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**Update on Capacity Building and Stakeholder Engagement Activities for WCPFC Harvest
Strategies**

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Executive Summary

The Western and Central Pacific Fisheries Commission (WCPFC) has agreed to a workplan for the adoption of harvest strategies for skipjack, bigeye, yellowfin, and South Pacific albacore tuna. To support this workplan, the Pacific Community (SPC) has conducted workshops and consultation sessions to equip stakeholders with the knowledge necessary to make informed, science-based decisions, thereby empowering them to take ownership of the harvest strategy development process.

Following the adoption of the skipjack management procedure by WCPFC in 2022 ([CMM2022-01](#)), the primary focus shifted to South Pacific albacore. Workshop content and delivery have evolved accordingly. In addition, topics related to mixed fisheries have emerged as a key discussion point in recent workshops.

This report, building on previous capacity building updates ([Yao et al., 2024](#); [Scott et al., 2023, 2022, 2021](#)), outlines the stakeholder engagement and capacity building activities led by SPC since June 2024, highlights key progress and challenges encountered, and proposes directions for future work.

1 Introduction

The Western and Central Pacific Ocean (WCPO) contributes more than half of the global tuna catch (Hare et al., 2024). Tuna fisheries in this region generate significant economic returns and are critical to the livelihoods of Pacific Island Countries and Territories (PICTs). To ensure the long-term sustainability of these fisheries, the WCPFC has developed a harvest strategy workplan for skipjack (*Katsuwonus pelamis*), bigeye (*Thunnus obesus*), yellowfin (*Thunnus albacares*), and South Pacific albacore (*Thunnus alalunga*) (CMM2014-06; CMM2022-03).

The successful implementation of harvest strategies requires strong support and engagement from stakeholders. Therefore, one of SPC’s key focus areas has been capacity building activities to support stakeholder participation. Since 2018, SPC has been delivering workshops to build members’ capacity to participate confidently in harvest strategy decision-making.

Following the adoption of the skipjack management procedure in 2022 (CMM2022-01), SPC refocused its efforts on supporting the development of harvest strategies for South Pacific albacore and mixed fisheries. Workshop content has been updated to reflect these evolving priorities.

This paper, accompanying the previous capacity building reports (Yao et al., 2024; Scott et al., 2023, 2022, 2021), summarises SPC-led capacity building and stakeholder engagement activities delivered from June 2024 to June 2025, outlines key challenges, and proposed priorities for future activities.

2 Current Stakeholder Engagement and Capacity Building Activities

2.1 Workshops

Since June 2024, the Pacific Tuna MSE project has delivered eight workshops on harvest strategies, often in collaboration with the FFA (Table 1). These included three in-person workshops, two online workshops focused on engagement with industry stakeholders, and two in-person events held jointly with the stock assessment team.

In total, 137 participants attended the workshops, representing Pacific Island countries as well as distant water fishing nations such as the Philippines, Indonesia, and Vietnam. Among participants, 54% were male and 46% were female.

Table 1: List of workshops and consultation events provided by SPC from June 2024 to June 2025. Full-length workshops are comprehensive two- to three-day events. Consultations are shorter sessions focused on specific WCPFC topics. NA = data not available.

Start Date	Workshop Type	Benefit Country	Male	Female	Total	Persons with a Disability
8/10/2024	Online Consultation	Fiji (industry)	NA	NA	15	NA
6/11/2024	Online Consultation	United States and its territories	16	4	20	0
13/11/2024	In-person Full-length	Tonga	7	7	14	0
17/2/2025	In-person Consultation	Tuvalu	5	9	14	0
11/3/2025	In-person Full-length	Solomon Islands	10	10	20	0
16/4/2025	WPEA Workshop	WPEA	9	8	18	0
5/5/2025	SPC Stock Assessment Workshop (SAW)	SAW (Regional)	9	9	18	0
17/6/2025	In-person Full-length	Papua New Guinea	10	7	17	0
Total			66	55	137	0

2.2 Engaging with industry

One of the recent developments in our capacity building efforts is the inclusion of dedicated consultations with industry representatives. As the harvest strategy adoption process advances in the region, industry stakeholders have shown growing interest in understanding and engaging with the process.

In October and November, the Fiji Fisheries Department and United States National Oceanic and Atmospheric Administration (NOAA) separately invited us to present at workshops specifically designed for the fishing industry. Similarly, during our workshops in Tonga and the Solomon Islands, industry representatives also participated, invited by their respective fisheries departments.

