

## Leveraging Pacific Island expertise for sustainable fisheries and aquaculture: Seventh Regional Technical Meeting on Coastal Fisheries and Aquaculture

The Seventh SPC Regional Technical Meeting on Coastal Fisheries and Aquaculture (RTMCFA7) was convened as a virtual gathering – due to funding constraints – from 19 to 22 November 2024. The meeting brought together coastal fisheries scientists, fisheries officers, and technical experts from across the Pacific Islands region to address essential technical and scientific gaps, identify pressing needs and challenges, and explore emerging opportunities for advancement. The meeting addressed a broad range of critical areas, including in-depth discussions on technical challenges in aquaculture and aquatic biosecurity, and highlighted the importance of data-driven and evidence-based approaches to effective coastal fisheries management. Additionally, it explored innovative tools and technologies to reinforce food security and enhance livelihoods, focusing on sustainable development and resilience across Pacific Island communities.

The meeting was attended online by an average of 85 registered delegates each day. Forty-seven percent of registrations were from 14 SPC member countries and territories (American Samoa, Australia, Cook Islands, Fiji, French Polynesia, Guam, Kiribati, New Caledonia, New Zealand, Samoa, Solomon Islands, Tonga, Wallis and Futuna, United States of America) and 53% were observers and staff

of SPC's Fisheries, Aquaculture and Marine Ecosystems Division (FAME). The actual number of participants from SPC Pacific Island countries and territories (PICTs) was difficult to determine, as several PICT fisheries agencies staff participated via a single registration through their conference or meeting room internet connection. The diverse representation included fisheries and aquaculture officers, onboard observers, civil society representatives, and nongovernmental organisations, fostering a collaborative environment for dialogue and exchange across the Pacific. The meeting was chaired by New Zealand, under the guidance of Sarah McAviney, Lead Adviser – Pacific Ocean and Fisheries, Pacific Regional Division, Ministry of Foreign Affairs and Trade, New Zealand.

The meeting focused on a range of areas, including:

- Progress update on RTMCFA6 outcomes and actions;
- PICT priority technical needs, issues and challenges;
- Report of the 4<sup>th</sup> Community-Based Fisheries Dialogue (CBFD4);
- Enhancing data-limited coastal fisheries health assessments in Pacific small island developing states;



Coastal fisheries data collection in (left) Honiara, Solomon Islands and (right) Port Moresby, Papua New Guinea. Images: George Shedrawi, © SPC



Woman selling seaweed (*nama*) in Fiji.  
Image: © George Shedrawi, SPC.



A plenary session focused on spat collection to support aquaculture. Shown here is a Tahitian pearl oyster spat collector with scallop spat in New Caledonia.  
Image: © Antoine Teitelbaum, SPC.

- ◆ Navigating the coastal fisheries and aquaculture monitoring, control, surveillance and enforcement future;
- ◆ Coastal fisheries activity updates:
  - An update on the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) process concerning marine aquarium fishes;
  - An update on Green Climate Fund Regional Tuna Project;
  - Enhancing law and policy development for Pacific coastal fisheries and aquaculture;
- ◆ Highly instrumented fish aggregating devices (HI-FADs);
- ◆ Update on the development of the Pacific Regional Aquaculture Strategy (PRAS);

- ◆ Aquaculture updates:
  - Economic comparison of mangrove oyster longline grow-out system and traditional homemade basket system;
  - Aquaculture potential of Pacific short-fin eel *Anguilla obscura*, in a novel aquaculture system;
- ◆ Developing a regional aquaculture database: key insights from PICTs;
- ◆ Further potential of spat collection in the Pacific Islands region;
- ◆ Pacific regional assessment of climate change implications for fisheries and aquaculture – 12-year update; and
- ◆ Socioeconomic community of practice (SECoP Pasifika): What is it and how can it be useful for fisheries authorities?

