TECHNICAL AND COMPLIANCE COMMITTEE
TWENTY-SECOND REGULAR SESSION
23-29 September 2026
Pohnpei, Federated States of Micronesia (Hybrid)

Available Data for Verifying Compliance in the Compliance Monitoring Scheme

WCPFC-TCC22-2026-06
18 August 2026

Submitted by the Secretariat

Purpose

1. This is the fourth iteration of the Secretariat's standing paper on available data for verifying compliance in the Compliance Monitoring Scheme, first prepared in response to the WCPFC19 tasking and subsequently updated for TCC19 (WCPFC-TCC19-2023-11), TCC20 (WCPFC-TCC20-2024-25), and TCC21 (WCPFC-TCC21-2025-15).

2. This paper seeks to draw conclusions from the previous iterations and to assist TCC22's consideration of recommendations for consideration by the Commission at WCPFC23.

Introduction

3. Across the four iterations of this paper, the core findings have remained the same:

   a. Independent verification continues to be strong for a limited set of high-coverage obligations, particularly purse seine fishing-day limits in EEZs and high seas areas and the HSP1 vessel limit, where multiple data sources (operational catch and effort, VMS, and observer data) are available.

   b. In contrast, the majority of quantitative limits (most catch-based and vessel-number capacity limits), obligations using ambiguous terms such as "actively fishing for," and significant number of measures (FAD management, sharks, seabirds, turtles, marine pollution) continue to rely predominantly on CCM self-reporting. Persistent gaps in longline observer coverage, incomplete vessel-specific baselines, limited independent verification of high seas transhipment activities, and the absence of baselines for certain prescribed limits further constrain the Secretariat's ability to independently confirm compliance.

Discussion

4. These enduring patterns indicate that incremental improvements in data tools and processes, while valuable, have not yet closed the structural verification gaps.

5. Critically, for over a decade repeated recommendations have been made to SC, TCC, and the Commission calling for an increase in observer coverage in the longline fleet in support of catch verification and bycatch monitoring, clearly indicating a strong, as yet unmet, desire for improvement. This desire is illustrated in **Table 1** which provides a subset of documents from SC, TCC, or the Commission's annual session where an increase in observer coverage was proposed.[1] **Figure 1** further highlights the ongoing need to address an increase in ROP coverage of longline trips through illustrating the increasing frequency of documents citing the need for ROP coverage increases.

Table 1. Requests or Recommendations for Increased Observer Coverage

Document ID	Name	Outcome
WCPFC22-2025-IP12	Evaluating increases in bigeye longline catch limits under CMM 2023-01	Continued consideration of the CMM 2023-01 increased-monitoring mechanism, with no immediate adjustments made to baseline coverage.
SC21-EB-IP-17	Summaries of longline fishing effort and observer coverage with respect to the review of the seabird bycatch CMM 2018-03	Examined the need for increased longline coverage for seabird bycatch monitoring, but no regulatory changes were adopted.
SC21-ST-WP-09	Summary of bycatch in WCPFC longline fisheries at a regional scale, 2003–2023	Highlighted low and spatially imbalanced observer coverage as a limitation to bycatch analysis; however, no mandatory coverage increase was implemented.
WCPFC-TCC20-2024-15	Interim steps for evaluating increases in bigeye longline catch limits under CMM 2023-01 – A discussion paper	Developed audit points for evaluating increased coverage under CMM 2023-01, but the baseline ROP observer coverage was not increased.
SC20-ST-WP-09	Interim steps for evaluating increases in bigeye longline catch limits under CMM 2023-01 – A discussion paper	Proposed interim technical steps for evaluating increased monitoring under CMM 2023-01, with no formal agreement reached to change the coverage baseline.

[1] Further papers were considered more recently at SC22, including WCPFC-SC22-2026-ST-WP09_Rev01, WCPFC-SC22-2026-ST-WP10, WCPFC-SC22-2026-OP01_Rev01, WCPFC-SC22-2026-EB-IP16.

