

Original: English

Paper reference:	Working paper 1
Title:	FAME results reporting 2021
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Summary/short description/key points:

FAME annually collates key results against its Business Plan to report to various stakeholders – including contributing to the SPC-wide results reporting, implementing partners, donor partners and the Heads of Fisheries. Continued from the 2020 COVID-19 impacts on travel and social distancing, 2021 has been a challenging year for FAME and its members. This results summary highlights the achievements against the FAME business plan's 2016-2020 objectives in the transition year between the Division's previous business plan (2016-2020), and the new one, which will begin its implementation in 2022. This will be last report on the progress against FAME Business Plan 2016-2020, including 2021 as the transition year.

FAME has updated the interactive results dashboard for members and partners to explore the results achieved by FAME between 2018 and 2021. The results dashboard is available online for members and stakeholders to view here: <https://famerresults.org/>.

Recommendations:

Members and partners are invited to note and review FAME's results for 2021 and provide any feedback.

## Overview

1. This working paper provides a summary of the performance of the Fisheries, Aquaculture and Marine Ecosystem (FAME) Division of SPC in 2021. It provides an overview of performance against the current Results Framework set out in the FAME Business Plan 2016-2020. This will be final report against the old FAME Business Plan and from next year (2023), reporting will be done against the new results framework for the *Business Plan 2022-2027*.

## About FAME

2. FAME is one of SPC's oldest Divisions, providing scientific and technical expertise to support fisheries management and sustainable development in the Pacific for over 60 years. Fisheries and aquaculture remain a fundamental and integral part of the Pacific narrative and will be for the foreseeable future. FAME's goal is that **fisheries and aquaculture resources of the Pacific region are resilient and managed sustainably for economic growth, food security, cultural and environmental conservation**.
3. FAME comprises two programmes: the Oceanic Fisheries Programme (OFP), the Coastal Fisheries and Aquaculture Programme (CFAP), both supported by the FAME Director's Office. Working with 22 Pacific Island Countries and Territories (PICTs), and supported by five 'metropolitan' members, FAME has strong partnerships with regional, sub-regional and national entities working in fisheries, aquaculture, and related areas.

## Staffing

4. At the end of 2021, FAME had 109 staff members (54 male and 55 female), an increase from 94 (50 male and 44 female) in 2020<sup>1</sup>. Additional 8 positions have been advertised as of April 2022. Notable improvements in gender balance have been made for internationally recruited roles, with women's representation increasing from 12% in 2020 to almost 50% at the end of 2021. As of February 2022, the Oceanic Fisheries Programme (OFP) had 64 staff, the Coastal Fisheries and Aquaculture Programme had 23 staff, and the Director's office had 22 staff. The majority of FAME staff (90%) are based in Noumea, with 10 located elsewhere, including Fiji and FSM.

## FAME capacity development evaluation

5. In 2021, FAME commissioned an independent evaluation to critically assess the results and approach of FAME's capacity development work over the past five years, and recommend future options. The evaluation found that FAME's capacity development has the support and appreciation of PICTs and training participants across the Pacific. The online survey demonstrated that participants across each training modality, and in the offshore, coastal and aquaculture areas, highly valued FAME capacity development, particularly as a vehicle for career progression.

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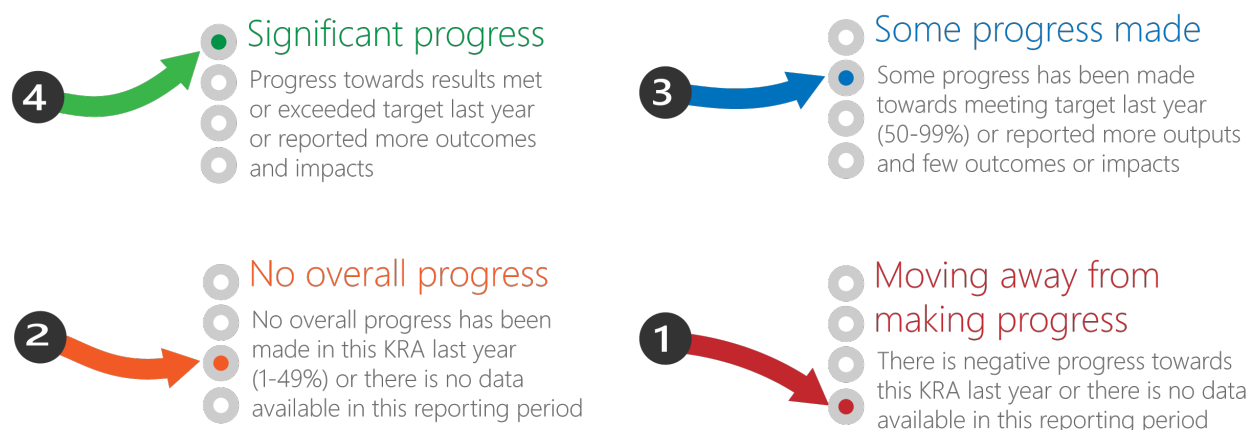
<sup>1</sup> The current FAME staff numbers include The Pacific-European Union Marine Partnership (PEUMP) programme staff implementing KRA1 and KRA3 and those within the multi-CROP KRA Programme Management Unit.

6. **COVID-19:** FAME's capacity development model has largely been predicated on international travel. With COVID-19 extinguishing this avenue, FAME pivoted quickly to providing what training it could online. The overall number of courses and participants was maintained, or in some cases increased, with key regular fixtures continuing virtually. These efforts were deemed successful by FAME's stakeholders: From the online survey, 60% of participants strongly agreed and 24% agreed that online training was successful during COVID-19.

FAME staff considered that COVID-19 accelerated the move to more online training and support; and that this should continue in future. This was supported by views from PICTs and stakeholders that online capacity development will have a greater role even once international travel resume. There was still a strong desire, however, for this to be supplemented with in-country support.

## Progress towards FAME Business Plan outcomes and objectives

7. 2020 was the final year of the 2016-2020 FAME Business Plan, however, due to COVID-19 restrictions and the delay in finalisation of the SPC Strategic Plan 2022-2031, the business plan was extended until end of 2021 in line with the SPC Transition Plan 2021. The 2021 reporting include results achieved as part of activities implemented in direct response to COVID-19.
8. Overall, FAME is tracking well in its performance against the Business Plan objectives and Key Results Area (KRAs), with a 91% budget execution rate and evidence of progress made toward 19 out of 21 KRAs.
9. In 2017, **FAME shifted its focus from reporting on activities, to more outcome-based results**, as endorsed by HoF10. As such, the key results below are those which demonstrate FAME's contribution to development outcomes across the region.
10. Table 1 summarises the ratings for each KRA in the business plan. This assessment has been made based on key results achieved in 2021 as defined in Figure 1. Annex 1 below provides further detail on results by objective<sup>2</sup>.



<sup>2</sup> Note: Results from Table 3 represents description of much of SPC's work but not a comprehensive documentation of SPC's work in the region.

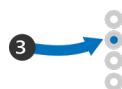
Table 1: Ratings on progress against FAME Key Results Areas, 2021

FAME key result area	Rating
<b>Outcome 1: High-quality science supports fisheries management at regional, sub regional, national and sub-national levels</b>	
<b>Objective 1: Enhance data collection and provide data management services for fisheries &amp; marine ecosystems</b>	
1.1 Enhance ecosystem, fisheries and biological data for key species	3
1.2 Data acquisition, management and dissemination, including processing, auditing and consolidating data holdings	3
1.3 Develop systems, tools and support services for standardised data collection,	4
<b>Objective 2: Provide analyses and advice for evidence-based fisheries management</b>	
2.1 Provide high quality stock assessments of key renewable oceanic resources and	3
2.2 Provide ecosystem, climate change, biodiversity, marine resource ecology and fisheries assessments, models and analyses	4
2.3 Provide integrated social science and economic analysis and advice for informed	3
2.4 Enhance existing and develop new modelling approaches to support scientific analysis and advice	4
2.5 Strengthen and expand CEAFM and support the implementation of the 'New Song for Coastal Fisheries' strategy across the region	3

2.6 Support the review and implementation of fisheries management legislation, policies, plans and MCS&E



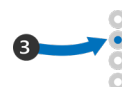
2.7 Support equitable access to shared benefits and decision-making, including women, young people and marginalised groups



## Outcome 2: High-quality technical assistance supports sustainable development

### Objective 3: Support the sustainable development of aquaculture

3.1 Enhance regional and national policy, planning, MCS&E and legislation in the



3.2 Provide technical and analytic support for aquaculture to support production and economic sustainability



3.3 Enhance the management of aquatic bio-security risks



### Objective 4: Identify diverse and sustainable marine-based livelihood options for fishing communities

4.1 Test and develop innovative small-scale subsistence and commercial fishing



4.2 Improve fish handling practices and promote value-added marine products



4.3 Support the fisheries and aquaculture sectors to mitigate and respond to disasters and strengthen risk reduction



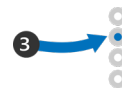
## Outcome 3: Information and capacity development empowers Pacific people to manage their fisheries