The *RTMCFA7 Outcomes and Actions Report*, along with all the working and information papers and the presentations, are available on the SPC FAME RTMCFA7 website.<sup>1</sup>

<sup>1</sup> The RTMCFA7 webpage on the SPC FAME website: <https://fame.spc.int/events/RTMCFA7>



The *RTMCEA7 Outcomes and Actions Report* includes the agreed priority issues and needs to be actioned by SPC members, provides guidance to SPC's FAME's Coastal Fisheries and Aquaculture Programme, and identified the key recommendations to be taken to the 17<sup>th</sup> Heads of Fisheries (HoF17) meeting in late April 2025.

## PICT member priorities

Prior to this virtual meeting, SPC PICT members were provided with a brief questionnaire, asking them to outline their current national coastal fisheries and aquaculture priorities and technical needs, and their challenges over the last year. Submissions were received from 11 PICT members, and their responses are captured in *RTMCEA7 Information paper 3*.<sup>2</sup>

The common coastal fisheries priorities included:

- 1 **Strengthened coastal fisheries data management and decision-making:** the need for data collection, analysis, and data management; the further use of applications (Ikasavea), databases and storage; support for socioeconomic surveys and data; and more value-chain analyses.
- 2 **Enhanced training and capacity building:** the need for targeted capacity-building initiatives, including training in stock assessments, fisheries-independent surveys and data analyses, certified training for fisheries officers, fisheries species identification, fish aggregating devices (FADs), and nearshore fishing techniques.
- 3 **Support for livelihoods, fisheries development and food security:** the need for support for all aspects of anchored FADs, including funding, deployment, fishing techniques, data, monitoring, and evaluation. Post-harvest handling, marketing and analysis of commodities, as well as supplementary or alternative livelihoods were also identified priorities.
- 4 **Strengthening of legislation, policies, regulations, monitoring, control, surveillance and compliance:** the need to review and update fisheries legislation, and to develop frameworks for policies and regulations for sustainable management (including community-based management), awareness and compliance.
- 5 **Technology:** the further promotion of technology-driven solutions, especially digital tools.

The common aquaculture priorities included:

- 1 **Production opportunities:** the need to improve aquaculture infrastructure and operations, develop priority species, conduct feasibility studies for farming and integrated systems, and promote local feed production.



Fresh seafood straight from the fishing boats in Fiji.  
Image: © George Shedrawi, SPC.

- 2 **Training and capacity building:** targeted training in hatchery operations, husbandry, handling, project management, feasibility studies, and site assessments was highlighted as being essential.
- 3 **Data and monitoring systems:** members identified the need to establish aquaculture databases, monitoring systems, and traceability systems for CITES-listed species to improve management and compliance.
- 4 **Governance and policy development:** the creation and implementation of standard operating procedures for biosecurity, importation, production, and management were highlighted. Members also recognised the importance of developing climate change remediation strategies for aquaculture farms.
- 5 **Biosecurity and infrastructure:** investments in laboratory facilities, specialised equipment, and regional demonstration facilities are needed to strengthen biosecurity and support aquaculture operations.
- 6 **Capacity and technical skills:** building capacity in risk assessments, disease diagnostics, site evaluations, and technical expertise for priority and emerging species was identified as a priority.
- 7 **Input availability:** the need to increase seed production, provide sustainable start-up support, and address water quality and supply issues, as well as to promote sustainable feed options to reduce import dependency and to lower costs.

<sup>2</sup> Information paper 3: <https://www.spc.int/digitallibrary/get/ktbry>

## Fourth Community-Based Fisheries Dialogue Report to RTMCFA7

This year, the 4<sup>th</sup> Community-Based Fisheries Dialogue (CBFD4) was held (in person) in Suva, Fiji, from 12 to 13 November 2024, with a focus on the participation of community fisher representatives, civil society organisations and other non-state actors. Aydah Akao from Solomon Islands served as the convenor, and presented the *CBFD4 Outcomes and Actions Report* to RTMCFA7.<sup>3</sup>

In establishing the CBFD, HoF and regional fisheries ministers agreed that the full CBFD outcomes and actions report (including recommendations to HoF) be presented to RTMCFA. The RTMCFA plenary may pose questions and seek clarification in relation to the report from the CBFD, and the report will be included in the RTMCFA outcomes and actions report and transmitted unchanged to the HoF. As such, RTMCFA7 noted the CBFD4's recommendations to HoF17.