This format not only strengthens industry involvement but also fosters improved communication and collaboration between industry stakeholders and national fisheries authorities.

2.3 Engagement Tool

A key component of harvest strategy decision-making is the selection of preferred management procedures (MPs) using performance indicators. To support this process, SPC developed SPAM-
PLE (<https://ofp-sam.shinyapps.io/spample/>), an interactive R Shiny application. This tool allows stakeholders to explore the results of the South Pacific albacore MSE and compare the performance of candidate MPs.

SPAMPLE has been used in training workshops and presented at SC20, SMD02, and the WCPFC Commission meeting. It has continued to evolve in response to feedback from stakeholders.

2.4 Use of Slido

Slido, an interactive meeting tool, was introduced during the SPC stock assessment workshop (SAW) and Papua New Guinea harvest strategy workshop to enhance interactivity and engagement.

The tool proved particularly effective for enabling anonymous, real-time polling and question submission, enhancing participants' engagement. During the Papua New Guinea workshop, 15 of the 17 participants actively used Slido to respond to polls or submit questions. A total of 52 questions were submitted, reflecting a high level of engagement. These questions primarily addressed key harvest strategy topics such as harvest control rules, management procedures, trigger reference points, performance indicators, and concepts like recruitment and boxplots.

Poll participation varied across sessions, with the highest response rate being 8 out of 15 participants (53%) in a single session. In addition to Q&A and polling, Slido also served as a valuable channel for collecting instant feedback on the clarity and relevance of workshop content (see example in Appendix Fig. 2).

The MSE Team will continue to experiment with and refine the use of Slido in future workshops as a tool to promote active participation and monitor the effectiveness of the workshops.

2.5 Handouts

The need to develop harvest strategy handouts to facilitate the explanation of statistical figures was repeatedly raised during workshops. In response, SPC created five visually engaging handouts that provide background on harvest strategies and explain key statistical concepts (see examples Appendix Fig. 4).

These handouts support participant learning during the workshop and serve as reference materials afterward and have received positive informal feedback.

2.6 Second Science-Management Dialogue (SMD02)

The Science-Management Dialogue (SMD) is a formal WCPFC body convened on an ad-hoc basis to support stakeholder engagement in the development of harvest strategies. Its objectives include

building capacity among WCPFC members and providing a forum for discussing technical and management issues. SPC has supported the SMD by preparing background documents and delivering technical presentations. By fostering a shared understanding of harvest strategies across the membership, the SMD plays a critical role in guiding informed decision-making.

The most recent SMD session (SMD02), held in September 2024, included discussions on candidate management procedures (MPs) for South Pacific albacore and target reference point (TRP) options for bigeye tuna. The outcomes of this dialogue have served as important guidance for the continued development of harvest strategies within the WCPFC process (WCPFC, 2024).

3 Training Outcome

3.1 Survey Result

From the eight workshops, five post-training surveys were conducted (Table. 2) to determine participant’s overall satisfaction with content, organisation, timing and engagement. The post-training survey has been designed to identify aspects of the workshop that are working well, or less well to promote continuous improvement.

The survey is facilitated online through the Survey Monkey web-application. When required (e.g. in instances where internet access or smart phones/laptops are not available), paper-based copies of the survey are also provided. The survey is administered in English, with the understanding that the target respondents are tertiary educated, technical experts who often work in English. The survey uses a five-point Likert scale to determine satisfaction in terms of agreement (see Appendix Fig.3).

From the five workshops, 87 participants had the opportunity to provide feedback via the survey. Of those 87, 42 responded (48 percent). Of those 42 respondents, 50 percent were male and 50 percent were female. Survey response rates vary, with rates as high as 75 percent and as low as 43 percent (Tab.2). Despite being fewer in number, female participants had a higher survey response rate than their male counterparts.

Workshop	Survey Respondents			Training Participants			Response Rate
	Female	Male	Total	Female	Male	Total	
Tonga	4	2	6	7	7	14	43%
Solomon Islands	7	8	15	10	10	20	75%
Australia	5	7	12	9	9	18	67%
SAW	6	7	13	8	10	18	72%
Papua New Guinea	5	4	9	6	11	17	53%

Table 2: Gender-disaggregated survey respondents, training participants, and response rates by location.

Survey results have shown high levels of satisfaction with Harvest Strategy workshops. Respondents indicated that the objectives of the workshop were clear, and the content was well-aligned to them. The sessions were seen as well organised and key concepts were easy to understand. Overall, respondents believed that they had gained new knowledge by attending the workshop and would recommend the workshop to their colleagues.