WCPFC20	Summary Report	Retained the 5% baseline ROP requirement. A conditional mechanism for increased monitoring linked to bigeye catch limits was introduced, but an across-the-board increase was not adopted.
WCPFC20-2023-DP04	PNA and Tokelau Submission on proposed language to amend the CMM 2021-01	A proposal for substantially increased monitoring (up to 30%) linked to increased bigeye catch limits was not adopted.
WCPFC19	Summary Report	A suggestion to increase longline coverage to 10% to address fleet imbalances was discussed but not adopted.
SC19-ST-WP-02	Summary of bycatch in WCPFC longline fisheries at a regional scale, 2003–2021	Emphasised that low and uneven coverage limits bycatch estimation, noting a peak of 6% in 2018; recommendations for mandatory increases were not actioned.
WCPFC18-2021-TTM-DP09	Assessments under CMM 2013-06 for proposed and potential provisions of a new CMM for tropical tuna stocks	A formal proposal to raise the general ROP requirement from 5% to 10% was reviewed but not adopted.
SC16-ST-IP-11	Updated longline bycatch estimates in the WCPO	Provided simulation data demonstrating the need for higher coverage levels, but no change to the coverage baseline was agreed upon.
SC16-ST-IP-02	Status of observer data management	Documented that actual coverage remained substantially below the 5% requirement and was spatially uneven; no changes to enforce or increase baseline coverage were agreed.
SC12-ST-IP-02rev1	Status of ROP Data Management	Noted data provision challenges in meeting the 5% requirement. While Electronic Monitoring was considered, no change to increase coverage was agreed.
SC12-EB-IP-07	Observer coverage to monitor seabird captures in pelagic longline fisheries.	Outlined observer coverage levels needed to estimate seabird bycatch, but calls for corresponding increases were not agreed upon.

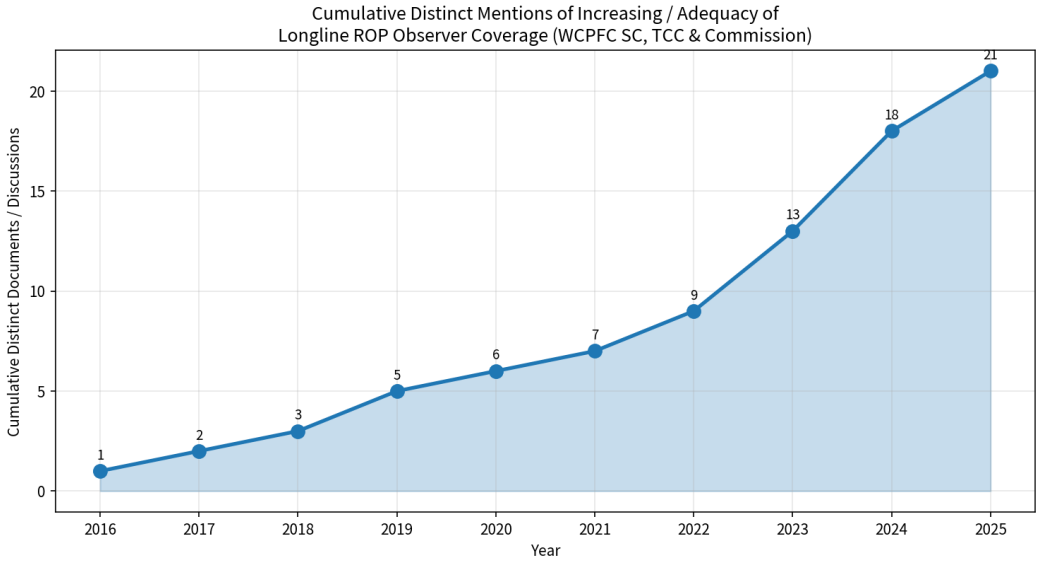

Figure 1. Cumulative distinct mentions of increasing longline ROP coverage 2016-2025

6. Accordingly, this paper proposes that TCC22 makes recommendations to the Commission on three complementary actions for consideration at WCPFC23:

    a. recognise the persistent calls to increase observer coverage to a level that meets minimum required coverage levels to support scientific, monitoring, and market-related requirements in longline fisheries through higher minimum ROP observer rates and accelerated, Commission-recognised, electronic monitoring implementation.

    b. require the routine submission of vessel-specific information identifying the individual vessels subject to applicable vessel-number capacity limits and baselines, together with clearer operational definitions for key terms such as “fishing for”.

    c. advance development of catch documentation schemes and streamlined data flows (including observer and transhipment reports) so that a greater proportion of obligations can be verified against independent, multi-source data.

7. Drawing on the Commission’s Risk-Based Assessment Framework (RBAF), it is proposed that TCC22’s recommendations explicitly address the ongoing risks associated with low observer coverage in the longline fishery. RBAF evaluations prepared by some CCMs in 2021 consistently identify ROP coverage implementation (CMM 2018-05 Annex C 06) as carrying a high likelihood of non-compliance and a severe risk profile.

8. The Secretariat could be tasked with exploring a simple compliance metric which, drawing from the work undertaken on the RBAF, clearly indicates whether the Commission is meeting the fundamental objectives of a CMM.