### Objective 5: Provide, and facilitate access to, fisheries information

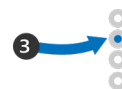
5.1 Develop information and knowledge products



5.2 Facilitate information management and circulation

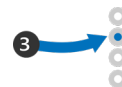


### 5.3 Strengthen MEL and communicate FAME results and activities



## Objective 6: Support capacity development in fisheries and aquaculture among PICTs

### 6.1 Design, deliver and quality assure regional vocational training in fisheries



### 6.2 Enhance capacity development in science, technology, data management, analysis and advice



## FAME's response to the impact of COVID-19

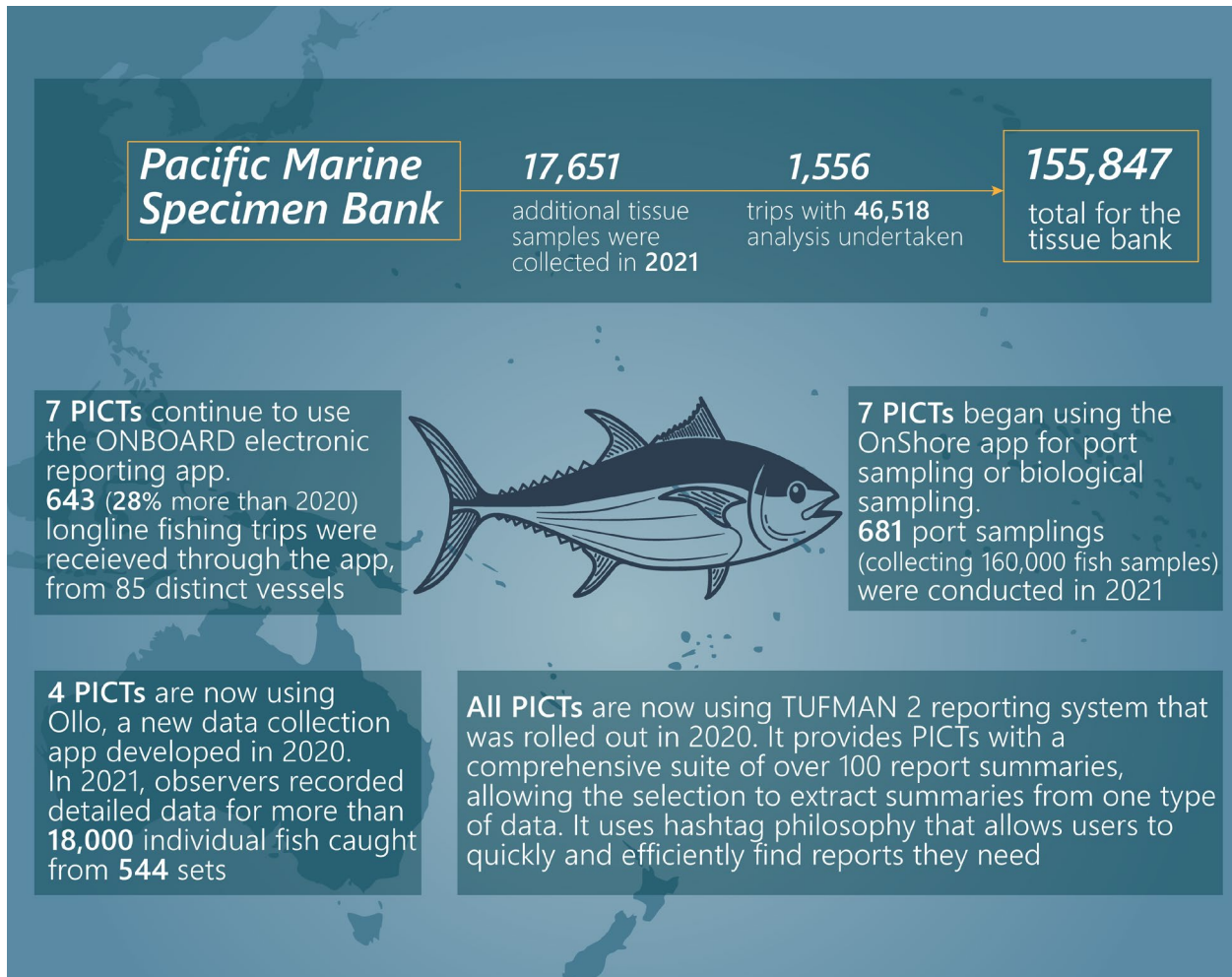
11. Due to COVID-19 travel restrictions and precautionary measures imposed by member countries and territories, FAME has adapted and innovated its ways of working and designed new initiatives to continue to be relevant in addressing the priorities and needs of member countries and territories. This included revising the 2020 budget and shifting programme delivery to a fully interactive online platforms such as Zoom, Microsoft Teams, Slack and others.
12. The 13<sup>th</sup> SPC Heads of Fisheries (HoF) Meeting was held online using the Zoom platform and was attended by 150 participants from 24 member countries and territories, as well as donor partners, development partners, NGOs, and civil society organisations. All aspects of the meeting received positive ratings, with an average of 81% of the survey participants ratings the meeting above satisfactory.

### *Selected highlights for outcomes achieved in 2021*

#### **Objective 1: Enhance data collection and provide data management services for fisheries & marine ecosystems**

13. **7,869** fish were tagged and released (23% increase compared with 2020) during the 39-days Central Pacific tagging cruise (CP15): 82% bigeye, 17% yellowfin and 1% skipjack. 166 fish (140 bigeye and 26 yellowfin) were implanted with an archival tag. Biological sampling was also undertaken on 334 fish. Genetic samples were taken from bio sampled fish of all species. 3 genetic experiments were conducted to study tissue degradation, variability between muscle sample locations and quality of samples collected with a modified tool. Live tissue biopsies were also taken from 9 oceanic white tip and 20 silky sharks. Of those sharks, 1 silky and 2 oceanic whitetip sharks were released with a satellite tag.

14. **Infographics:** Pacific Marine Specimen Bank and data collection and reporting tools



15. PICTs continue to use the 'Tails' data entry app (table-based) to support data collection. More than **18,770** trips were recorded to the app compared to **20,000** trips in 2020, bringing to a total of **70,973** trips uploaded using the app. Five years after the first 'Tails' log sheet, there are no **106** active data collectors operating in 8 PICTs, with **581** unique species logged, and **1.75 million kg** of fish recorded. This represents a significant amount of data, clearly indicating the suitability of tablet-based data collection to meet the challenge of gathering small scale fisheries data in the Pacific context. It supports management decisions by tracking and reporting of nearshore FAD effectiveness of small-scale tuna catch to the Western and Central Pacific Commission (WCPFC)



16. In 2021, **all PICTs met the July deadline for submitting their WCPFC Part 1 Report**, which indicates improvements in WCPFC Part 1 reporting requirements have been sustained since 2019.
17. The “Pathways to sustaining tuna-dependent Pacific Island economies during climate change” (published in Nature Sustainability: <https://www.nature.com/articles/s41893-021-00745-z>), a highly collaborative research on the effects of continued GHG emissions are expected to progressively drive skipjack, yellowfin and bigeye tuna from the exclusive economic zones of Pacific SIDS into the high seas, has provided members with a powerful advocacy tool such as the COP26 activities and has been provided to the IPCC. As a result of this research, members are supporting both RFMM and FFC, and Ministers have requested CROP and other partners to catalogue adaptation and mitigation actions that the fisheries sector can engage in and requested CROP partners to prepare documentation on climate change impacts on the fisheries sector. It has also enabled SPC to resecure long-term funding, including a MFAT project on climate change and the GCF in the pipeline.
18. Increased availability and use of resources in FAME's digital library. 589 documents were added to FAME's digital library and a total of 428,292 downloads recorded, compared to 399 documents and 3,003,474 downloads in 2020.
19. New online tools were developed to support coastal fisheries data collection and management including:
  - Web teaching modules were developed for training in sampling methodologies for creel and market-based surveys, centred around use of the Ikasavea application;
  - Ikasavea tablet application extended to incorporate socio-economic surveys; and
  - fish species identification from pictures using artificial intelligence for 240 fish species and work on invertebrate species was conducted (lobster, crabs, sea cucumbers).
20. In 2021, ongoing support provided to 8 PICTs with the collection of fisheries and biological data. Solomon Islands and Fiji collected data to contribute to the status of invertebrates. Fiji, Kiribati, New Caledonia, Tonga, Samoa, Vanuatu and Wallis and Futuna collected data on finfish and invertebrates through market or landing surveys. A biological sampling was conducted in New Caledonia on finfish, sea cucumber and lobster to assess size at maturity.
21. In 2021, Coastal fisheries data collection expands through a broader adoption of Ikasavea & coastal fisheries web application for market, landing and socio-economic surveys. 2,483 market stalls were surveyed in 2021, less than 2020 (4,129 stalls) due to national lockdowns, but additional data was collected for 516 trips and more than 25,500 pictures uploaded. Multi-year logbook data (11,576 trips) and socio-economic surveys (13,202 households) have also been imported into the system.

