

Pacific
Community
Communauté
du Pacifique

LOA n°22-106

LETTER OF AGREEMENT

BETWEEN

The Pacific Community,

AND

DeSilva Sea Encounter Corporation,

Pacific Princess Partnership Ltd, Western Pacific Fisheries Inc,

Freisland Fishing Company LLC, JM Fisheries LLC,

AACH Holding Company LLC, AACH Holding Company No 2 LLC, Xuk

S.A., Tumbaco Fishing Industries S.A., Tradition Mariner LLC,

(“the Fishing Companies”)

PREAMBLE

WHEREAS the Pacific Community (“SPC”) is an intergovernmental organisation founded by treaty (*the Canberra Agreement*) in 1947, owned and operated by 27 member countries and territories to serve the development, scientific and technical needs of the Pacific region; SPC is also the Science Service Provider to the Western and Central Pacific Fisheries Commission (“WCPFC”);

WHEREAS DeSilva Sea Encounter Corporation, Pacific Princess Partnership Ltd, Western Pacific Fisheries Inc, Freisland Fishing Company LLC, JM Fisheries LLC, AACH Holding Company LLC, AACH Holding Company No 2 LLC, Xuk S.A., Tumbaco Fishing Industries S.A., Tradition Mariner LLC (*“the Fishing Companies”*), are purse seine fishing companies fishing in the Western and Central Pacific Ocean (“WCPO”); and

WHEREAS SPC, as the Science Service Provider to WCPFC, has been tasked in implementing the WCPFC Project 110: Non-entangling and biodegradable fish aggregation devices (“FAD”) trial in the “WCPO”, with the goal of supporting industry’s uptake of more ecologically sustainable drifting FAD designs. The Fishing Companies, holding relevant licenses to fish in the WCPFC Convention Area, recognises the need to transition towards more ecologically sustainable FADs, and have agreed to collaborate with SPC and WCPFC to trial alternative designs.

Hereinafter referred to collectively as ‘the Parties’, SPC and the Fishing Companies have agreed as follows:

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Initials the Fishing Companies: SC JS AA

I. The Project

1.1 The purpose of this Letter of Agreement (LOA) is to set out the terms and conditions of a joint-cooperation between the Parties regarding the design and conduct of trials for non-entangling and biodegradable FADs in the WCPO, and the analyses of the data and reporting on the results ("*the Project*").

1.2 The Project ("WCPFC Project 110") has the objective of conducting trials of non-entangling and biodegradable FADs in the WCPO to provide essential information to the tuna fishing industry on the designs, types of materials, performance and cost-effectiveness of non-entangling and biodegradable FADs in the WCPO context, and support industry to increase uptake of more ecologically sustainable FAD designs.

1.3 The overarching objectives are to:

- (a) design/refine cost-feasible non-entangling and biodegradable FADs; informed by previous trials in the WCPO and other oceans, industry and national fishery agency input, and readily available (locally or shipped) suitable construction materials;
- (b) undertake at-sea experiments to compare the performance of non-entangling and biodegradable FADs to traditional FADs;
- (c) provide robust scientific advice to industry and national fisheries managers on the performance of non-entangling and biodegradable FAD designs; and
- (d) increase regional support, capacity building and partnerships on FAD research with various stakeholders in the WCPO.

1.4 The current project is scheduled to run over one and half (1.5) years, starting September 2022. The Project, as currently envisioned, will involve

- (a) SPC and the Fishing Companies designing and conducting the non-entangling and biodegradable FAD trials;
- (b) SPC conducting scientific analyses and reporting on results to the Fishing Companies, WCPFC and other stakeholders. Commercially confidential information will not be disseminated, and relevant key outputs will be developed in collaboration with the Fishing Companies. Expected outputs include a yearly report, including final analyses to relevant WCPFC or sub-regional meetings between 2022 and 2024, and if possible, a scientific peer-reviewed journal paper, with the Fishing Companies co-authorship, based on the results of analyses; and
- (c) SPC maintaining contact with the Fishing Companies and proposed Project outputs will be provided to the Fishing Companies in advance for review.