9. This metric would allow CCMs to monitor the effectiveness of ROP coverage against the original objective of the CMM through the provision of a data-based feedback loop, and as it is using existing data streams, without an increase in compliance monitoring burden to CCM or vessel operators.

10. These steps would materially strengthen the robustness and credibility of future Compliance Monitoring Scheme assessments.

ROP Rates and EM/ER

11. Substantially increasing independent monitoring coverage in longline fisheries remains essential if the Compliance Monitoring Scheme is to move beyond its current heavy reliance on self-reported information. As documented in WCPFC-TCC21-2025-15, independent verification of most longline vessel-number capacity limits, catch-based limits, and bycatch mitigation obligations continues to rest predominantly on CCM Annual Report Part 2 statements, while persistently low and uneven longline observer coverage undermines confidence in bycatch and interaction estimates. Although coverage has recovered to pre-pandemic levels, the longstanding 5% minimum ROP coverage rate has proven insufficient to generate the volume and spatial consistency of data required for robust cross-checking (as reflected in Table 1). This leaves large portions of longline activity effectively unobserved more than a decade after the original coverage deadline was agreed.[2]

12. Over successive years the Scientific Committee has repeatedly heard that 5% coverage is inadequate for reliable estimation of rare-event bycatch, with scientific analyses and SC discussions commonly indicating that coverage on the order of 20% (or higher for the rarest interactions) is needed to produce acceptably precise estimates. Member proposals have reflected similar concerns: the United States has long maintained substantially higher coverage in its own Hawaii deep-set longline fishery (targeting around 20%) and has advanced EM proposals that phase in 10% then 20% electronic monitoring coverage for relevant longline vessels; the 2023 PNA and Tokelau proposal (WCPFC20-2023-DP04) sought a 30% monitoring level as a condition for any increase in bigeye catch limits. While CMM 2023-01 ultimately adopted a more limited optional mechanism linking modest proportional increases in observer or EM coverage to higher bigeye catch limits, these earlier scientific and CCM proposals underscore the continuing gap between the current minimum and the levels required for both scientific robustness and effective compliance monitoring.

13. Raising the minimum ROP observer coverage rate would directly address this structural shortfall by expanding the pool of independent data available for verification. Higher coverage would improve the reliability of catch and bycatch estimates, strengthen assessments of compliance with shark, seabird, and turtle measures, mitigation of marine pollution, and reduce the uncertainty that currently forces many longline-related obligations into the self-reported category. The experience of near-100 percent observer coverage in the purse seine fishery, which enables multi-source independent verification of

[2] CMM 2018-05 Annex C 06

fishing-day limits, demonstrates that elevated monitoring transforms compliance assessment from a largely declarative exercise into one grounded in verifiable evidence.

14. Accelerating the development and formal recognition of Commission electronic monitoring standards offers a complementary and scalable pathway to the same objective. Following adoption of the Interim EM Minimum Standards at WCPFC21, the ERandEM Intersessional Working Group has advanced key supporting elements in 2025 and 2026, including prioritisation of a single full-authorisation pathway, development of a standalone assurance framework modelled on the ROP audit process with a three-year cycle, and preparation of Vessel Management Plan templates and related questionnaires. Completing this work so that EM-derived data can be formally recognised for compliance purposes would allow members to deploy camera-based systems that contribute meaningfully to coverage requirements. Combined with higher human observer rates, a Commission-recognised EM programme would expand independent monitoring capacity without depending solely on the limited supply of at-sea observers, thereby closing one of the most persistent gaps identified across successive verification papers.

Vessel-specific information linked to capacity limits and "fishing for"

15. Requiring the routine submission of vessel-specific information linked to capacity limits and baselines is a necessary step if the Commission is to move beyond aggregate self-reporting when assessing compliance with quantitative limits. As highlighted in successive iterations of this paper, including WCPFC-TCC21-2025-15, most vessel-number capacity limits and certain purse seine vessel limits continue to be evaluated primarily on the basis of CCM-reported totals. Flag CCMs typically provide overall numbers without identifying the individual vessels that fall within each limit or baseline, leaving the Secretariat unable to cross-check reported figures against the Record of Fishing Vessels, VMS data, or other operational sources. Without vessel-level lists, independent verification remains incomplete even where supporting data streams exist.

16. Clearer operational definitions for key terms such as "actively fishing for," "directed at," and "targeting" are equally important. These phrases appear in multiple Conservation and Management Measures yet lack agreed, practical interpretations that can be consistently applied during the Compliance Monitoring Scheme process. The resulting ambiguity has repeatedly prevented TCC from completing assessments of certain obligations,[3] forcing reliance on self-declared statements and leaving interpretation issues unresolved from one year to the next. Establishing precise, operational definitions would remove a recurring source of uncertainty and allow both CCMs and the Secretariat to apply the same criteria when determining whether a vessel or fleet falls within the scope of a given limit.

