	0	36	0%
New Caledonia	2	24	12	24	100%
Niue	1	0	0	12	0%
Palau	1	1	1	12	8%
PNG	3	33	11	36	92%
RMI	2	12	6	24	50%
Solomon Is.	2	0	0	24	0%
Tokelau	1	0	0	12	0%
Tonga	2	7	3.5	24	29%
Tuvalu	2	0	0	24	0%
Vanuatu	2	17	8.5	24	71%
Grand Total	40	246		480	51%



4. Station Availability

The table below records the station availability; noting if GCOS monthly data is received internationally through the standard WDQMS monitoring system.

Country	Station	WIGOS #	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25	Jan-26	Feb-26	Mar-26	Total
American Samoa	Pago pago Int. Airport	0-20000-0-91765					1			1	1	1	1	1	6
Cook Is.	Aitutaki Airport AWOS	0-20000-0-91831	0	0	0	0	0	0	0	0	0	0	0	0	0
Cook Is.	Rarotonga (91843-0)	0-20000-0-91843	0	0	0	0	0	0	0	0	0	0	0	0	0
Fiji	Nadi	0-20000-0-91680	1	1	1	1	1	1	1	1	1	1	1	1	12
Fiji	Ono I Lau AWS	0-20000-0-91699	0	1	1	1	0	0	1	1	1	1	1	1	9
Fiji	Rotuma	0-20000-0-91650	1	1	1	1	1	1	1	1	1	1	1	1	12
Fiji	Udu	0-20000-0-91652	1	1	1	1	1	1	0	1	1	1	1	1	11
French Polynesia	Hiva-oa	0-20000-0-91925	1	1	1	1	1	1	1	1	1	1	1	1	12
French Polynesia	Takaroa	0-20000-0-91943	1	1	1	1	1	1	1	1	1	1	1	1	12
French Polynesia	Bora bora Motu Aero	0-20000-0-91929	1	1	1	1	1	1	1	1	1	1	1	1	12
French Polynesia	Tahiti Faa'a	0-20000-0-91938	1	1	1	1	1	1	1	1	1	1	1	1	12
French Polynesia	Anaa	0-20000-0-91933	0	0	0	0	0	0	0	0	0	0	0	0	0
French Polynesia	Tubuai aero	0-20000-0-91954	1	1	1	1	1	1	1	1	1	1	1	1	12
French Polynesia	Mangareva	0-20000-0-91948	1	1	1	1	1	1	1	1	1	1	1	1	12
French Polynesia	Rapa	0-20000-0-91958	1	1	1	1	1	1	1	1	1	1	1	1	12



FSM	Chuuk, ECI	0-20000-0-91334	0	0	0	0	1	0	0	1	1	1	1	1	6
FSM	Pohnpei, Caroline Is.	0-20000-0-91348	0	0	0	0	1	0	0	1	1	1	1	1	6
FSM	Yap, Caroline Is.	0-20000-0-91413	0	0	0	0	0	0	0	0	0	0	0	0	0
Guam	Weather Forecasting Office, Mariana Is.	0-20000-0-91212	0	0	0	0	1	0	0	1	1	1	1	1	6
Kiribati	Tarawa	0-20000-0-91610	0	0	0	0	0	0	0	0	0	0	0	0	0
Kiribati	Kanton	0-20000-0-91701	0	0	0	0	0	0	0	0	0	0	0	0	0
Kiribati	Christmas Is.	0-20000-0-91490	0	0	0	0	0	0	0	0	0	0	0	0	0
New Caledonia	Noumea	0-20000-0-91592	1	1	1	1	1	1	1	1	1	1	1	1	12
New Caledonia	Koumac	0-20000-0-91577	1	1	1	1	1	1	1	1	1	1	1	1	12
Niue	Hanan Airport	0-20000-0-91824	0	0	0	0	0	0	0	0	0	0	0	0	0
Palau	Koror WSO	0-20000-0-91408	0	0	0	0	1	0	0	0	0	0	0	0	1
PNG	Momote WO	0-20000-0-92044	1	1	1	1	1	1	1	1	1	1	0	1	11
PNG	Madang WO	0-20000-0-92014	1	1	1	1	1	1	1	1	1	1	0	1	11
PNG	Port Moresby WO	0-20000-0-92035	1	1	1	1	1	1	1	1	1	1	0	1	11
RMI	Majuro Intl.	0-20000-0-91376	0	0	0	0	1	0	0	1	1	1	1	1	6
RMI	Kwajalein/ Bucholz AAF	0-20000-0-91366	0	0	0	0	1	0	0	1	1	1	1	1	6
Solomon Is.	Munda	0-20000-0-91503	0	0	0	0	0	0	0	0	0	0	0	0	0
Solomon Is.	Honiara/ Henderson	0-20000-0-91520	0	0	0	0	0	0	0	0	0	0	0	0	0
Tokelau	Nukunonu	0-20000-0-91723	0	0	0	0	0	0	0	0	0	0	0	0	0
Tonga	Lupepau'u	0-20000-0-91779	0	1	1	1	1	1	0	1	0	1	0	0	7
Tonga	Nuku'alofa	0-20000-0-91789	0	0	0	0	0	0	0	0	0	0	0	0	0
Tuvalu	Funafuti	0-20000-0-91643	0	0	0	0	0	0	0	0	0	0	0	0	0
Tuvalu	Nanumea	0-20000-0-91631	0	0	0	0	0	0	0	0	0	0	0	0	0
Vanuatu	Aneityum	0-20000-0-91568	0	0	0	0	1	1	1	1	1	1	1	1	8
Vanuatu	Pekoa Airport (Santo)	0-20000-0-91554	0	0	0	1	1	1	1	1	1	1	1	1	9