1.5 The details of the Project and expected outputs are attached in **Annex I**, Concept note.

II. Agreed activities

2.1 The Parties agree to collaborate together to jointly implement the Project within their respective mandates and agree in particular:

2.1.1 For SPC to:

- (a) discuss and collaborate with the Fishing Companies to agree on trial design(s) and logistics;
- (b) organise procurement activities linked to the materials and shipment for fifty (50) non-entangling and biodegradable FADs. The fifty (50) non-entangling and biodegradable FADs will be equally

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distributed to the ten (10) fishing companies named in the parties clause, with each fishing company receiving five (5) non-entangling and biodegradable FADs. Invoices will be sent to the Fishing Companies for reimbursement in accordance with the Schedule of Reimbursement under Article V;

- (c) organise the construction of the non-entangling and biodegradable FADs, based on the specifications agreed to with the Fishing Companies;
- (d) cover the cost for the fifty (50) satellite and echosounder buoys (Satlink, model SLX+) to be attached to the non-entangling and biodegradable FADs, including shipment. The fifty (50) satellite and echosounder buoys (Satlink, model SLX+) will be equally distributed to the ten (10) fishing companies named in the parties clause, with each fishing company receiving five (5) satellite and echosounder buoys (Satlink, model SLX+);
- (e) conduct comparative analyses of the performance of the two (2) FAD types including aggregative power and drift behaviour, catch rates per species, costs and handling requirements, effective lifespan and condition at different times-at-sea;
- (f) collate results for presentation to relevant meetings, in coordination with the Fishing Companies;
- (g) report regularly to the Fishing Companies on the status of the Project, including analyses and reporting;
- (h) organise a final workshop with the Fishing Companies to discuss results of the trial, lessons learnt and a potential industry adoption plan. If possible, the workshop will occur in person, otherwise the workshop will be held remotely; and
- (i) lead the development of the WCPFC Scientific Committee paper and of any scientific peer-reviewed publications that may arise, with input from the Fishing Companies.

2.1.2 For the Fishing Companies to:

- (a) discuss and collaborate with SPC to agree on the trial design(s) and logistics;
- (b) reimburse the cost for the materials and shipment for the fifty (50) non-entangling and biodegradable FADs, as well as the labor to construct them. SPC will advance the budget to procure and ship the materials for the fifty (50) non-entangling and biodegradable FADs, the Fishing Companies will then reimburse SPC. Each fishing company will reimburse the cost to procure and ship the materials for five (5) non-entangling and biodegradable FADs, in accordance with the Financial Arrangements in Article V;
- (c) provide a matching number of fifty (50) conventional FADs collectively, with each named fishing company in the parties clause providing five (5) conventional FADs individually, as well as the satellite and echosounder buoys (Satlink, model SLX+) attached to the conventional FADs;
- (d) cover the cost for the monthly air-time and buoy communication related to the echosounder and satellite buoys attached to the non-entangling and biodegradable FADs and to the conventional FADs in accordance with the Budget in Article IV. The communication fee will be paid till the end of the lifetime of the FADs, which have been set at a maximum of one (1) year;
- (e) inform fishing crew on the Project and the form linked to the activity and condition of the non-entangling and biodegradable FADs and the conventional FADs, to be filled by skippers;
- (f) deploy fifty (50) non-entangling and biodegradable FADs and a matching fifty (50) conventional FADs and use them in normal fishing conditions. Each fishing company named in the parties clause will deploy five (5) non-entangling and biodegradable FADs and a matching five (5) conventional FADs;

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- (g) fill-up the Project form (linked to the activity and condition of the non-entangling and biodegradable FADs and the conventional FADs) upon each visit or fishing set, to monitor FAD condition and catch;
- (h) liaise regularly with SPC on the advancement of the trials at-sea, and on eventual problems;
- (i) transmit forms (linked to the activities and condition of the non-entangling and biodegradable FADs and the conventional FADs) to SPC on a monthly basis;
- (j) coordinate with the satellite buoy service provider (Satlink) to access and facilitate provision to SPC of echosounder and position data from satellite buoys attached to the non-entangling and biodegradable FADs and the conventional FADs of the Project. Due to the confidential nature of the data, the echosounder and position data will be provided to SPC with a two (2) months delay;
- (k) review the Project outputs within appropriate timescales prior to dissemination;
- (l) attend a final workshop, including with skippers, crew members and key company staff member to discuss results of the trial, lessons learnt and a potential industry adoption plan. If possible, the workshop will occur in person, otherwise will be held remotely; and
- (m) co-author any WCPFC Scientific Committee paper and scientific peer-reviewed publications that may arise.