[3] Recent examples include:
- WCPFC22-2025-fCMR para 25 – regarding CMM 2023-01 33;
- WCPFC22-2025-fCMR para 02 – regarding CMM 2019-03 02; and
- WCPFC20-2023-fCMR para 30 – regarding CMM 2021-04 04.

17. Together, these two requirements would close a structural gap that has persisted across four iterations of this paper. Routine provision of vessel-specific information would enable systematic cross-checking against independent data sources, while clearer definitions would reduce the scope for divergent interpretations. Implementing both measures would strengthen the credibility of quantitative-limit assessments, reduce the proportion of obligations that can only be evaluated through self-reporting, and provide a more solid foundation for future Compliance Monitoring Scheme processes and their outcomes.

Catch documentation

18. Advancing catch documentation schemes would provide an independent data stream capable of verifying catch-based limits that currently rely almost entirely on self-reporting. As noted in WCPFC-TCC21-2025-15 and earlier iterations of this paper, many catch limits, particularly those applying to purse seine EEZ fisheries where activity occurs and to various longline and billfish fisheries, cannot be independently confirmed because suitable catch-level information is not available to the Secretariat in a usable form. A well-designed catch documentation scheme would generate verifiable records of catch quantities and origins, allowing cross-checks against CCM reports and reducing the proportion of quantitative limits that fall into the self-reported category.

19. WCPFC has considered a regional Catch Documentation Scheme (CDS) for more than a decade. The Commission established the CDS Intersessional Working Group (CDS-IWG) in 2012, with the objective of developing a regional system to improve catch identification, traceability, verification, and management of IUU risks. The IWG developed progressively more detailed proposals, including data standards and a mass-balance reconciliation approach, initially envisaging coverage of bigeye, yellowfin, skipjack, and South Pacific albacore. The IWG met through 2016, with its final report considered by TCC12 and WCPFC13. Thereafter, the Commission-wide CDS-IWG process lost momentum, while CDS development continued through a separate Joint IATTC–WCPFC Northern Committee process focused on Pacific bluefin tuna, ultimately leading to work on an electronic CDS. Although the PBF process occasionally contemplated whether its work could provide a basis for an electronic CDS covering all tuna species, the original multi-species CDS initiative did not subsequently progress into an operational system for tropical tunas.

20. There is now a strong case for reviving and modernising the original CDS initiative. The underlying rationale of independent validation of catch, improved traceability, IUU risk reduction, and stronger compliance verification remains highly relevant, while the limitations of relying heavily on CCM self-reporting have become increasingly evident through 16 years of implementing the Compliance Monitoring Scheme. At the same time, electronic reporting, VMS, electronic monitoring, observer systems, transhipment reporting, and national traceability systems are substantially more mature than when the CDS-IWG last worked on the issue. A renewed initiative could therefore build on the work already completed, incorporate lessons from the PBF eCDS, and develop a phased electronic CDS for the major tuna species. Properly designed, it would provide an independently verifiable chain linking catch at sea to transhipment/landing to processing to export, including mass-balance

reconciliation. This would provide the Commission with a much stronger evidence base for fisheries management.

21. Streamlining data flows for observer and transhipment reports is equally critical. High seas transhipment reporting and related obligations remain only partially verified, in part because the Secretariat lacks timely, systematic access to observer transhipment reports and cannot independently confirm observer presence or the vessel on which the observer was deployed. Similar constraints affect the timely use of broader observer data for compliance purposes. Establishing clearer protocols and automated pathways for the routine transmission of these reports, by building on existing arrangements with the Scientific Services Provider, would enable more consistent multi-source reconciliation and strengthen verification of both transhipment activities and associated catch and effort reporting.

22. Taken together, these measures would expand the set of obligations that can be assessed against independent, multi-source data rather than CCM self-declarations alone. Catch documentation schemes would address longstanding gaps in catch verification, while improved observer and transhipment data flows would close persistent weaknesses in high seas monitoring. Implementing both would materially improve the robustness of the Compliance Monitoring Scheme and align verification practices more closely with the multi-source standard already achieved for high-coverage purse seine effort limits.