## Objective 2: Provide analyses and advice for evidence-based fisheries management

22. In 2020, total catch of tuna in the Western and Central Pacific Ocean (WCPO) totalled more than 2.7 million metric tonnes, which constituted around 55% of the global tuna catch. All four key commercial tuna stocks - skipjack, yellowfin, bigeye and South Pacific albacore – have been recently assessed and



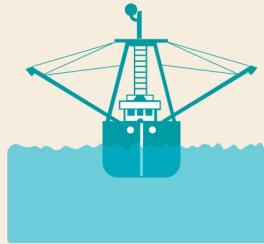
are above agreed sustainable levels. This accomplishment is not matched by any other regional ocean in the world. The healthy status of WCPO tuna stocks is attributed to the management of the fishery through the WCPFC process and its members, including the key roles played by the Pacific Island member countries and subregional fisheries agencies including the Forum Fisheries Agency (FFA) and the Parties to the Nauru Agreement (PNA). While challenges remain in rebuilding several species of shark and billfish, several important conservation efforts have been implemented.

**23. Infographics:** Contribution from tuna in the region (source: 2021 Tuna Report Card)



**\$550 million**

PICT government revenue from licence and access fees in 2019.



**\$1.7 billion**

the share of the catch value taken by FFA fleets across the WCPFC-CA.



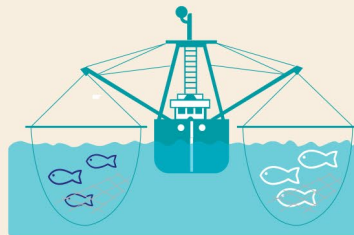
**\$2.9 billion**

value of tuna caught in FFA EEZs by fleet in 2019 (FFA and non-FFA fleets).



**4,800 people**

In the for years to 2019 employment in the tuna related industry grew by 4,800. This is the lower than target set in the the roadmap of an increase by 18,000 over 10 years.



**\$928 million**

Total exports from ffa member countries based on import data from the major export destinations in 2019.



**70% - 90%**

of workforce in the Tuna processing in the Pacific region is made up of women.

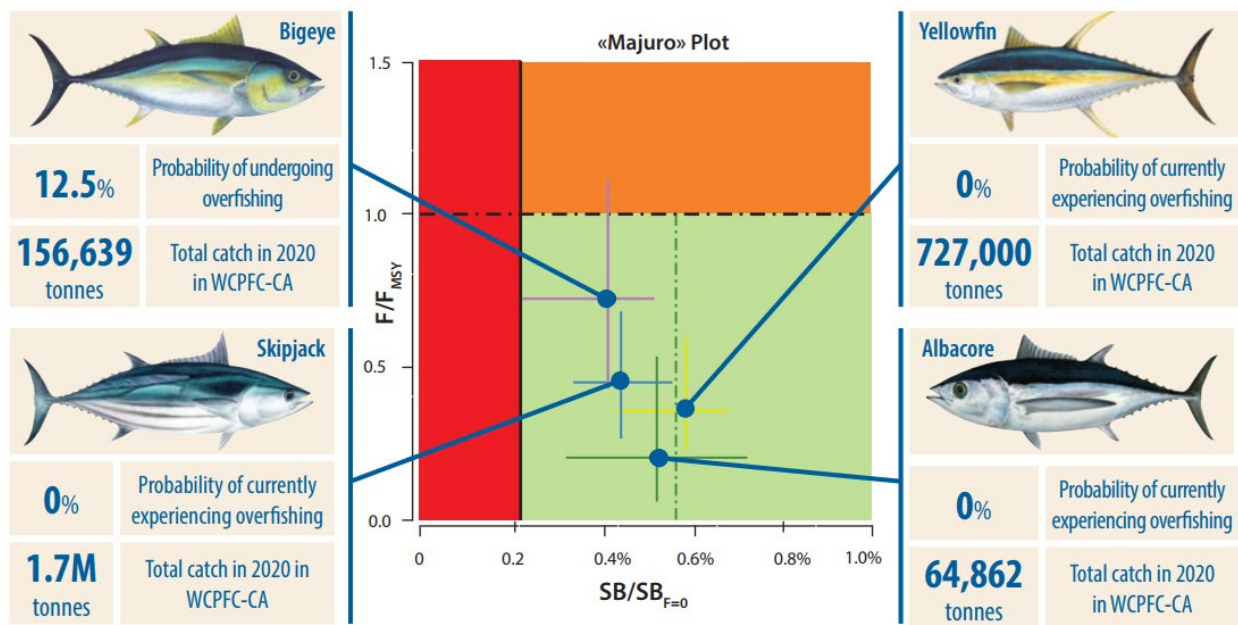
**24.** In 2021, SPC continued to provide technical support for the implementation of the Western and Central Pacific Fisheries Commission (WCPFC) harvest strategy implementation workplan. Ongoing work with the skipjack and albacore modelling, has resulted in the initial testing of a mixed fishery

Management Strategy Evaluation (MSE) framework that the 17th Scientific Committee meeting of WCPFC agreed showed promising results, and which will be further developed in 2022. A major step forward in the development of harvest strategies for Western and Central Pacific Ocean (WCPO) tuna stocks occurred at the 18th meeting of the Western and Central Pacific Fisheries Commission (WCPFC18) whereby members agreed to convene a Science Management Dialogue (SMD) on harvest strategy development in 2022. This is a key step towards decision making on critical aspects of harvest strategies.

25. Work related to drifting fish aggregation devices (dFADs) was considerably advanced, including:

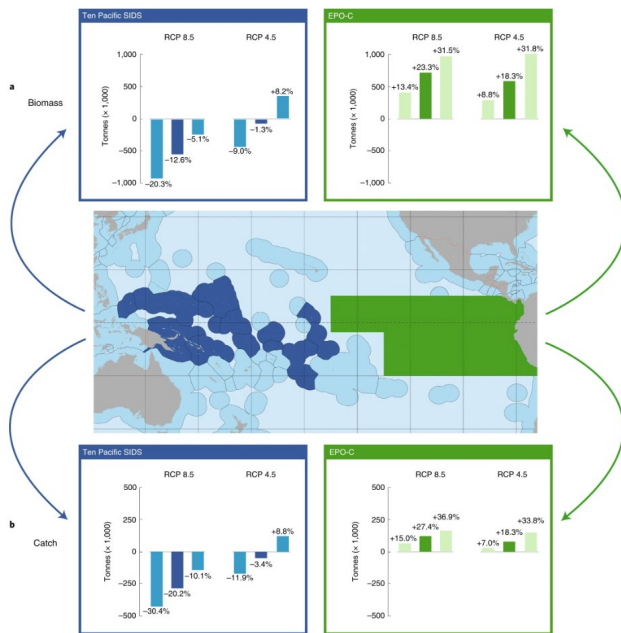
- continuing the build of a regional database on beached dFADs;
- estimating the number of dFADs deployed annually in the WCPO (Western and Central Pacific Ocean), and the number of active buoys monitored per vessel, including a scientific journal publication;
- collaboration on a Pacific-wide project to define guidelines to reduce the impact of lost and abandoned dFADs on marine turtles;
- completion of a major project exploring the potential for acoustic data from dFAD buoys to provide information on tuna abundance trends and mitigate impacts on smaller bigeye tuna;
- provision of advice on dFAD trends to the Parties to the Nauru Agreement (PNA);
- investigation of the potential for recovery of lost dFADs by the tuna industry; and
- start of a project on trialling non-entangling and biodegradable dFADs.

26. FAME's most recent stock assessments<sup>3</sup> indicate all four targeted tuna species are estimated to be in a healthy and sustainable state as none are considered to be overfished.



<sup>3</sup> [https://www.spc.int/DigitalLibrary/Doc/FAME/Reports/Hare\\_21\\_western\\_central\\_Pacific\\_tuna\\_fishery\\_stock\\_overview\\_2020.pdf](https://www.spc.int/DigitalLibrary/Doc/FAME/Reports/Hare_21_western_central_Pacific_tuna_fishery_stock_overview_2020.pdf)

## 27. Stories of change: Tuna stocks move out from PICT EEZs



**a.** Projected changes in total biomass of skipjack, yellowfin, and bigeye tuna in the combined EEZs of ten Pacific SIDS and the central eastern Pacific (EPO-C) under the RCP 8.5 and RCP 4.5 emissions scenarios in 2050 relative to the average biomass from these areas in 2009–2018.

**b.** Projected changes in total purse-seine catch in the EEZs of ten Pacific SIDS and the EPO-C under the RCP 8.5 and RCP 4.5 emissions scenarios in 2050 relative to the average catch from these areas in 2009–2018. The dark column in each histogram represents the average change from the four ESMs

This led to a think tank workshop on Tuna Climate Justice, composed of an interdisciplinary team focusing on integrative science and plans to raise greater awareness through a publication in the scientific journal, *Nature Sustainability*

The process entailed a multidisciplinary approach, bringing together renowned scientists, champions for the region – including oceanographers, environmental law and international affairs experts, senior advisers, and professionals from NGOs, IGOs and CROP agencies. SPC joined a consortium of technical agencies, including Conservation International, the Pacific Islands Forum Fisheries Agency (FFA), the Parties to the Nauru Agreement Office (PNAO), the University of Wollongong and their partners. Johann Bell, Senior Director of Tuna Fisheries at Conservation International's Center for Oceans was the lead author of this publication.