2.2 Both Parties agree to:

- (a) communicate regularly with each other and provide timely information on matters relating to the activities;
- (b) raise any issues of concern with the nominated focal point;
- (c) work collaboratively to ensure the Project objectives are implemented;
- (d) devote appropriate resources to ensure Project objectives are achieved; and
- (e) use their skills, expertise, know-how and experience to implement the Project.

2.3 Both Parties commit to:

- (a) implement the Project following the highest standards of ethics and conduct including a zero tolerance for fraud and corruption, harassment, bullying or sexual exploitation; and
- (b) ensure the project is socially inclusive and environmentally responsible and aligns with the values of SPC's *Social and Environmental Responsibility Policy*.

2.4 Additional responsibilities, or changes to these responsibilities, may be generated and agreed to by the Parties as part of the planning process.

2.5 The Parties also agree that the Project may evolve during the implementation and that the number of biodegradable FADs may increase, in which case the Parties will amend this LOA by means of a written amendment.

III. Timing of activities

The timing of the activities implemented under the Project is expected to be:

Description of the Activities	Start date	End date
Signing of the LOA	-	02/09/2022

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Procurement of materials and FAD construction	31/08/2022	31/01/2023
At-sea trials phase 1	01/11/2022	31/09/2023
Data analyses	01/11/2022	31/11/2023
Final report	-	31/12/2023

Note that the timing of activities may vary depending on materials availability, shipment time, as well as uncertainty linked to the fishing operations.

IV. Budget

The overall budget for the Project is anticipated to be **80,800 USD**. The details of the budget with each Parties' contribution (USD) are set out in the table below:

Budget for 50 biodegradable FADs	Price per unit (USD)	No.	The Fishing Companies contribution	The Fishing Companies contribution /reimbursement to SPC (USD)	SPC contribution (USD)
Purchase and shipment of biodegradable material and labor to construct FADs	300	50		15,000	
Buoys to track biodegradable FADs (\$1000/ SLX buoy) ¹	1,000	50			50,000
Shipping of buoys	5,000	1			5,000
Monthly air-time and buoy communication (18\$ per month/ buoy /12 months)	216 ²	50	10,800		
TOTAL (USD)			10,800	15,000	55,000
TOTAL BUDGET (USD)				80,800	

For each of the fishing company, the anticipated budget is as follow:

Fishing company	Vessel	Nb of vessels	Nb of FADs per vessel	Buoy communication (USD)	Bio-FAD materials and shipment (USD)
				Direct payment to Satlink (216 USD/ buoy/12months)	Reimbursement to SPC (300 USD/FAD)
DeSilva Sea Encounter Corporation	Sea Encounter	1	5	1,080	1,500
Pacific Princess Partnership Ltd	Pacific Princess	1	5	1,080	1,500
Western Pacific Fisheries Inc	Western Pacific	1	5	1,080	1,500

¹ The fifty (50) satellite and echosounder buoys (Satlink, model SLX+) remain the property of SPC

² Per annum

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Freisland Fishing Company LLC	Friesland	1	5	1,080	1,500
JM Fisheries LLC	Capt. Vincent Gann	1	5	1,080	1,500
AACH Holding Company LLC	Daniela	1	5	1,080	1,500
AACH Holding Company, No 2 LLC	Isabella	1	5	1,080	1,500
Xuk S.A.	Carmen D	1	5	1,080	1,500
Tumbaco Fishing Industries S.A.	Andrea 1	1	5	1,080	1,500
Tradition Mariner LLC	Evelina Da Rosa	1	5	1,080	1,500
TOTAL			50	10,800	15,000

V. Financial Arrangements and Reporting Obligations

In accordance with the Budget established in Article IV above, SPC will advance all the funds dedicated to the purchase and delivery of the equipment. All Procurement will be made by SPC in accordance with SPC Procurement Policy. The Fishing Companies will reimburse SPC the amount dedicated to the material, and shipment of the biodegradable FADs for a maximum amount of **15,000 USD** and according to the following conditions:

Schedule of reimbursable payments by the Fishing Companies				
Payment	Deliverable as per Budget	Expected date of payment	Percentage	Amount in USD
1	Advance payment	Within one (1) month upon signature of the LOA	50%	7,500
2	When the biodegradable FADs are constructed and received by the Fishing Companies	Dec 2022 to March 2023 - Upon presentation of an invoice	50%	7,500
	TOTAL REIMBURSABLE		100%	15,000