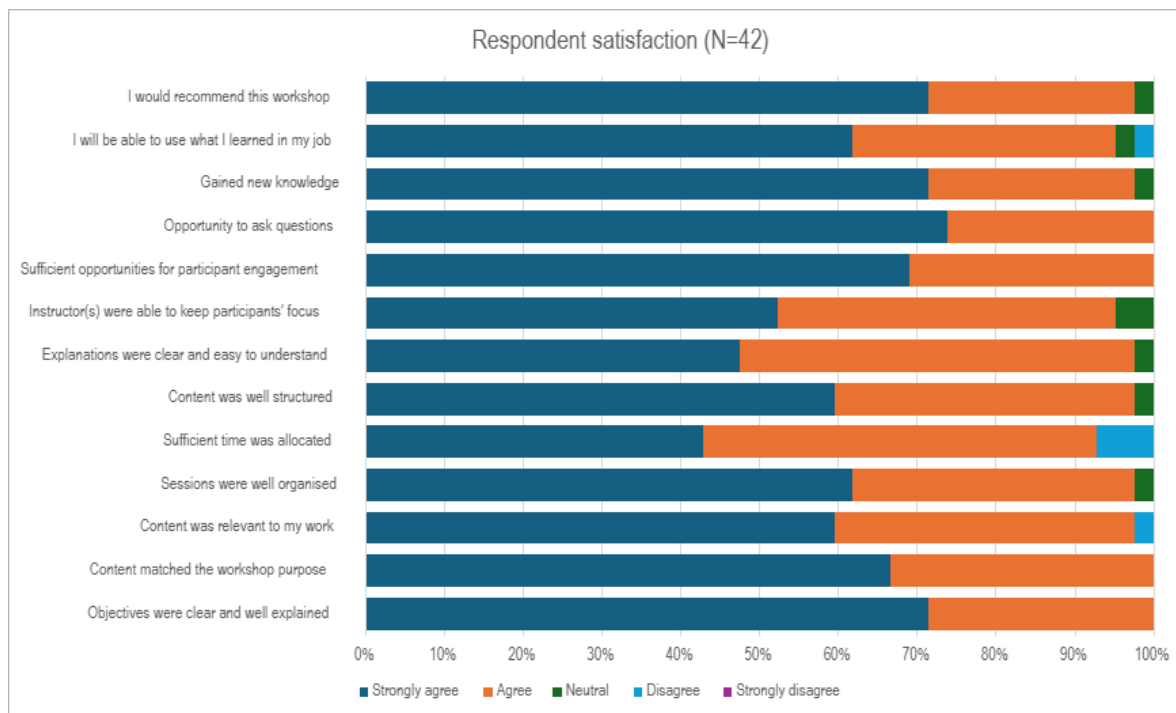


Figure 1: Responses of the post-training surveys of the five harvest strategy workshops facilitated between June 2024 to June 2025.

As shown in Fig. 1, there were very few ‘neutral’ or ‘disagree’ responses and zero ‘strongly disagree’ responses. ‘Neutral’ and ‘disagree’ responses tended to be clustered around three statements:

1. I will be able to use what I learned in my job;
2. Instructors were able to keep participant’s focus; and
3. Sufficient time was allocated.

These results are consistent with participants’ responses to qualitative survey questions and instructor’s reflections. These subjects are explored in the section below on emerging themes and challenges.

4 Emerging Themes and Challenges

The survey asked respondents to identify the most and least useful parts of the workshop, as well as any suggestions for future improvement. Several suggestions were consistently raised:

- Training length and frequency (more frequent training for longer periods of time);
- Practical exercises and examples (such as quizzes, Slido and applying learnings);
- Inviting decision-makers (to raise the profile of MSE within; governments/organisations and their prioritisation); and
- Training scope (to be country/locale specific).

In addition to these themes, instructors have faced difficulties getting the most appropriate people to attend the training. Harvest Strategy is a complex topic which seeks to enable participants to accurately interpret scientific data and use it to inform their work. The workshop is aimed at technical experts and decision makers, but often these are not the people that come to the training. This reflection may align with survey results which indicated that some participants did not think that they would be able to apply what they had learned during the training to their work. In some instances, these respondents worked in coastal fisheries – whereas the training focuses on offshore fisheries, in particular, tuna.