### Results and Impact

The findings of this highly collaborative research effort were published in *Nature Sustainability*. It describes how the effects of continued GHG emissions are expected to progressively drive skipjack, yellowfin, and bigeye tuna from their EEZs of Pacific SIDS, eastward into the high seas. As a result, the total biomass of these key tuna species in the combined jurisdictions of 10 Pacific SIDS is expected to decline by an average of 13% under continued high GHG emissions by 2050. The implications for already vulnerable Pacific Island economies include an average 20% decline in the purse-seine tuna catch from their waters by 2050, resulting in reductions in annual government revenue in the range of 8%-17% for some Pacific Island states. The paper describes the modelling in detail, identifies the implications for sustainable management of the world's largest tuna fishery and proposes pathways for addressing this climate justice issue.

This work has had significant reputational value for SPC, as the provider of the best possible science to our members, supporting their aspirations to get the most out of their fisheries. It has also provided members with a powerful advocacy tool to be used as leverage for access to funding, as well as feeding into COP26 activities and has been provided to the IPCC. As a result, SPC has been able to resecure long-term funding, including an MFAT project on climate change and the GCF project in the pipeline.

### Context

Tuna stocks are critical for Pacific SIDS' current and future economic development and have been sustainably managed by a cooperative agreement for decades. Fishing fees make up a large proportion of government revenue for PICTs. However, collaborative research reveals this revenue, and other important benefits fisheries provide, are at risk.

### Change process

Over the past 20 years, SPC has been working on ecosystem modelling of tuna population dynamics, in line with the WCPFC 2019 Resolution on Climate Change, driven by SPC members' needs and priorities. In 2019, SPC Policy Brief #32 was issued on this topic, which raised regional awareness of the issue.

### Objective 3: Support the sustainable development of aquaculture

28. In 2021, 14 PICTs were up to date with their annual national reports to Office International des Epizooties (OIE) concerning the status of aquatic disease. Results of the screening and targeted surveillance of notifiable OIE-listed diseases of relevance to the region in targeted commodities have been very useful to improve knowledge of the current aquatic health status in specific PICTs and has assisted these countries in their national and OIE (international) reporting. Aquatic biosecurity work, particularly in raising awareness was rated highly (especially, by stakeholders in Samoa) (PacAqua project review, 2021).
29. In 2021, technical support on business skills was provided to 17 enterprises, comprising 15 private sector enterprises and 2 farmer associations groups from 8 countries (Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Papua New Guinea, Solomon Islands, Tonga, Vanuatu) and 2 territories (French Polynesia and New Caledonia).
30. In 2021, FAME supported aquaculture farmer clusters, and community aquaculture:
- Fiji: ongoing extension support was provided to three tilapia farm cluster groups in Tailevu, Nadi and Savusavu. Within Tailevu cluster, technical support was provided to 2 tilapia farmers to develop business plans for hatchery-based tilapia farms with on-site fish breeding through an incubation system to strengthen their business.
  - PNG: Extension support was provided to tilapia farmer cluster groups at Lake Sirinumu on Sogeri Plateau, north of Port Moresby.
  - Business literacy trainings were provided to 18 trainees in Kiribati (3 women 15 men), 40 women were trained in Solomon Islands at two communities (Wagina and Maneoba) on value-addition to farmed seaweed, and 40 community pearl farmers (10 women, 30 men) were trained in Fiji from Vatulele and Urata villages in pearl meat husbandry methods and business literacy (jointly with the Wildlife Conservation Society).

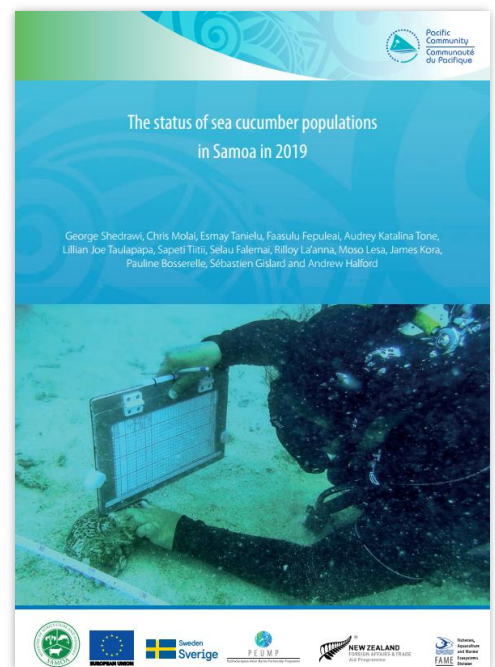
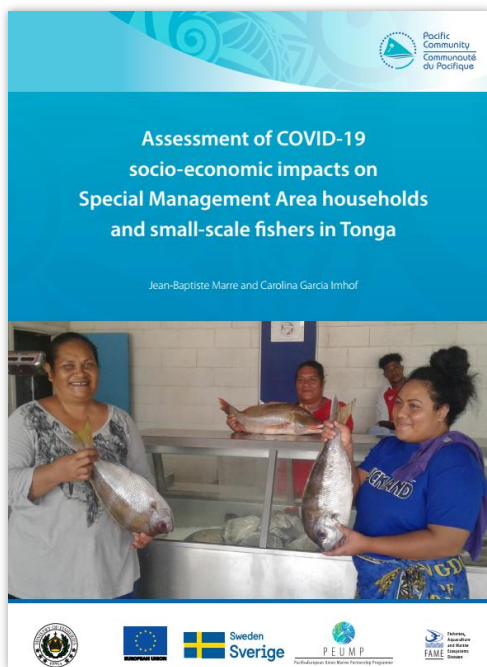
### Objective 4: Identify diverse and sustainable marine-based livelihood options for fishing communities

31. In 2021, due to COVID travel restrictions, in-person training on small scale fishing techniques was restricted to New Caledonia, where training was provided on night net fishing techniques. Remote support was provided to Tonga small scale fishers on diamondback squid and liftnet fishing. Five videos on trolling techniques were produced.
32. Anchored Fish Aggregating Device (aFAD) training was provided remotely to Cook Islands, FSM and Tuvalu on site survey, FAD rigging, deployment, maintenance, and data collection.
33. A series of anchored FAD training videos were developed in support of aFAD training.
34. Assisted FAO FishFAD project by providing advice for national implementation in Fiji, Tuvalu, and Kiribati.

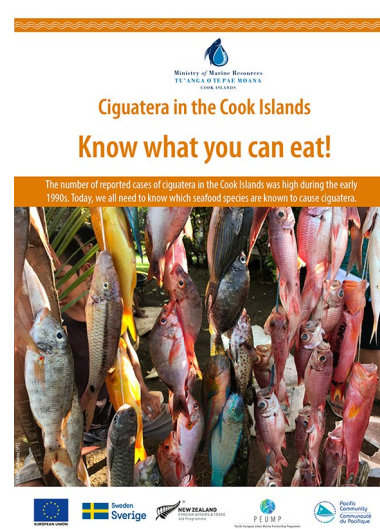


## Objective 5: Provide, and facilitate access to, fisheries information

35. In 2021, FAME increased availability and use of resources in FAME's digital library. 589 documents were added to FAME's digital library and a total of 428,292 individual downloads were recorded.
36. In 2021, FAME enhanced skills and knowledge of 16 fisheries officials in fisheries information production and dissemination
37. In 2021, FAME facilitated and supported the production of scientific reports—including (1) *Assessment of COVID-19 socio-economic impacts on SMA households and Small-scale fishers in Tonga*, (2) *Using local knowledge to guide coconut-crab (*Brigus latro*) scientific research in Fiji*, (3) *Status of sea cucumber population in Samoa* and *Gender*, and (4) *Human rights in Coastal Fisheries and aquaculture: A comparative analysis of legislation in Fiji*.



38. In 2021, FAME produced over 70 information tools in the framework of awareness campaigns targeting communities in 10 countries or states: Cook Islands, Fiji, Federated States of Micronesia (Kosrae and Pohnpei), Kiribati, Nauru, Papua New Guinea, Tonga, Tuvalu, Wallis and Futuna.



## Objective 6: Support capacity development in fisheries and aquaculture among PICTs

39. In 2021, FAME continued its capacity development activities for the benefit of PICTs through mentoring and provision of trainings. **30** different types of trainings were delivered with an aggregate participation of **1,156** (36% female and 64% male) from 22 countries and territories in the region.



Aggregate participation in FAME facilitated trainings disaggregated by section within FAME.

40. In 2021, post-training evaluations were conducted for six trainings and were completed by 92% of participants. The participants were asked whether they would incorporate what they have learned in trainings into their work. On average, 90% of the participants indicated they would incorporate what they had learnt into their work.