The reimbursable payments for each of the fishing company are indicated below:

Fishing company	Nb of vessels	Nb of FADs per vessel	Payment 1 (50%)	Payment 2 (50%)	Total
DeSilva Sea Encounter Corporation	1	5	750	750	1,500
Pacific Princess Partnership Ltd	1	5	750	750	1,500
Western Pacific Fisheries Inc	1	5	750	750	1,500
Freisland Fishing Company LLC	1	5	750	750	1,500
JM Fisheries LLC	1	5	750	750	1,500
AACH Holding Company LLC	1	5	750	750	1,500
AACH Holding Company, No 2, LLC	1	5	750	750	1,500
Xuk S.A.	1	5	750	750	1,500
Tumbaco Fishing Industries	1	5	750	750	1,500
Tradition Mariner LLC	1	5	750	750	1,500
TOTAL	10	50	7,500	7,500	15,000

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The funds shall be deposited in:

Account Owner: La Communauté du Pacifique - USD
Name of bank: BANQUE DE NOUVELLE CALEDONIE
Address of bank: 33 TER RUE DE L'ALMA, BP L3, 98849 NOUMEA, NOUVELLE CALEDONIE
Precise denomination of the account holder: USD
Full account number (including bank codes): 14889-00081- 81716001012-06
IBAN account code (or BIC): IBAN FR76 1488 9000 8181 7160 0101 206

The payment will be made by the Fishing Companies to SPC upon presentation of an invoice.

VI. Confidentiality and use of data

Each Party will maintain the confidentiality of any information it receives from the other Party that has been designated as confidential or which by its nature is deemed to be confidential. The Parties will only use confidential information for purposes of this LOA.

The Fishing Companies acknowledges that SPC's Information, including Personal Data, is subject to privileges and immunities accorded to SPC and that as a result any such Information is inviolable and cannot be disclosed, provided or otherwise made available to, or searched, confiscated or otherwise be interfered with by any person, unless such immunity is expressly waived in writing by SPC.

VII. Intellectual property rights and use of collected data

Pre-existing intellectual property rights remain the property of their current owner. SPC and the Fishing Companies shall be jointly entitled to all intellectual property and other proprietary rights including but not limited to patents, copyrights, and trademarks, with regard to products, reports, documents or any other materials which bear a direct relation to or are produced or prepared or collected in consequence of or in the course of the implementation of the Project under this LOA. Each Party may make use of the above-mentioned rights without the agreement of the other Party, except in case of an exclusive or non-exclusive license to a third party, for which the respective agreement of the Parties to this LOA shall be needed.

VIII. Child protection

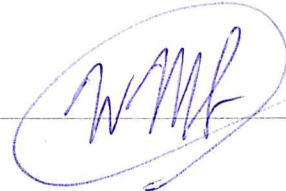
The Fishing Companies acknowledges SPC's Child Protection Policy as updated from time to time, and will use its best endeavours to act in accordance with those principles and to abide by other relevant international declarations, conventions and arrangements.

IX. Visibility

The Fishing Companies will acknowledge SPC's financial support to the Project in all promotional materials, including speeches, media statements and publications, by systematically including the following statement: with the support of SPC, accompanied by the SPC logo.

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The Parties maintain sole authority over their respective names, logos and emblems. Neither Party is authorised under this LOA to use the name, logo or emblem of the other Party in any manner other than as provided for in this LOA or in any communication plan established separately between the Parties.

X. Focal points

The focal points for this LOA are:

SPC
Dr Lauriane Escalle Fisheries Scientist, FAME The Pacific Community (SPC) BP D5 Noumea 98848 New Caledonia E: laurianee@spc.int

Fishing companies		
Randall DeSilva President DeSilva Sea Encounter Corporation 3687 Voltaire St #D San Diego, CA 92106 E: randydesilva@aol.com	Ricardo da Rosa General manager Pacific Princess Partnership Ltd 3687 Voltaire St #D San Diego, CA 92106 E: ricardodarosa01@gmail.com	Stuart Chikami Managing owner Western Pacific Fisheries Inc 4395 S. Cameron Street Unit C Las Vegas, NV 89103 E: schikami@westpacfish.com
Jim Sousa Director - Freisland Fishing Company LLC - JM Fisheries LLC 2535 Kettner Blvd #1A2 San Diego, CA 92101 E: jim.sousa@marpacifico.net	Antonio Alvarez Director - AACH Holding Company LLC - AACH Holding Company No 2, LLC - Tumbaco Fishing Industries SA - Xuk S.A. 7850 NW South River Drive Miami, Florida 33166 E: galvarezd@aol.com	Larry Da Rosa Fleet Manager Tradition Mariner LLC 5444 Bay Center Dr, Suite 211 Tampa, FL 33609 E: ldarosa1@cox.net