The need to review and update fisheries legislation, and to support awareness and compliance was addressed. Fisheries officers in Fiji. Image: Ariella D'Andrea, © SPC

## Coastal fisheries technical sessions

### *Enhancing data-limited coastal fisheries health assessments in Pacific SIDS*

An update was presented on the major advancements by SPC's CFAP Science and Database teams in developing innovative e-data tools designed to improve the collection, management and analysis of coastal fisheries data. These tools aim to support evidence-based management by providing accurate and reliable data, and insights for informed decision-making. The meeting also served as a platform for members to share their experiences in using these tools, discuss their practical applications, and explore upcoming capabilities being integrated into existing tools, as well as areas of importance including the use of artificial intelligence (AI) to assess fishery health and address challenges in data-limited fisheries. The meeting noted the critical need for capacity building in data-limited coastal fisheries assessments, and agreed to a number of actions and two recommendations to HoF17 to address data analysis needs in data-limited contexts.

### *Navigating the coastal fisheries and aquaculture monitoring, control, surveillance and enforcement future*

This session emphasised the need to foster a more robust culture of compliance within coastal fisheries through monitoring, control, surveillance and enforcement (MCSE) tools, focusing on community education, stakeholder engagement, and ongoing efforts in training, partnerships, monitoring trials, and data management to support sustainable management and conservation. After participating in breakout groups, the meeting agreed on several actions and one recommendation to HoF17 to further advance SPC's efforts in strengthening coastal fisheries compliance through expanded training programmes, strategic partnerships, innovative monitoring trials, and comprehensive data management.

### *Coastal fisheries activity updates*

SPC provided updates on the CITES proceedings for marine aquarium fish, the Green Climate Fund's Regional Tuna Project for climate resilience, and the legal and policy support for coastal fisheries management, and Pacific Small Island Developing States' negotiations on ocean and marine environmental issues, including plastic pollution from fishing gear, in collaboration with regional partners. The meeting acknowledged these updates and identified several actions and two recommendations for HoF17.

<sup>3</sup> Outcomes and Actions Report from the 4th Community-Based Fisheries Dialogue: <https://www.spc.int/digitalibrary/get/srtip>



### Highly instrumented fish aggregating devices

An update was provided on the HI-FAD project, which tested satellite buoy technologies in PICTs, showing benefits including improved anchored FAD monitoring, fishing success and ocean monitoring, but also highlighting challenges such as equipment loss and the need for proper deployment practices. The meeting noted the suggestions on best practices for selecting the correct FAD design and deployment site, attaching GPS monitoring buoys to FADs, and disseminating data from electronic technologies on anchored FADs, and emphasised the importance of careful planning and recovery strategies to maximise the effectiveness of satellite buoy technologies. The meeting encouraged PICTs to explore the opportunity of repurposing equatorial purse seine fleet echosounder buoys that have been stranded in PICTs' coastal areas, as part of an effort to enhance local fisheries monitoring while managing communication costs.



Coastal fisheries produce for sale in Suva, Fiji.  
Image: © George Shedrawi, SPC

### Aquaculture technical sessions

The meeting acknowledged the significant contribution to Pacific aquaculture of Dr Timothy Pickering, SPC FAME Principal Aquaculture Adviser, who sadly passed away in July 2024 after a valiant 10-month fight with an illness.

#### *Update on the development of the Pacific Regional Aquaculture Strategy*

SPC provided an update on the progress of the developing PRAS, and invited participants to review the draft strategy and submit final feedback by mid-December 2024. The meeting also acknowledged SPC's effort in supporting members in developing PRAS as a comprehensive framework to guide sustainable development across the Pacific, aiming to strengthen food security, livelihoods, and economic resilience. The final draft of the strategy will be presented to HoF17 for adoption.