41. In 2021, 86% of participants who responded to post-training evaluations, rated highly FAME's approach and method of delivering trainings on various criteria - such as relevance to their job, clear objectives of the trainings, content structure, topics covered, opportunity for participants to engage and ask questions, increased knowledge and use of skills or knowledge in their work.
42. In 2021, Fiji, Solomon Islands, Tuvalu, Tonga, Vanuatu, and Papua New Guinea represented more than half of the total number of participants (68%) who participated in the training and mentoring programmes.
43. Between 2011 and 2021, the aggregate participation was **5,964**, with an average breakdown of 70% male and 30% female from member countries attended various FAME mentoring and trainings programmes, with 57% participation through the Coastal Fisheries Programme, 33% through the Oceanic Fisheries Programme<sup>4</sup> and 10% from Director's Office (including PEUMP and Information sections). Combined, more than half of the total number of participants during this period came from Fiji (21%), Tonga (12%), Kiribati (11%), Vanuatu (8%), Solomon Islands (8%) and Papua New Guinea (8%).

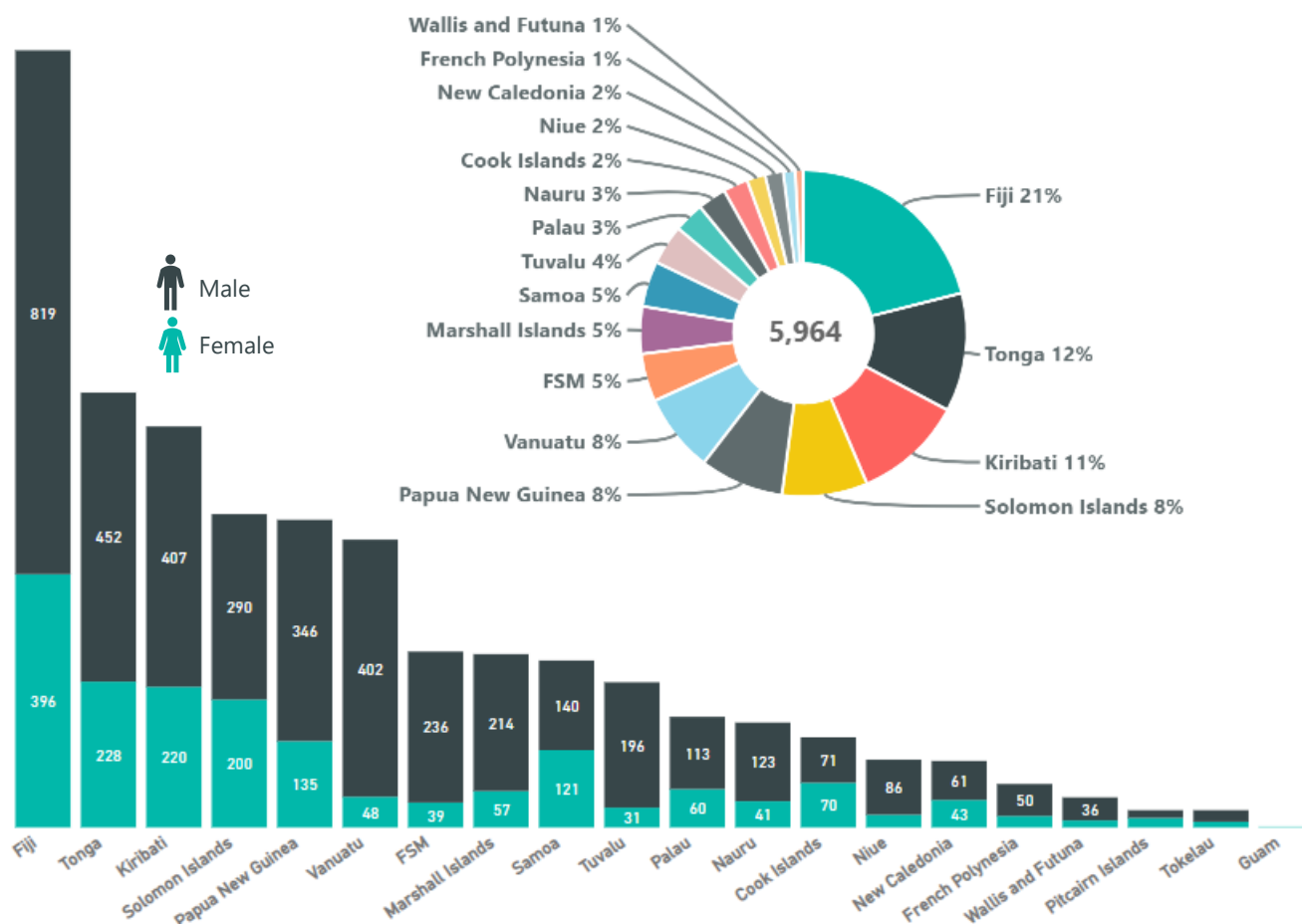


Figure 8: Training participants from member countries between 2011-2021



44. In 2021, FAME completed a major Capacity Development Evaluation and findings were presented to the HoF13. The findings and recommendations were within the context that FAME was been considered by its key stakeholders, including members as a relevant, effective, and impactful provide of capacity development.
45. Participants of the FAME capacity development evaluation rated the relevance of capacity across all modalities of development as 3.42 out of 4.0 (86%). Experiential workplace-based attachments and on-the-job training rated the most relevant at 3.63 out of 4.0 (91%).

## Annex 1: 2021 key results against FAME business plan objectives

### Outcome 1: High-quality science supports fisheries management at regional, sub-regional, national and sub-national levels<sup>5</sup>

#### Objective 1: Enhance data collection and provide data management services for the fisheries and marine ecosystems

##### Key Results Area 1.1: Enhance ecosystem, fisheries, and biological data for key species

*FEMA & CFSML sections within FAME responsible for this Results Area.*

- In 2021, ongoing support provided to 8 PICTs for the collection of fisheries and biological data. Solomon Islands and Fiji collected data to contribute to the status of invertebrates. Fiji, Kiribati, New Caledonia, Tonga, Samoa, Vanuatu and Wallis and Futuna collected data on finfish and invertebrates through market or landing surveys. A Biological sampling was conducted in New Caledonia on finfish, sea cucumber and lobster to assess size at maturity.

**Countries:** *Fiji, New Caledonia, Tonga, Samoa, Vanuatu and Wallis and Futuna*

- Ongoing collection and analysis of samples for the Pacific Marine Specimen Bank. **17,651** additional tissues samples were collected, bringing the overall total for the tissue bank to **155,847** samples collected from **1,556** trips with **46,518** analyses undertaken.

**Countries:** *Regional (ALL PICTs)*

- In 2021, **7869** fish were tagged and released (23% increase compared with 2020) during the 39-days Central Pacific tagging cruise (CP15): **82%** bigeye, **17%** yellowfin and **1%** skipjack. **166 fish** (140 bigeye and 26 yellowfin) were implanted with an archival tag. Biological sampling was also undertaken on 334 fish. Genetic samples were taken from bio sampled fish of all species. 3 genetic experiments were conducted to study tissue degradation, variability between muscle sample locations and quality of samples collected with a modified tool. Live tissue biopsies were also taken from 9 oceanic white tip and 20 silky sharks. Of those sharks, 1 silky and 2 oceanic whitetip sharks were released with a satellite tag.

**Countries:** *Regional (ALL PICTs)*

- In 2021, The “Pathways to sustaining tuna-dependent Pacific Island economies during climate change” ( published in Nature Sustainability: <https://www.nature.com/articles/s41893-021-00745-z> ) , a highly collaborative research effort which identified that the effects of continued GHG emissions are expected to progressively drive skipjack, yellowfin and bigeye tuna from the exclusive economic zones of Pacific SIDS into the high seas, provided members with a powerful advocacy tool for COP26 activities and has been provided to the IPCC. As a result of this research, members are supporting both RFMM and FFC, and Ministers have requested CROP and other partners to catalogue adaptation and mitigation actions that the fisheries sector can engage in and requested CROP to prepare documentation on climate change impacts on the fisheries sector. It has also enabled SPC to resecure long-term funding, including a MFAT project on climate change and the GCF project in the pipeline.

**Countries:** *Regional (ALL PICTs)*

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<sup>5</sup> Note: Results highlighted in this annex represent the key results of FAME’s work but not a comprehensive documentation of all activities undertaken in 2020 given the focus on reporting results and outcomes.

### Key Results Area 1.2: Data acquisition, management, and dissemination, including processing, auditing and consolidating data holdings

*FEMA, DM and CFSML sections within FAME responsible for this Results Area.*

- In 2021, SPC processed 416 log sheets (169 longline, 32 pole and line, 215 purse-seine) for fishing trips were processed by vessels flagged to 15 countries (vessel nationality: China, Ecuador, Spain, Federated States of Micronesia, Japan, Kiribati, Korea, Marshall Islands, Nauru, Papua New Guinea, Philippines, Salvador, Solomon Islands, Taiwan, Tuvalu).

**Countries:** *Regional (ALL PICTs)*

- In 2021, **1574** observer trips were processed by SPC from 11 PICTs observer programmes using TUFMAN 2 software. The target of **1000** purse seine observer workbooks entered by the end of May was also met.