5. Station Performance

Station performance was assessed by comparing expected monthly reports with reports received through WDQMS. Across the 40 stations, 246 of 480 expected monthly reports were received. Performance varied across the region, with some countries achieving high reporting rates while others recorded limited or no reporting during the period.

- **High reporting performance:** New Caledonia recorded 100%, while Fiji and Papua New Guinea each recorded 92%, and French Polynesia recorded 88%.
- **Moderate reporting performance:** Vanuatu recorded 71%, while American Samoa, Guam and the Republic of the Marshall Islands each recorded 50%.
- **Low reporting performance:** FSM recorded 33%, Tonga recorded 29% and Palau recorded 8%.
- **Zero reporting performance:** Cook Islands, Kiribati, Niue, Solomon Islands, Tokelau and Tuvalu recorded no reports received during the reporting period.

6. Data Management and Quality Control

Reliable climate services depend on timely data exchange, consistent metadata and documented quality-control procedures. This reporting cycle focused on whether monthly reports were received through WDQMS; it did not assess the completeness, accuracy or quality of the climate observations contained in those reports.

As a next stage, National Meteorological and Hydrological Services should confirm local archives, station metadata, transmission records and quality-control results, including checks for missing values, outliers, instrument changes and station relocation records.

7. Key Issues Identified

- Overall reporting availability was 51%, with 246 reports received out of 480 expected reports.
- Several countries and stations recorded zero or very low reporting during the period and require targeted follow-up.
- The current dataset confirms report receipt but does not confirm the completeness or quality of observations within each report.
- Potential causes of reporting gaps may include equipment faults, communications outages, staffing constraints, metadata issues or data transmission problems.
- Further review is needed to distinguish between stations that were operational but not transmitted internationally and stations that were not operational.

8. Actions Undertaken During the Reporting Period

- Compiled station-level reporting availability for the April 2025 to March 2026 period.
- Summarised reporting performance by country and station using WDQMS report receipt records.
- Identified high, moderate, low and zero-reporting stations for follow-up with national focal points.
- Prepared a reporting framework to support consistent annual monitoring in future reporting cycles.

9. Recommendations

1. Verify the official Pacific GCOS station list and confirm whether all 40 stations were expected to report throughout the April 2025 to March 2026 period.
2. Validate the monthly reporting statistics with national focal points, particularly for countries and stations with zero or low reporting performance.
3. Investigate whether missing reports were caused by station outages, communications issues, WDQMS transmission problems, metadata errors or local archiving gaps.
4. Prioritise maintenance, communications support and spare-part assistance for high-value climate stations with long-term records and persistent reporting gaps.
5. Undertake a follow-up review of data completeness, timeliness and quality once report availability has been verified.
6. Establish a quarterly monitoring process so reporting gaps can be identified and addressed before the next annual review.
7. Ensure that these stations be included in CliDE database so data goes through the QC process.
8. Work with PICI panel to ensure these stations are included in the priorities of the WRP and WIS workplan so there will be improvement in our data management, and reporting
9. Work with NMHS to address data gaps
10. Sustainable engagement with NMHS and Stakeholders on what are their strategic goals
11. Work on regular reporting to GCOS

10. Next Steps

The next step is to validate the reporting availability results with national focal points, confirm the reasons for missing reports and determine whether low reporting reflects station outages, data transmission issues or WDQMS recording gaps. Once verified, the report can be strengthened with station outage dates, metadata updates, quality-control findings and agreed corrective actions for regional coordination and submission to relevant Pacific GCOS stakeholders.