Instructors reflected that some countries have more appetite for Harvest Strategy workshops than others. As a result, instructors are often delivering training to the same groups of people each year. There is a concern that learning is not being fully absorbed and translating into behaviour change on the job. As a demand-driven project, MSE is responsive to the needs of stakeholders. However, resources (time, expertise, funding, etc.) are limited. A key challenge is ensuring that Harvest Strategy workshops are as effective in generating knowledge transfer as possible across the WCPFC membership to reduce repeat requests for training.

5 Improvement

Going forward, the MSE Team has developed several strategies to help overcome workshop challenges, such as:

- Inviting leaders and decision makers to participate in the final day of the workshop – to raise the profile of Harvest Strategy and its prioritisation at the national, local and industry level.
- Preparing pre-workshop and follow-up materials - to better prepare participants before the workshop and support continued learning afterward.
- Continuing to trial Slido – to increase active participation in the workshops and collect data on the kinds of content that should be included in the training materials.

- Participate in Capacity Building research – to understand the most effective ways to generate behaviour change and sustained benefits from workshops and training.

Acknowledgments

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7 Appendix

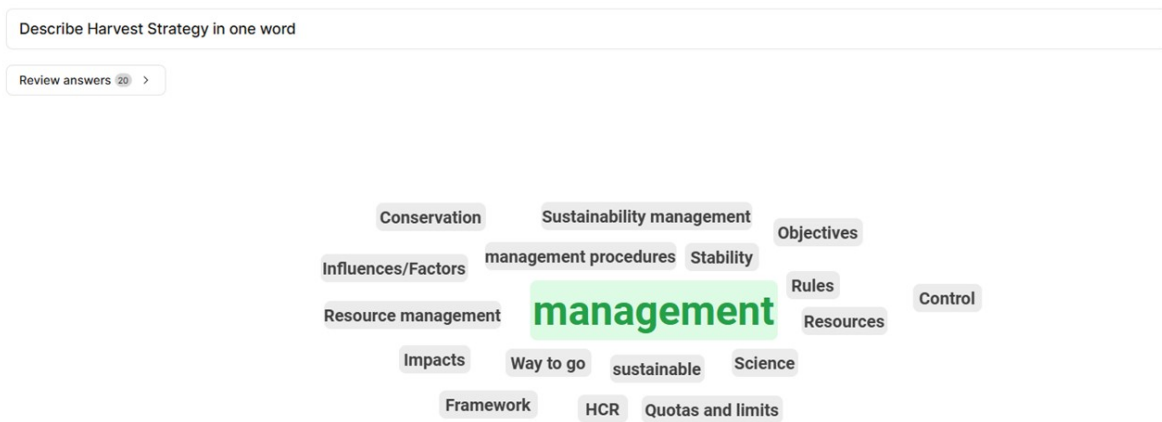


Figure 2: Descriptors of Harvest Strategy from respondents via Slido in SAW in Auckland, NZ.

* 2. **Purpose and Relevance**

To what extent do you agree with the following statements?

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
The objectives of the training were clear and explained well	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Training content matched the training purpose	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The training content was relevant to my work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure 3: Example survey question and scale.

Performance Indicators: How To Read Them?

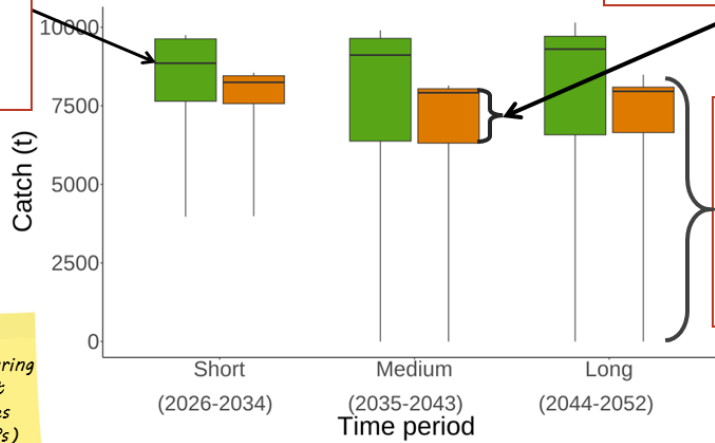
Performance indicators measure how well management procedures achieve the management objectives.

Line inside the box (median):
The middle value of the data. A higher median = higher average expected catch.

Box: Contains the middle 60% of values. Taller box = more variability.

Whiskers: Contains the middle 95% of values. Providing a sense of the overall spread of the data while excluding extreme outliers.

Focus on comparing the different coloured boxes (different MPs) to each other!



Time period: Check the performance is acceptable in the short term, medium term and long term

Figure 4: Example of the Harvest Strategy handout designed by SPC.