**Countries:** *FSM, Fiji, French Polynesia, New Caledonia, Niue, Samoa, Solomon Islands, Tokelau and Tonga*

### Key Results Area 1.3: Develop systems, tools and support services for standardised data collection, management and reporting

*FEMA, DM and CFSML sections within FAME responsible for this Results Area.*

- In 2021, more than **18,770** trips were uploaded to the 'Tails' app, bringing to a total of **70,973** trips uploaded using the app. 5 years after the first 'Tails' log sheet, there are now **106** active data collectors operating in **8 PICTs**, with **581** unique species logged, and **1.75 million kg of fish** recorded. This data supports management decisions by tracking and reporting of nearshore FAD effectiveness of small-scale tuna catch to the Western and Central Pacific Fisheries Commission (WCPFC).

**Countries:** *Regional (ALL PICTs)*

- In 2021, there were increased availability and use of resources in FAME's digital library. **589 documents** were added to FAME's digital library and a total of **428,292 downloads recorded**, compared to 399 documents and 3,003,474 downloads in 2020.

**Countries:** *Regional (ALL PICTs)*

- In 2021, all PICTs were using the TUFMAN 2 reporting system that was rolled out in 2020. Introductory training in late 2021 ensured a quick uptake. This tool provides PICTs with a comprehensive suite of over 100 report summaries, allowing the selection to extract summaries from one type of data, or to extract reports integrating several different data types. The new tool uses the hashtag philosophy that allows users to find the report quickly and efficiently.

**Countries:** *Regional (ALL PICTs)*

- In 2021, FAME developed:
  - web modules for fish and invertebrate underwater surveys and fisher logbook surveys
  - Ikasavea tablet application extended to incorporate socio-economic surveys; and
  - fish species identification from pictures using artificial intelligence for **240 fish species** and work on invertebrate species was conducted (lobster, crabs, sea cucumbers).

**Countries:** *Regional (ALL PICTs)*

- 17 PICTs required to submit WCPFC Part 1 reports met the 13 July deadline in 2021. This means improvements in meeting WCPFC annual Part 1 reporting requirements have been sustained since 2019.

**Countries:** *Cook Islands, Federated States of Micronesia, Fiji, French Polynesia, Marshall Islands, Kiribati, Nauru, New Caledonia, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu, Wallis and Futuna*

- In 2021, **7 PICTs** continue to use the **ONBOARD** electronic reporting application. **643** (28% more than 2020) longline fishing trips were received through the app, from 85 distinct vessels.  
**Countries:** Cook Islands, Federated States of Micronesia, Fiji, French Polynesia, New Caledonia, Samoa, Tonga
- In 2021, **7 PICTs** began using the **OnShore** app for port sampling and/or biological sampling. **681** port samplings (collecting nearly **160,000** fish samples) were conducted using the app, representing an increase in around 17% in app usage compared to 2020.  
**Countries:** Federated States of Micronesia, Fiji, French Polynesia, New Caledonia, Tonga, Marshall Islands, Vanuatu
- In 2021, **4 PICTs** are now using **Oilo**, a new data collection app developed in 2020. Through the app, observers recorded detailed data for more than **18,000** individual fish caught from **544** sets.  
**Countries:** Cook Islands, French Polynesia, New Caledonia, and Tonga

## Outcome 2: High-quality technical assistance supports sustainable development

### Objective 2: Provide analysis and advice for evidence-based fisheries management

#### Key Results Area 2.1: Provide high quality stock assessments of key renewable oceanic resources and supporting data analyses

*FEMA, DM & SAM sections within FAME responsible for this Results Area.*

- In 2021, **90 papers** were delivered to the Western and Central Pacific Fisheries Commission (WCPFC), authored, or co-authored by SPC (58 to the Scientific Committee, 12 to the Commission's Regular Session and 9 to the Technical and Compliance Committee, 10 to the Tropical Tuna Measure workshops and 1 to the South Pacific albacore roadmap meeting).  
**Countries:** Regional (ALL PICTs)

#### Key Results Area 2.2: Provide ecosystem, climate change, biodiversity, marine resource ecology and fisheries assessments, models and analyses

*FEMA, DM, SAM & CFSML sections within FAME responsible for this Results Area.*

- In 2020, total catch of tuna in the Western and Central Pacific Ocean (WCPO) totaled more than **2.7 million** metric tonnes, which constituted around **55%** of the global tuna catch. All four key commercial tuna stocks - skipjack, yellowfin, bigeye and South Pacific albacore – have been recently assessed and are above agreed sustainable levels. This accomplishment is not matched by any other regional ocean in the world. The healthy status of WCPO tuna stocks is attributed to the management of the fishery through the WCPFC process and its members, including the key roles played by the Pacific Island member countries and subregional fisheries agencies including the Forum Fisheries Agency (FFA) and the Parties to the Nauru Agreement (PNA). While challenges remain in rebuilding several species of shark and billfish, several important conservation efforts have been implemented.  
**Countries:** Regional (ALL PICTs)
- In 2021, 8 PICTs benefitted from technical support to strengthen national level analysis on coastal fisheries resources:
  - National level analysis on the status of invertebrates (sea cucumber) were conducted in Fiji and Solomon Islands;
  - Training on invertebrate species surveys and analysis (coconut crab, sea cucumbers) were held in Fiji and Solomon Islands; and

- Training and support for invertebrate and finfish species data collection through market or landing surveys was conducted in Fiji, Kiribati, New Caledonia, Samoa, Tonga, Vanuatu and Wallis and Futuna.

**Countries:** *Fiji, Kiribati, New Caledonia, Samoa, Tonga, Vanuatu and Wallis and Futuna*

- In 2021, considerable work related to drifting fish aggregation devices (dFADs) was advanced, including:
- continuing to build a regional database on beached dFADs;
  - estimating the number of dFADs deployed annually in the WCPO (Western and Central Pacific Ocean), and the number of active buoys monitored per vessel, including a scientific journal publication;
  - collaboration on a Pacific-wide project to define guidelines to reduce the impact of lost and abandoned dFADs on marine turtles;
  - completion of a major project exploring the potential of acoustic data from dFAD buoys to provide information on tuna abundance trends and mitigate impacts on smaller bigeye tuna;
  - provision of advice on dFAD trends to the Parties to the Nauru Agreement (PNA);
  - investigation of the potential for recovery of lost dFADs by the tuna industry; and
  - start of a project on trialing non-entangling and biodegradable dFADs.

**Countries:** *Regional (ALL PICTs)*

- In 2021, number of deployments and active dFADs per vessel and in the whole WCPO were compiled for the last 9 years. The work, quantifying drifting Fish Aggregating Device use by the world's largest tuna fishery, was published in the highly rated ICES Journal <https://doi.org/10.1093/icesjms/fsab116>

**Countries:** *Regional (ALL PICTs)*

### Key Results Area 2.3: Provide integrated social science and economic analysis and advice for informed decision-making

*SAM, AQ & CFSML sections within FAME responsible for this Results Area.*

- In Analysis of key coastal habitats of New Caledonia was undertaken. Report published in 2021.

**Country:** *New Caledonia*

### Key Results Area 2.4: Enhance existing and develop new modelling approaches to support scientific analysis and advice

*FEMA and SAM sections within FAME responsible for this Results Area*

- In 2021, FAME continues to provide technical support for the implementation of the Western and Central Pacific Fisheries Commission (WCPFC) harvest strategy implementation workplan. Ongoing work on the skipjack and albacore modelling has resulted in the initial testing of a mixed fishery Management Strategy Evaluation (MSE) framework that the 17th Scientific Committee meeting of WCPFC agreed showed promising results and which will be further developed in 2022. A major step forward in the development of harvest strategy for Western and Central Pacific Ocean (WCPO) tuna stocks occurred at the 18th meeting of the Western and Central Pacific Fisheries Commission (WCPFC18) whereby members agreed to convene a Science Management Dialogue (SMD) on harvest strategy development in 2022. This is a key step towards decision making on critical aspects of harvest strategies.

**Countries:** *Regional (ALL PICTs)*

- In 2021, Production of a short movie highlighting harvesting strategies and their importance on tuna fisheries in the WCPO <https://www.youtube.com/watch?v=zM3B9DLmtZg>. The movie is accompanied by a poster that has now been distributed to around 30 countries in the Pacific and Asian region, with translation in French, Indonesian, Chinese, Korean, Japanese and Vietnamese.

**Countries:** *Regional (ALL PICTs)*

## Key Results Area 2.5: Strengthen and expand CEAFM and support the implementation of the 'New Song for Coastal Fisheries' strategy across the region

AQ, SAM & CFSML sections within FAME responsible for this Results Area

- In 2021, the Coastal Fishery Report Card included Household Income and Expenditure Survey (HIES) data from 13 PICTs, compared to 12 in 2020. The increase was due to the inclusion of Kiribati HIES data in 2021. The 2021 Report Card was presented to the Regional Fisheries Ministers Meeting (RFMM).

**Countries:** *Regional (ALL PICTs)*

- 2021 was the second meeting of the Regional Fisheries Ministerial Meeting (RFMM) to discuss coastal fisheries, aquaculture and other fisheries related issues not covered by the FFC Ministerial which focusses on Tuna. In that meeting, the ministers endorsed the Pacific Framework for Action on Scaling-up Community-based Fisheries Management: 2021-2025 that acknowledges members sovereignty over coastal fisheries and Pacific diversity and noted the proposed developed of the related CBFM scaling up policy brief. In endorsing the Regional Framework, Ministers emphasised the importance of coastal fisheries resources to their people and communities, essential during pandemic, and key to a sustainable recovery from the pandemic.