Risk of Inaction

23. Continuing without meaningful changes would leave the Compliance Monitoring Scheme locked in its current pattern of uneven verification. Purse seine fishing-day limits would remain the principal obligations that can be independently confirmed through multiple data sources, while the majority of catch-based limits, vessel-number capacity limits, mitigation measures, and high seas transhipment obligations would continue to rest on CCM self-reporting. Year after year, the same structural gaps, low longline observer coverage, missing vessel-specific baselines, ambiguous definitions, and incomplete data flows, would reappear in successive iterations of this paper, eroding confidence in compliance assessments and limiting the Commission's ability to detect and address non-compliance in a timely and equitable manner.

24. Persistent reliance on self-reported data will continue to constrain the effectiveness of the CMS, leave key conservation measures difficult to enforce, and undermine the credibility of the Commission's management framework at a time when there is a growing international demand for improved scientific data to support high seas conservation measures brought about by the entry into force of the BBNJ Convention. Maintaining the status quo would therefore not only perpetuate existing weaknesses but also place WCPFC at a comparative disadvantage in the broader landscape of marine space governance.

25. These persistent verification gaps, precisely because they recur year after year, risk becoming normalised as "business as usual." Over time this creates an uneven compliance burden: some

fisheries and obligations are treated as inherently difficult to assess and are therefore quietly accepted at a lower standard of verification, while others are held to a consistently higher bar. Indeed, this has already played out in the recent work related to addressing the imbalance in observer coverage between the purse seine and longline fisheries and the use of observer data in the CMS (review of aggregate tables) and the Compliance Case File System. The result is an ongoing uneven playing field that is undermining both the perceived fairness and the actual effectiveness of the Compliance Monitoring Scheme.

26. To help CCMs and the Commission better visualise patterns of data availability, verification strength, and residual risk across CMMs, the Secretariat could be invited to explore the development of simple graphical or dashboard-style tools, or other practical means of presenting this information in a clearer and more accessible form.

Conclusion

27. The four iterations of this paper have demonstrated that the core verification gaps within the Compliance Monitoring Scheme are structural and persistent. Independent confirmation remains strong only for a narrow set of high-coverage purse seine effort limits, while the majority of quantitative limits, mitigation obligations, and high seas activities continue to depend on self-reporting by CCMs. Closing these gaps requires coordinated progress in the three areas identified in paragraph 6, above: (1) substantially increasing independent monitoring coverage in longline fisheries through higher minimum ROP observer rates and accelerated Commission-recognised electronic monitoring; (2) requiring the routine submission of vessel-specific information linked to capacity limits and baselines, together with clearer operational definitions for key terms such as “fishing for”; and (3) advancing catch documentation schemes alongside streamlined data flows for observer and transhipment reports.

28. Taken together, these measures would shift a greater proportion of obligations from self-declared statements to multi-source, independently verifiable data. They would align WCPFC more closely with the monitoring standards already being implemented by other tuna RFMOs, strengthen the credibility and effectiveness of the Compliance Monitoring Scheme, and provide the Commission with a more robust foundation for assessing compliance and ensuring the long-term sustainability of the fisheries under its mandate. Without deliberate action in these three areas, the patterns documented in this and previous papers will continue, limiting the Scheme’s ability to deliver reliable and equitable outcomes.

Recommendations

29. TCC22 is invited to recommend to the Commission that it:

    a. **note** the persistent structural gaps in independent verification identified across successive iterations of this paper, including the continued reliance on self-reporting for most catch-based and vessel-number capacity limits, mitigation obligations, and some high seas

transhipment activities, as well as the limitations arising from low longline observer coverage, incomplete vessel-specific baselines, and ambiguous operational definitions;

b. **task** TCC, in coordination with the relevant intersessional working groups, to develop and implement measures over the next three years that substantially increase independent monitoring coverage in longline fisheries, including through higher minimum ROP observer coverage rates and the accelerated finalisation of Commission-recognised electronic monitoring standards, assurance frameworks, and data recognition protocols;

c. **request** CCMs to provide vessel-specific information linked to applicable capacity limits and baselines on an annual basis through Annual Report Part 2 reporting;

d. **task** TCC23, in coordination with the relevant intersessional working groups, to develop clearer operational definitions for key terms such as “actively fishing for,” “directed at,” and “targeting,” for consideration and possible adoption by the Commission at WCPFC24;

e. **re-establish** the CDS-IWG at WCPFC23 to advance the development of catch documentation schemes and streamlined data flows for observer and transhipment reports, so that a greater proportion of obligations under the Compliance Monitoring Scheme can be verified against independent, multi-source data; and

f. **task** the Secretariat to explore development of a single, clear, concise, and transparent CMM compliance metric, which is complimentary to the RBAF, such as a threshold that shows whether compliance performance is sufficient to determine whether an expected management outcome is being achieved, as a basis for prioritising TCC’s efforts toward addressing recurrent compliance verification shortfalls.