XI. Resolution of disputes

The Parties shall make their best efforts to amicably settle any dispute, controversy or claim arising out of this LOA. Any disputes that might arise from or in relation to this LOA, if not settled by negotiation, shall be settled by arbitration in accordance with the Arbitration Rules of the United Nations Commission on

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International Trade Law (UNCITRAL). This LOA will be governed by the general principles of international law.

XII. Privileges and immunities

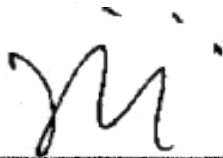
Nothing in or relating to this LOA shall be deemed a waiver, express or implied, of any of the privileges and immunities of SPC.

XIII. Entry into force, termination and amendment

This LOA will enter into force on the date of its signature by both the Parties and will remain into force until 31/12/2023. Clause VI will extend beyond the termination of the LOA.


Any changes to this LOA must be approved by both the Parties by signing a written amendment.


For SPC



Name: Dr Paula Vivili
Title: SPC Deputy Director General Science and Capability
Date: **6th October, 2022**

For the Fishing companies


WILLIAM M SARDINHA
DIRECTOR


WILLIAM M SARDINHA
CONTROLLER/AUTH REP

FOR Randall DeSilva
President
DeSilva Sea Encounter

Date: 9/14/22

FOR Ricardo da Rosa
General manager
Pacific Princess Partnership Ltd

Date: 9/14/22

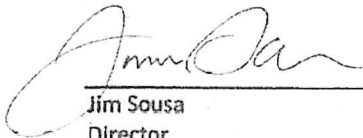
Stuart Chikami
Managing owner
Western Pacific Fisheries Inc

Date: Sept 2, 2022

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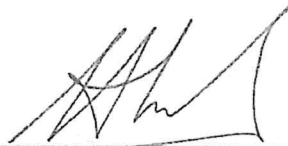
Initials Fishing companies:





Jim Sousa
Director
Freisland Fishing Company LLC
JM Fisheries LLC

Date: 9/9/22



Antonio Alvarez
Director
AACH Holding Company LLC
AACH Holding Company No 2, LLC
Tumbaco Fishing Industries SA
Xuk S.A.


Date: 9/12/22

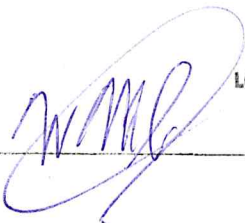


Irene Chen for

Larry Da Rosa,
Fleet Manager
Tradition Mariner LLC

Date: 10/3/2022

Initials SPC: 

Initials Fishing companies: 

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ANNEX I: Concept Note

WCPFC Project 110 Non-entangling and Biodegradable FAD trial in the WCPO

Summary

WCPFC Project 110 will conduct trials of non-entangling and biodegradable FADs (Fish Aggregation Devices) in the WCPO (Western and Central Pacific Ocean). It will provide essential information to the tuna fishing industry on the designs, types of materials, performance and cost-effectiveness of non-entangling and biodegradable FADs in the WCPO context, and support industry to increase uptake of more ecologically sustainable FAD designs.

Context

Recent estimates indicate that the number of drifting FAD deployments in the WCPO has ranged between 23,000 and 40,000 per year (SC16-MI-IP-13). Traditional FAD designs can lead to entanglement and unnecessary mortality of Species of Special Interest (SSIs; i.e. sharks, turtles). Of increasing concern is the rate of subsequent abandonment and beaching of deployed FADs, recently estimated at 41% and 7%, of tracked FADs, respectively (SC16-MI-IP-14). The resulting marine pollution, ghost fishing and ecosystem impacts on coastal environments are of concern to the communities of the region, fishery stakeholders and the social licences of the purse seine tuna industry in the WCPO. To mitigate these undesirable impacts of FAD use there is a need to transition to FADs constructed of materials that are both biodegradable and prevent entanglement of Species of Special Interest. For industry to accept and make this transition, collaborative research and development is required to design and test FADs made of biodegradable and non-entangling materials supported by industry, and to demonstrate their performance relative to the traditional designs.