#### *Aquaculture activity updates*

SPC presented preliminary results from a cost-benefit analysis conducted for the Fiji Ministry of Fisheries and Forests, comparing the effectiveness of two oyster growout systems: traditional homemade baskets and longline growout baskets. The meeting highlighted the need for further analysis to optimise conditions for scaling production, ensuring that the longline system remains economically viable for larger-scale operations over time, and the need to further investigate the durability, environmental sustainability, and cost-effectiveness of various types of baskets. The meeting emphasised the importance of continued technical support and capacity building, especially for women's groups and local communities involved in oyster farming.

The preliminary results were presented from a study investigating the growth rates and survival of juvenile Pacific short-finned eels (*Anguilla obscura*) within a controlled aquaculture environment in Fiji. The meeting noted the potential to explore similar studies for species found in other PICT members, drawing on the lessons learned from the Fiji study.

#### *Developing a regional aquaculture database: Key insights from PICTs*

SPC presented the current state of aquaculture data and the need for a central database to manage aquaculture data from hatcheries and farms. After breakout group discussions, the meeting endorsed the development of a regional aquaculture database, recognising it as a crucial tool for consolidating aquaculture data across PICTs to support national and regional reporting and informed decision-making. Participants emphasised the importance of this work and emphasised several key requirements that will need to be included to maximise functionality for all users. The meeting agreed on a recommendation for HoF17 to prioritise this initiative.

### *Further potential of spat collection in the Pacific Islands region*

Spat collection, a process of gathering juvenile shellfish such as oysters and clams from natural habitats to support aquaculture, was the focus of a plenary presentation and breakout group discussions. This low-cost, sustainable practice, already established for pearl oysters in isolated Pacific communities, could be expanded to rock and mangrove oysters, enhancing food security, environmental health, and economic resilience across the region. The meeting acknowledged spat collection as an accessible, low-cost aquaculture method with significant potential to support income generation, food security, and marine conservation for Pacific communities, but requiring further research and resource development. It was agreed that the establishment of regulatory frameworks and community agreements to clarify access rights, manage environmental impacts, and address challenges related to spat collection areas, infrastructure security, and potential navigation hazards, were important areas requiring attention. The importance of ensuring access to affordable financing and start-up capital to enable communities to actively engage in aquaculture programmes such as spat collection was highlighted.

### **Cross-cutting technical sessions**

#### *Pacific regional assessment of climate change implications for fisheries and aquaculture – A 10-year update*

An update was provided on the Pacific regional assessment of climate change implications for fisheries and aquaculture, which is in its final stages. This comprehensive 10-year review, funded by the Australian Department of Foreign Affairs and Trade, and the New Zealand Ministry of Foreign Affairs and Trade, involves contributions from over 50 experts. The assessment examines the impacts of climate change on coastal, oceanic, freshwater fisheries, aquaculture, livelihoods, economies, food security, and blue food systems. To ensure practical and targeted outcomes, detailed summaries with recommended adaptations are being prepared for each PICT, incorporating input from national agencies, regional organisations and other stakeholders. The final publication will be presented to HoF17 in late April 2025.

#### *Socioeconomic community of practice (SECoP Pasifika): What is it and how can it be useful for fisheries authorities?*

SPC provided an update on the recently established Socioeconomic Community of Practice (SECoP Pasifika), a

regional member of the Global Socioeconomic Monitoring Initiative for Coastal Management, which brings together experts and interested stakeholders to exchange insights and strategies for enhancing resource management in the Pacific. SECoP Pasifika was endorsed as a valuable platform for integrating socioeconomic insights into fisheries and coastal resource management, emphasising its role in supporting sustainable community livelihoods across the Pacific.