**Countries:** *Regional (ALL PICTs)*

- SPC 13th Heads of Fisheries was the second meeting held virtually. 2021 was the first year of the new regional information flow mechanism for coastal fisheries and aquaculture, with the Regional Technical Meeting for Coastal Fisheries and Aquaculture (incorporating the 1<sup>st</sup> Community-Based Fisheries Dialogue), reporting to the HoF, which in turn reports to the RFMM, which then feeds into the Forum Leaders Meeting.

**Countries:** *Regional (ALL PICTs)*

## Key Results Area 2.6: Support the review and implementation of fisheries management legislation, policies, plans and MCS&E

FEMA, DM, SAM & CFSML sections within FAME responsible for this Results Area

- In 2021, a policy brief and publication on human rights and gender issues in coastal fisheries and aquaculture was produced, analysing legislation in Fiji, Kiribati, Samoa, Solomon Islands, Tonga and Vanuatu (Graham and D'Andrea 2021). The study takes into account the conclusions of a virtual workshop held in 2020 in collaboration with PEUMP, where country representatives were given the opportunity to discuss the main findings of the report as it was being prepared.

**Countries:** *Fiji, Kiribati, Samoa, Solomon Islands, Tuvalu, Tonga and Vanuatu*

- In 2021, 8 PICTs benefitted from support to strengthen their national policies and legislations on coastal fisheries and aquaculture. American Samoa, Nauru, Samoa, and Vanuatu were supported with the drafting of their coastal fisheries and aquaculture legislations and Fiji, FSM, Niue and PNG were supported with their scoping work. 7 PICTs (Cook Islands, Kiribati, Tonga, RMI, Palau, New Caledonia, and French Polynesia) developed their coastal fisheries and aquaculture legislations (ECFM project review, 2021).

**Countries:** *American Samoa, Cook Islands, Fiji, French Polynesia, Federated States of Micronesia, Kiribati, Marshall Islands, Nauru, New Caledonia, Niue, Palau, Papua New Guinea, Samoa, Tonga and Vanuatu*

- In 2021, 12 PICTs made progress with the implementation of their coastal fisheries and aquaculture legislation/policies. This includes the enforcement of policies and legislations through the development of manuals and guides to promote compliance and the delivery of training activities on monitoring, control, and surveillance.  
**Countries:** *Cook Islands, Fiji, Federated States of Micronesia, French Polynesia, Kiribati, Nauru, Niue, Palau, Pitcairn Islands, Solomon Islands, Tonga, Vanuatu*
- In 2021, 3 PICTs participated in the fourth regional train-the-trainer virtual workshop on Coastal Fisheries and Aquaculture Compliance through USP. Monitoring, Control and Surveillance (MCS) workshops were held in: Kiribati (15 women, 14 men), Pitcairn (7 participants) and in 6 provinces in Vanuatu.  
**Country:** *Kiribati, Pitcairn and Vanuatu*
- In 2021, Kiribati, Pitcairn Islands, Tonga and Vanuatu were supported with the implementation and enforcement of their coastal fisheries and aquaculture regulations. This included the development of manuals and guides to promote compliance and the delivery of training activities on monitoring, control and surveillance (MCS).  
**Countries:** *Kiribati, Pitcairn, Samoa, Tonga and Vanuatu*

### Key Results Area 2.7: Support equitable access to shared benefits and decision-making, including women, young people and marginalized

*ALL FAME sections are responsible for this Results Area*

- In 2021, analysis on gender and human rights in coastal fisheries and aquaculture: A comparative analysis of legislation in Fiji, Kiribati, Samoa, Solomon Islands, Tonga and Vanuatu and Policy Brief was finalised and published.  
**Countries:** *Fiji, Kiribati, Samoa, Solomon Islands, Tonga and Vanuatu*
- The 2nd edition of the Pacific Handbook on Gender and Social Inclusion (GSI) in coastal fisheries and aquaculture was launched, which includes a module on GSI analysis. SPC supported Women in Fisheries Network (WCS) in developing a complementary GSI analysis framework to mainstream and add a GSI lens into the work of partner organisations such as Wildlife Conservation Society and Women in Fisheries Network.  
**Countries:** *Regional (ALL PICTs)*

## Objective 3: Support the sustainable development of Aquaculture

### Key Results Area 3.1: Enhance regional and national policy, planning, MCS&E and legislation in the aquaculture sector

*Aquaculture (AQ) & CFSML section within FAME responsible for this Results Area*

- In 2021, FAME provided support to Solomon Islands in developing a sea cucumber plan for Palau and a national fisheries compliance strategy, in collaboration with FFA. Nauru was also supported with their coastal fisheries regulations and Federated States of Micronesia (Yap) with its aquaculture legislation. SPC also supported Vanuatu with editing and layout for the publication of the Vanuatu National Aquaculture development and management strategy  
**Countries:** *Palau, Nauru, Federated States of Micronesia, Solomon Islands and Vanuatu*



**Key Results Area 3.2: Provide technical and analytic support for aquaculture to support production and economic sustainability**  
*Aquaculture (AQ) section within FAME responsible for this Results Area*

- In 2021, technical support on business skills were provided to 17 enterprises, comprising 15 private sector enterprises and 2 farmer associations groups from 8 countries (Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Papua New Guinea, Solomon Islands, Tonga, Vanuatu) and 2 territories (French Polynesia and New Caledonia).

**Countries:** *Fiji, Kiribati, FSM, Marshall Islands, Tonga, Vanuatu, French Polynesia, New Caledonia, Papua New Guinea, Solomon Islands*

- In 2021, Fiji, Solomon Islands and Tonga benefitted from technical advice and support to their business enterprises:
- Technical advice to a seaweed enterprise in Tonga to make a COVID-19 pivot away from luxury lotion products for export and towards edible seaweed for local consumption.
  - A community vocational training NGO in Solomon Islands assisted with the procurement of aquaculture equipment and a boat engine to enable outreach activities to up to 500 intending tilapia farmers in western Guadalcanal, Solomon Islands.
  - A pearl farm enterprise in Fiji was assisted with materials for the training of local pearl seeding technicians for round pearl production, industrial attachment training for community pearl-meat farm staff and materials for the establishment of 2 pearl-meat community farms.

**Countries:** *Fiji, Solomon Islands and Tonga*

- In 2021, 5 PICTs supported by SPC to undertake import risk assessments: Kiribati (milkfish import); Marshall Islands (Pacific threadfin polydactylus sexfilis - moi import); Samoa (red tilapia import); PNG (ornamental trade import); and Solomon Islands (genetically improved farmed tilapia-GIFT import) (PacAqua project review, 2021).

**Countries:** *Kiribati, Marshall Islands, Papua New Guinea, Samoa, and Solomon Islands*

- In 2021, 9 PICTs progressed their legislation and/or policies related to aquaculture. 5 PICTs developed aquatic biosecurity plans, supported through a total of 13 attachments at SPC. 4 PICTs implemented and enforced aquaculture regulations. This included the development of manuals and guides to promote compliance and the delivery of training activities on monitoring, control and surveillance (MCS)

**Countries:** *Cook Islands, Federated States of Micronesia (Yap and Pohnpei), Fiji, French Polynesia, Kiribati, Nauru, Niue, Palau, Solomon Islands, Marshall Islands, Papua New Guinea, Pitcairn, Tonga and Samoa*

- In 2021, 14 PICTs were up to date with their annual national reports to Office International des Epizooties (OIE) concerning the status of aquatic disease. Results of the screening and targeted surveillance of notifiable OIE-listed diseases of relevance to the region in targeted commodities have been very useful to improve knowledge of the current aquatic health status in specific PICTs and has assisted these countries in their national and OIE (international) reporting. PacAqua biosecurity work, particularly in raising awareness was rated highly (especially, by stakeholders in Samoa) (PacAqua project review, 2021).

**Countries:** *Cook Islands, Federated States of Micronesia, Fiji, French Polynesia, Guam, Kiribati, Marshall Islands, New Caledonia, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Vanuatu*

- In 2021, Ongoing support to strengthen national capacities in aquaculture data collection:
- Tuvalu, Vanuatu, Cook Islands, and New Caledonia benefitted from support related to mariculture hatchery design and engineering.

- A feasibility study was conducted in Wallis and Futuna in collaboration with the PROTEGE Project to identify potential aquaculture opportunities.
- Aquaculture officers in Fiji and Solomon Islands were trained via email and Zoom on construction and/or upgrades to tilapia brood stock facilities.
- Technical assistance was provided to New Caledonia on giant clam hatchery and husbandry and mangrove oysters
- ACIAR PARDI (an INGO) benefitted from technical advice relating to planning and project design for a tilapia marketing study conducted in the Western Division of Fiji to gain an understanding of the market chain of the product in Fiji..

