

12th MEETING OF THE SCIENTIFIC COMMITTEE

30 September to 05 October 2024, Lima, Peru

SC 12 – Doc 12

Data Working Group status and Terms of Reference (ToR)

Secretariat

1. Introduction

The concept of a Data Working Group (DWG) within the South Pacific Regional Fisheries Management Organisation (SPRFMO) has evolved in response to the growing need for more structured and effective data management to support the organization's conservation and management objectives. Discussions regarding the formation of such a group began during the 10th Meeting of the Scientific Committee (SC10), where members identified significant data limitations including the need for standardization of data collection and reporting protocols, improving the quality and usability of data assets, and advancing electronic reporting capabilities and the necessity for improved data processes. This initiative was formalised in the 2023 Multi-Annual Workplan of the Scientific Committee (SC), which included a directive to create Terms of Reference (ToR – see Annex 1) for the DWG and prioritise the data needs of SPRFMO Members.

An inception meeting for the now established Data Working Group was held on 13 April 2023, drawing participation from 38 experts and representatives. This meeting laid the groundwork for the group's objectives, structure, and scope of work. However, there were initial challenges in defining the exact subsidiary body under which the DWG should operate, with varying opinions on whether it should fall under the SC or the Compliance and Technical Committee (CTC). Despite these discussions, there was a general agreement that the DWG would be most effective under the purview of the SC, though this arrangement may be revisited if necessary.

The DWG is still in its early stages, with ongoing efforts to refine its ToR and operational framework. The SC is encouraged to continue supporting this initiative, recognizing its potential to significantly enhance the data management capabilities of SPRFMO and its Members. Adjustments to the group's structure, mandate, or operations will be made as necessary to ensure alignment with SPRFMO's evolving needs and priorities. Draft terms of Reference were presented in [SC11-Doc12](#) Data Management Update paper, and have been included into this document as Annex 1. The group currently lacks a chairperson and the 2023 list of interested representatives may benefit from additional nominations.

This paper invites the SC to:

- **Nominate a chairperson** for the Data Working Group (DWG)
- **Provide feedback** on the potential areas of work to guide the Data Management workplan within the Secretariat.
- **Adopt the proposed Terms of Reference** for the DWG, with any necessary modifications based on feedback during the 12th meeting of the Scientific Committee.
- **Encourage Members and CNCs** to ensure that the appropriate experts are made available to participate in the DWG



2. Potential areas of work for the Data Working Group:

1. Provide input to the development of SPRFMO's improved data management infrastructure, including databases, data repositories, and data processing tools.
 - This could include a new portal to provide both public and private interfaces for managing uploads of submissions, edits to data, and reports extracting/summarising while being cognizant of Members and CNCPs data confidentiality rules.
 - Annex 2 provides a short review of the data platform under the new database services provider. It details the migration of data to the new platform, added geospatial functionality, and new data reports and reporting options. Annex 2 also provides several suggestions for Members to consider in order to enable the continued development of this platform.
2. Provide input/oversight into data related projects (e.g. development of a Transshipment notification/declarations system, integration of FAO GIES for port inspections, automation of FAO FIRMS reporting etc)
3. Provide input/support for the development and implementation of the Electronic Monitoring Reporting initiative.
4. Assess data quality for SPRFMO data (providing an understanding of completeness, consistency, accessibility and reliability etc).
5. Ensuring that data reports and analytical outputs are accurate, timely, and presented in a manner that support effective decision making by the Commission and its subsidiary bodies.
6. Organise capacity building workshops for data preparation, processing, and submissions (e.g., use of R/Python)
7. Review appropriateness of current data submissions e.g. are all required data submissions still relevant, are all desired data fields included, are data fields being consistently reported, are the reporting frequencies resulting in duplication of effort and data, etc

3. Organisation of work

The Data Working Group (DWG) will report to both the Scientific Committee (SC) and the Compliance and Technical Committee (CTC), ensuring its work supports both scientific assessments and regulatory compliance. Reporting to the SC allows the DWG to enhance data quality for stock assessments and ecosystem research; while reporting to the CTC ensures data management aligns with compliance and enforcement measures. This dual structure integrates scientific integrity with regulatory functions, fostering a comprehensive approach to data management across SPRFMO.

To effectively support its dual reporting function, the DWG could hold four key meetings annually. An intersessional meeting scheduled before the Scientific Committee (SC) meeting, allowing the group to identify and prepare key data management items for presentation. A second meeting during the SC would enable real-time discussions and adjustments. Similarly, an intersessional meeting held before the Compliance and Technical Committee (CTC) meeting, followed by a meeting during the CTC. These intersessional meetings will be scheduled early enough to ensure thorough preparation and alignment with the annual meetings' agendas, enhancing coordination and responsiveness to SPRFMO's data needs.

4. Conclusion

The establishment of the Data Working Group represents a critical step in strengthening SPRFMO's data management capabilities, ensuring that the organization is equipped to meet its conservation and management objectives.

By providing expert oversight and fostering collaboration, the DWG will play a pivotal role in enhancing the quality and utility of data that underpins decision-making within SPRFMO.