Objectives

1. Design/refine cost-feasible non-entangling and biodegradable FADs; informed by previous trials in the WCPO and other oceans, industry and National fishery agency input, and readily available (locally or shipped) suitable construction materials.
2. Undertake at-sea experiments to compare the performance of non-entangling and biodegradable FADs to traditional FADs.
3. Provide robust scientific advice to industry and national fisheries managers on the performance of non-entangling and biodegradable FAD designs.
4. Increase regional support, capacity building and partnerships on FAD research with various stakeholders in the WCPO.

Project description

In recognition of the need to reduce the environmental and ecological impacts of drifting FADs in the WCPO, CMM 2018-01 (Conservation and Management Measure for bigeye, yellowfin and skipjack tuna in the western and central Pacific Ocean), includes requirements that:

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- all FADs in the WCPO should comply with low-entanglement design specifications (as described in CMM 2018-01) from January 2020; and
- the use of biodegradable materials to construct FADs is encouraged.

Recent review of observer data shows limited use of non-entanglement and/or biodegradable FAD designs in the WCPO (SC16-EB-IP03) so far. However, 2020 data are limited, and it is therefore not yet possible to identify any recent response to the requirements of CMM 2018-01. Importantly, greater support to National fisheries agencies and information to guide construction and use of 'effective' non-entanglement and biodegradable FADs will be essential to encourage and drive wider industry uptake. This will necessarily involve working closely with industry.

While trials of non-entanglement and biodegradable FADs adapted to the WCPO (SC16-EB-IP-08) have been initiated by ISSF (International Seafood Sustainability Foundation), in collaboration with industry, government and SPC, much additional work and collaborative action is required if non-entanglement/biodegradable FADs are to become the 'norm' in the WCPO. This project will build on the recent trials in the WCPO. It will provide the additional data required to provide robust information to industry on the designs, types of materials, performance and cost-effectiveness of non-entanglement and biodegradable FADs in the WCPO.

Methodology

Stage 1: *Information and planning workshop, identify FAD construction locations and initiate capacity building in design and construction.*

Initially, we will compile relevant information from previous ISSF and other studies on non-entanglement/biodegradable FADs worldwide and identify willing industry partners. Following this, in collaboration with ISSF, industry partners, National fisheries agencies, Regional Observer Programme (ROP) representatives and local FAD construction experts, we will hold a planning and information sharing workshop. The workshop will identify willing industry partners, plausible FAD materials and designs to trial and inform the design, data collection protocols and logistics of the at-sea trials. Identifying locations for the construction of non-entanglement/biodegradable FADs for the project, and ongoing supply to industry, will also be an important part of this initial workshop. Based on the recommendations of locations for FAD construction activities, capacity building activities in design and construction of biodegradable and non-entanglement FADs will be initiated as part of the construction of the prototype FAD designs, and eventually all FADs for the project.

Stage 2: *Detailed design of at-sea trials and construct FADS*

Based on the information from the planning workshop a detailed design for the at-sea trials will be developed by the lead SPC scientist in collaboration ISSF and presented back to the initial workshop attendees/industry partners/ROP representative for comment/endorsement. The detailed project design will include all aspects of the at-sea trials and clearly outline the data collection protocols and other support required from industry, National fisheries agencies and observers. If logistical feasible, at-sea experimental FAD trials will follow normal deployment practices. The trials will be co-ordinated by the lead scientist from the SPC with support from ISSF. Observer involvement and coverage will be important, and they will be supported by SPC/ISSF in monitoring and data collection. The monitoring program will be developed in collaboration with the observers and industry partners/skippers to ensure it is feasible given

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their other work activities. FAD construction will be ongoing from stage 1 once the prototype FADs are designed and endorsed by industry partners.

Stage 3: Conduct at sea trials and broader industry communications program

The project will aim to deploy a minimum of 150 'experimental' non-entangling/biodegradable FADs that will be compared with 150 'conventional' (currently used) FADs. We will aim to increase this number subject to support from industry partners and attraction of other funds. We envisage that the performance of the experimental and conventional FADs will be monitored over 8-10 months (2021-2022), and include information on FAD condition, catch history, acoustic data and drift trajectories (following approaches previously employed in ISSF projects). Comparative analyses of the performance of the two FAD types will, include; aggregative power and drift behaviour, catch rates per species, costs and handling requirements, effective lifespan and condition at different times-at-sea. Analyses of data from echo-sounder buoys deployed on the FADs will build on knowledge gained through EU funded Project 88 (FAD acoustics). Acoustic buoys will be provided by Satlink to ensure data is comparable with previous experiments that used this brand, and also the majority of the traditional FADs deployed in the region.