**Countries:** Cook Islands, Fiji, New Caledonia, Solomon Islands, Tuvalu, Vanuatu, Wallis and Futuna

- Ongoing support to promote community pearl farming. Project partner Wildlife Conservation Society (WCS) was provided with technical support and advise on operation and crop monitoring, shell cleaning and pearl farming maintenance. WCS was also advised on diversification options such as producing edible pearl meat for food as a post-COVID adaptation, over luxury round pearl production

**Country:** Fiji

- In 2021, Ongoing support to farmers in value chain and stakeholder engagement:
- Fiji: ongoing extension support was provided to tilapia farm cluster groups in Tailevu, Nadi and Savusavu. Technical support to 2 tilapia farmers in Fiji to develop business plans for hatchery-based tilapia farms with on-site fish breeding through an incubation system to strengthen their business.
  - PNG: Extension support provided to farmer cluster groups in Sirinumu on Sogeri Plateau north Port Moresby.
  - Business literacy trainings were provided to 18 trainees in Kiribati (3 women 15 men), 40 women were trained in Solomon Islands at two locations on value-addition to farmed seaweed, and 35 community pearl farmers (10 women, 30 men) were trained in Fiji from Vatulele and Urata villages in pearl meat husbandry methods and business literacy (jointly with the Wildlife Conservation Society).

**Countries:** Fiji, Kiribati, Papua New Guinea, Solomon Islands

- In 2021, 4 aquaculture interns (all women) completed a 6-month internship programme based in Suva. Two were subsequently hired by commercial tilapia farms in supervisory roles and two continued to higher postgraduate studies at USP

**Country:** Fiji

### 3.3 Key Results Area 3.3: Enhance the management of aquatic bio-security risks

*Aquaculture (AQ) section within FAME responsible for this Results Area*

- In 2021, 2 pearl farmers in Fiji (J Hunter Pearls and USP) increased capacity and access to technology (PCR test kits) to screen pearl-meat oysters and mangrove oysters for viruses and bacteria, required for food safety of shellfish export.

**Country:** Fiji

## Objective 4: Identify diverse and sustainable marine-based livelihood options for fishing communities

### Key Results Area 4.1: Test and develop innovative small-scale subsistence and commercial fishing opportunities

CFSML section within FAME responsible for this Results Area

- In 2021, ongoing support to strengthen innovative small-scale subsistence and commercial fishing opportunities. 7 PICTs were supported with technical advice, training videos and materials relating to fish aggregating devices (FADs).

**Countries:** American Samoa, Cook Islands, Federated States of Micronesia, Fiji, Kiribati, New Caledonia, Tuvalu

## Outcome 3: Information and capacity development empowers Pacific people to manage their fisheries

### Objective 5: Provide, and facilitate access to, fisheries information

#### Key Results Area: 5.1 Develop information and knowledge products

FEMA, DM, SAM, AQ, CFSML & IM sections within FAME responsible for this Results Area

- In 2021, Supported the production of 4 scientific reports:
- Using local knowledge to guide coconut crab (*Birgus latro*) scientific research in Fiji
  - Assessment of COVID-19 socio-economic impacts on Special Management Area households and small-scale fishers in Tonga
  - The status of sea cucumber populations in Samoa in 2019
  - Gender and human rights in coastal fisheries and aquaculture: A comparative analysis of legislation in Fiji

**Countries:** Fiji, Samoa, Tonga

- In 2021, produced and disseminated close to 500 documents, including:
- 3 issues of the *Fisheries Newsletter* covering a wide range of topics related to fisheries and aquaculture in the Pacific Islands and abroad;
  - 2 issues of the *Women-in-fisheries Bulletin* focused on the growing importance of the role of women in fisheries and aquaculture;
  - 1 issue of the *Beche-de-mer Bulletin*, the only scientific publication devoted to this essential resource for the region;
  - a *Tuna Fisheries Assessment Report* that provides current information on the tuna fisheries of the western and central Pacific Ocean and the fish stocks (mainly tuna) that are impacted by them; and
  - a *Fisheries Address Book* listing over 1500 individual contacts in the region and abroad.

**Countries:** Regional (ALL PICTs)

## 5.2 Facilitate information management and circulation

*Information Management (IM) sections within FAME responsible for this Results Area*

- In 2021, Ongoing support to strengthen the dissemination and use of fisheries information products. 72 various tools were produced in the framework of national awareness campaigns:
- Cook Islands: “Share your data today” and other campaigns: 4 guide/brochures in English
  - FSM – Chuuk: “Fan Itach Chuuk” campaign: 12 posters/brochures/stickers (6 in English + 6 in local language)
  - FSM – Pohnpei: “Ahi Mour Ahi Pwukoah” campaign: 14 posters/brochures/stickers (7 in English + 7 in local language)
  - Fiji: “Fish Smart” campaign (in collaboration with LMMA): 7 posters/brochures/stickers in English
  - Kiribati: Awareness campaign on fishing regulations: 1 guide in English
  - Nauru: “FADs for family” campaign: 2 posters/brochures in English
  - Papua New Guinea: 1 Beche-de-mer processing guide in local language
  - Tonga: “SMAs management” campaign: 5 posters/brochures/stickers (2 in English + 3 in local language)
  - Tuvalu: “Safety at sea” and “Handling seafood” campaigns: 6 brochures in local language
  - Wallis: “Te Tai Mata puma Ote Maui” campaign: 16 posters/brochures/billboards in local language and 2 videos in local language

**Countries:** Cook Islands, Fiji, Federated States of Micronesia, Kiribati, Nauru, Papua New Guinea, Tonga, Tuvalu, Wallis and Futuna

- In 2021, 16 participants (12 women, 4 men) were trained in fisheries information production and dissemination.

**Countries:** Regional (ALL PICTs)

## Objective 6: Support capacity development in fisheries and aquaculture among PICTs

### Key Results Area 6.1: Design, deliver and quality assure regional vocational training in fisheries

*Information Management (IM) sections within FAME responsible for this Results Area*

- In 2021, **221** (7 women, 214 men) participants from 7 PICTs trained as part of the Regional Observer Programmes (Pacific Islands Regional Fisheries Observer Programme).

**Countries:** Fiji, French Polynesia, Nauru, New Caledonia, Samoa, Tonga, Vanuatu

- In 2021, ongoing support to strengthen regional vocational training in fisheries. 18 students (7 women, 11 men) from 4 PICTs completed the online coursework and all the assignments with the actual Competency -Based Assessment (CBAs) towards the completion of their Certificate IV at USP.

**Countries:** Fiji, Kiribati, Solomon Islands, Tonga

## Key Results Area 6.2: Enhance capacity development in science, technology, data management, analysis, and advice

Information Management (IM) sections within FAME responsible for this Results Area

- Increasing support for capacity building initiatives in the fisheries sector from participants and shareholders, with 84% of participants strongly agreed that online training was successful during COVID-19, and accredited courses and regional workshops were more effective as they were able to support more participation (*FAME Capacity Development Evaluation, 2021*).

**Country:** *Regional (ALL PICTs)*

- In 2021, Pacific Fisheries Leadership Programme (PFLP) continued adaptation of virtual formats and options allowing greater numbers of participants than originally targeted 16 PICTs and 5 regional organisations participated in several trainings under PFLP Programme:
  - 126 participants of Mini-Workshops (72 women, 54 men).
  - 27 participants completed the Inclusive Strategic Leadership course (16 women, 11 men)
  - 11 participants completed the Leading and Managing People course (6 women, 5 men)
  - 149 participants took part in coaching sessions (45 women, 19 men)

**Country:** *Regional (ALL PICTs)*

- In 2021, post-training survey result from the PFLP training showed positive behavioral changes, including how people work with and influence others, prioritise and act more purposefully, and strong evidence that these increased capabilities are starting to positively influence the performance of the participants and those they work with.

**Country:** *Regional (ALL PICTs)*

- In 2021, 90% of participants who responded to post-training evaluation, indicated they would incorporate what they had learned in trainings into their work, 89% of participants in post-training evaluations mentioned change in knowledge as a result of FAME training.

**Country:** *Regional (ALL PICTs)*

- In 2021, 86% of participants who responded to post-training evaluations, rated highly of FAME's approach and method of delivering trainings on various criteria - such as relevance to their job, clear objectives of the trainings, content structure, topics covered, opportunity for participants to engage and ask questions, increased knowledge and use of skills or knowledge in their work.

**Country:** *Regional (ALL PICTs)*

- In 2021, **728** participants from around the region participated in trainings supported by FAME as follows:
  - 110 Aquaculture (56 women, 54 men)
  - 117 Coastal Fisheries Science and Management (CFSM) (32 women, 85 men)
  - 246 Fisheries and Ecosystem Monitoring and Analysis (FEMA) (15 women, 231 men)
  - 92 Pacific-European Union Marine Partnership Programme (PEUMP) (50 women, 42 men)
  - 163 Stock Assessment and Modelling (SAM) (44 women, 119 men)

**Country:** *Regional (ALL PICTs)*

FAME results are available online, including performance stories, training dashboards and coastal fisheries report cards. Go to [www.fameresults.org](http://www.fameresults.org) to view more of FAME results.