Annex 1. Terms of Reference

1. The scope of the DWG's work will encompass all aspects of data management within SPRFMO, with a focus on the work of the Compliance and Technical Committee (CTC) and Scientific Commission (SC), to support other subsidiaries as appropriate, and to respond to specific requests from the Commission.
2. The DWG aims to advise the collection and delivery of data for the analysis carried by the working groups of the SC to improve the quality data to be delivered by consensus.
3. The group will be led by a chairperson, who will be responsible for setting agendas, facilitating discussions, and reporting to the SC and the Commission. Administrative support will be provided by the Secretariat, which will handle meeting logistics, document distribution, and record-keeping.
4. The DWG will be composed of experts from various domains relevant to fisheries data management, including (but not limited to):
 - a. SPRFMO Secretariat representatives responsible for coordinating data management activities
 - b. Representatives from SPRFMO Member States, CNCPs and other relevant organisations with experience in fisheries data management and/or a stake in SPRFMO's data management processes
 - c. Fisheries Scientists and Statisticians with experience in stock management and ecological modelling
 - d. IT Specialists with experience in developing and managing large-scale data systems.
5. All data made available to participants of this group, by the Secretariat, shall be treated as confidential information and used only for purposes described in these Terms of Reference.
6. The Working Group will:
 - a. Advise the Commission and its subsidiary bodies on data collection, submission, and management needs to support the work of the SPRFMO Commission.
 - b. Assess the appropriateness of data collected by the Commission and its subsidiary bodies to support SPRFMO scientific and management objectives and to improve the quality and usability of SPRFMO data assets.Specific examples may include:
 - i. Develop and evaluate data standardisation protocols and data submission templates
 - ii. Identify reporting needs/desires with a focus towards advancing electronic reporting capabilities
7. The WG shall report annually to the CTC and SC (and other subsidiary bodies and/or the Commission as appropriate) on the group's activities over the previous year as well as current data-related challenges and opportunities. The group may also hold ad hoc meetings to address urgent issues or to respond to specific requests from the SC or the Commission.



Annex 2. Review of data platform

The initial database provider (FINNZ) had its contract come to an end due to the service no longer meeting the evolving needs and the system's inherent limitations. Given the constrained timeframe to develop an alternative portal, Dragonfly was contracted to swiftly replicate the existing FINZ system, acknowledging its known limitations, to ensure continuity of service. A more advanced and improved data platform was planned for subsequent development.

Between 2023 and 2024, Dragonfly Data Science successfully completed the creation of a new data platform, effectively replacing all systems previously managed by FINZ. Key components of this new platform include:

- A replication of the previous system and [SPRFMO website] (<https://sprfmo.org>) to allow for continuity of service. This provides functionality for managing vessel registration that supports the uploading and storage of various data file types.
- A robust research database build process that consistently loads, validates, and generates reports on diverse datasets, including files submitted by members.
- A reporting system that facilitates reproducible and fully automated reporting via the [Gâteaux platform] (<https://gateaux.sprfmo.org>). Initial reports cover topics such as Jack Mackerel (SC12-JM03), Squid (SC12-SQ03), and observed captures of species of concern (SC12-Doc10).
- Direct storage of geospatial objects within the reporting database using the PostGIS database, enabling seamless access for reporting tools like QGIS.

The systems provided are all operational now, with support provided by the team at Dragonfly Data Science. Work is continuing to refine the data processing and reporting.

Additionally, VMS vessel track data is now available via API access to the CLS database. These data are now available for subsequent analysis.

Suggestions for the development of improved data and reporting platform.

1. Redevelopment of an enhanced data platform and portal to address current system limitations and to elevate the capabilities of our data management infrastructure. This initiative will not only streamline the integration, validation, and reporting of diverse datasets submitted by members but also ensure a more robust, user-friendly interface for stakeholders through advanced features such as automated reporting, dynamic geospatial data visualization, and improved data storage solutions.
2. Public facing data visualisation of key data (activity, catch, observer) on the <https://sprfmo.org> website. This visualisation would develop common presentation formats of data to improve overall communication between members and with other stakeholders and the public. The visual assets would be made available to download and cite for all fishery managers and researchers. An example is the PSC site developed by Dragonfly for displaying protected species captures information in New Zealand's EEZ: <https://protectedspeciescaptures.nz/PSCv7/released/>.
3. Continuing automation of all standard reporting for the SC, CTC and the Commission. Some of these reports have been completed. These automated reports will free up time for the data management team at SPRFMO to focus on the further improvements.
4. Creation of public and member tools for accessing key summary data of annual catch, fishing activity, observer data, and vessel information. These tools can provide prepared data in open formats (CSV) for use by researchers.
5. A detailed reconciliation report on the final reporting database to provide assurance that all data provided has been incorporated. This would include detailed tables of any grooming or linking completed in the automated processing, along with reconciliation tests to ensure that



data quality is maintained. This reporting would be used internally at SPRFMO for data management but would be available to members.

6. Transshipment records are currently stored but not processed into a validated reporting database. Historical transshipment data can be processed to provide a starting point for further transshipment data management, including incorporation into future data capture methods (APIs, mobile applications).
7. The VMS data provides an opportunity to support the compliance monitoring with linked data reports from activity, transshipment and vessel data. This enhanced reporting would augment the existing Themis system provided by CLS.