These trials will be performed in close partnership with industry (skippers) and the observer programme to ensure marking, deployment, identification and monitoring/data recording of FADs occurs in a consistent and coordinated way. Two levels of industry participation are anticipated: (1) the partner fleets that deploy the FADs and are actively engaged in the research depending on their fishing activities, and; (2) all other fleets that find and/or fish the experimental FADs. Information from (2) will be important to the success of the research.

A communications and engagement strategy and materials will be developed and implemented to ensure the work is well known across the purse seine fleets and communities in the WCPO, along with reporting requirements by non-partner vessels. The work will also be promoted as part of the community-based data collection on beached FADs. To support industry liaison and communications we will support a staff position at the SPC Micronesia Regional Office in Pohnpei to be a local focal point for this work.

Stage 4: Data analysis, reporting, final workshop and industry adoption plan

Data from the at-sea trials will be summarised (and analysed to the extent possible) as it becomes available and reported back to industry partners at 6 monthly intervals, including a mid-project review workshop, and to the WCPFCs FAD Management Options Intersessional Working Group (FAD-IWG) and papers to the WCPFC Science Committee. The final analyses and reporting of results will be delivered to the SC and a final workshop with industry partners, National fisheries agencies, ROP representatives. Assuming positive results of the trial, the final workshop would include a session on 'industry adoption' with an objective of developing an adoption plan. SPC is also developing a FADs communication strategy and we will build this project into that broader strategy.

Expected results

- Provide evidence for the feasibility, performance and cost-effectiveness of non-entangling/biodegradable FADs in the WCPO;
- Develop regional capacity for design and construction of non-entangling/biodegradable FADs at key locations ; and
- Apply the outcomes to promote industry uptake of non-entangling/biodegradable FADs.

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Initials Fishing companies: SC JS AA 

Partners

The Project will be coordinated and overseen by SPC as the lead investigator. Funds have been provided through WCPFC by the European Union, International Seafood Sustainability Foundation (ISSF) and the United States of America (US). SPC will collaborate with the ISSF who will provide important support in relation to industry involvement. The ISSF has extensive experience and track record in working with the purse seine industry, and strong industry relationships which should reduce the risk of poor or insufficient industry buy-in and in-kind contributions to the project. The SPC has strong expertise in working with FAD related data and conducting the related scientific analysis, as well as having direct access to a range of fishery dependent data that will be used in the project. The SPC is also leading the work on FAD acoustic research in the WCPO and has established relationships with the major fleets in the purse seine industry. Fishery agency staff in each of the key locations identified as construction/distribution points for the FADs will receive salary support from the project to cover their involvement as focal officers for this work.

Expected timeline

Activity	2022												2023												2024											
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8				
Stage 1: Information and planning workshop, identify FAD construction locations and initiate capacity building in design and construction.	P	P	P	P																																
					W ₁	W ₁							W ₂	W ₂																						
Stage 2: Detailed design of at-sea trials, construct FADs						C	C	C	C					C	C	C																				
Stage 3: Conduct at sea trials and broader industry communications program										D ₁	D ₁	D ₁	D ₁	S ₁	S ₁	S ₁	S ₁	S ₁	S ₁	S ₁	S ₁															
																D ₂	D ₂	D ₂	D ₂	S ₂	S ₂	S ₂	S ₂	S ₂	S ₂	S ₂	S ₂	S ₂	S ₂	S ₂	S ₂	S ₂				
Stage 4: Data analysis, reporting, final workshop and industry adoption plan							SC											A	A	SC					A	A	A	A	A	A	A	A	A	A	A	SC

P = Planning and review of previous trials and materials/designs, contact companies, observer programs, etc.

W = workshop (if travel allows)

C = Construction (on-site, of if remote, allow for shipment time)

D = deployment

S= drifting at-Sea

A= Analyses

SC= WCPFC SC paper

Initials SPC: *AV*

Initials Fishing companies: SC JS AA