The meeting highlighted the importance of SECoP Pasifika in fostering collaborative learning and capacity building, providing access to resources, training, and expertise that enhance socioeconomic and gender-inclusive approaches within fisheries authorities.

### **Recommendations for HoF17**

The meeting discussed and agreed to seven recommendations to be transmitted to HoF17 members for their consideration in late April 2025. These are included in the *RTMCFA7 Outcomes and Actions Report*<sup>4</sup>.

### **Feedback**

Participants were asked to complete a post-RTMCFA7 survey to rate aspects of the meeting. Only 17 participants responded to the feedback survey, a 22% response rate, representing a drop both in total participation and response rate compared to RTMCFA6 (November 2023), in which 97 participants attended the meeting and 45% responded to the post-meeting survey. It should be noted that RTMCFA6 was the first fully in-person meeting for three years, whereas RTMCFA7 was a return to a fully virtual meeting due to funding constraints.

Participants were asked to rate meeting content, opportunity for feedback, participant engagement, time allocated for the sessions, virtual meeting delivery and breakout groups facilitation. The “opportunity for feedback” and “participant engagement” received an average weighted rating under 4 points, indicating potential room for improvement for these elements for future meetings. Furthermore, all general aspects were rated between 3.8 and 4.1, indicating that the satisfaction level was good, but not high.

Participants were asked to rate the meeting sessions of RTMCFA7. The sessions receiving the highest rating were “Day 1 - Summary of PICT coastal fisheries priority technical needs, issues and challenges”, “Day 1 - Enhancing data-limited coastal fisheries health assessments in Pacific SIDS” and “Day 2 - Navigating the coastal fisheries and aquaculture monitoring, control, surveillance and enforcement future”, both sessions received an average rating of 4.29 out of 5. RTMCFA6 sessions received average ratings between 4.3 to 4.6, indicating a decrease in satisfaction with the agenda compared to last year’s meeting.

<sup>4</sup> Outcomes and actions report from the 7th SPC Regional Technical Meeting on Coastal Fisheries and Aquaculture - <https://www.spc.int/digitallibrary/get/6b7ek>



### Snapshot:

- Low response rate to the post-meeting survey (22%, only 17 out of approximately 78).
- Most respondents considered they had the opportunity to provide their inputs when they wanted to.
- Most respondents considered the sessions addressed topics relevant to their countries or territories.

**Most informative:** Respondents most frequently mentioned the aquaculture sessions (especially the spat collection session), the coastal fisheries MCS, and the impacts of climate change in coastal fisheries as the most informative topics discussed during RTMCFA7.

**Least informative:** Most respondents rated all parts of the meeting informative. A few respondents mentioned the SECoP update as least informative.

Respondents were also asked to suggest topics for RTMCFA8, as well as possible timing for RTMCFA8 to avoid conflicts with other fisheries and/or aquaculture meetings. These will be considered when planning for RTMCFA8 in 2025.

## Conclusions

The participation rate of SPC member PICTs in RTMCFA7 was disappointing, with only 12 out of 22 PICTs attending. Only 11 PICTs completed the pre-meeting questionnaire on their priority technical needs, issues and challenges – the lowest response rate since this was initiated. Whether this was due to RTMCFA7 being a fully virtual meeting, SPC PICT members having too many fisheries or aquaculture meetings in 2024, a perceived decline in the usefulness of the RTMCFA meetings, a mix of these, or some other reasons, will need to be assessed. It is proposed that the need, value, format and timing of RTMCFA should be discussed at HoF17.

The next RTMCFA meeting is tentatively scheduled to be held in late 2025, funding permitting. Timing will depend on the decisions by HoF17 concerning RTMCFA. An official announcement will be sent out after HoF17 in late April 2025.

### For more information:

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Targeted training and capacity building was highlighted as being essential, including for aquaculture operations, management and techniques. Sea cucumber hatchery in Honiara, Solomon Islands. Image: Sylvester Diake, © SPC



Fish market at Port Moresby, Papua New Guinea. Image: George Shedrawi, © SPC