



**SCIENTIFIC COMMITTEE  
NINETEENTH REGULAR SESSION**

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**Terms of Reference for a project to support additional work on trialling non-entangling and biodegradable FADs in the WCPO**

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**WCPFC-SC19-2023 / EB-WP-07  
21 July 2023**

**SPC-OFP and WCPFC Secretariat**



## Executive Summary

WCPFC Project 110 is identifying some of the challenges that will be encountered during the wider implementation of non-entangling and biodegradable FADs in the WCPO. These challenges include limited availability of suitable biodegradable materials within the region, extended freight times and supply chain bottlenecks for materials sourced from outside the region, lack of trained regional personnel and facilities for constructing non-entangling and biodegradable FADs - including suitable storage facilities (humidity and insect damage is a problem for biodegradable materials) - and a need to enhance the awareness and preparedness of the purse seine industry in the WCPO for transitioning to non-entangling and biodegradable FADs.

Project 110 has suffered major challenges due to COVID19, however, the work has progressed significantly since the COVID19 travel restrictions eased in Pacific countries in 2022. The project has adopted the 'jelly-FAD' design as the prototype non-entangling and biodegradable FAD to be used. Progress of Project 110 is described in the working paper (SC19-EB-WP-02) by Escalle et al. (2023). The project has been leveraged by collaborating with the International Sustainable Seafood Foundation (ISSF) on this work and other similar work in the Pacific.

While Project 110 has worked through the logistical challenges, it has also found that the level of visits and purse seine sets on individual FADs is lower than expected, meaning that larger numbers of trial jelly-FADs need to be deployed to get robust results. This work is impossible without the valuable contributions of industry partners; however, they participate as part of their day-to-day fishing operations and as such treat the trial jelly-FADs the same as standard drifting FADs; that is, they typically will not go out of their way to specifically visit and or set on the trial jelly-FADs.

Furthermore, delays due to procurement challenges and industry challenges in participating due to COVID19, have also led to delayed FAD deployments. This has meant that the recently deployed first batch of jelly-FADs will have an at-sea time that overlaps with the FAD closure, precluding any visits by purse seiners for 3 months. These issues mean the level of data obtained per jelly-FAD deployment is considerably lower than expected when planning Project 110, again highlighting the need for additional jelly-FAD deployments to increase the statistical rigour and robustness of advice from these trials.

Noting these delays and concerns, we requested a no-cost extension of the Project 110 until December 2025, with the goal to provide a project report to SC21. However, in recognising that the current project is limited in the number of jelly-FADs it can deploy, and the need for more training, exploration of local materials/availability, identification of suitable locations as hubs for construction and supply of non-entangling and biodegradable FADs and enhancement of industry engagement, the WCPFC has sought additional funds to leverage off the current work of Project 110. WCPFC, with support from SPC, will submit a project proposal to the EU to further this expansion of the work. While the proposed EU funds would cover most of the project cost, co-funding would be sought from the WCPFC budget to be approved at WCPFC20.

Appendix 1 provides a Terms of Reference for this additional project that will be expanded on in a full application to the EU.

### **We ask that the SC19:**

- consider this TOR,
- consider prioritisation of this project during its discussions on the SC 2024 work programme and budget, and
- provide a recommendation regarding support or otherwise to the WCPFC20 for provision of co-funds.

## Appendix 1. WCPFC TOR project template

Project XX	Terms of Reference for a project to support additional work on trialling and supporting development of non-entangling and biodegradable FADs in the WCPO
<b>Objectives</b>	<p>This project has the general objectives:</p> <ol style="list-style-type: none"> <li>1. To enhance WCPFC project 110 with the deployment of additional non-entangling and biodegradable FADs to increase the robustness of the results and related management and industry advice.</li> <li>2. To increase the regional capacity to support industry uptake and use of non-entangling and biodegradable FADs in the WCPO.</li> </ol>
<b>Rationale</b>	<p>This project aims to build on the current WCPFC project 110. Project 110 is discovering the highly challenging nature that implementing drifting non-entangling and biodegradable FADs in the WCPO presents. These challenges include limited regional materials availability, high freight time and supply chain bottlenecks for materials sourced from outside the region, lack of trained regional personal and facilities for constructing non-entangling and biodegradable FADs, including suitable storage facilities, and a general unpreparedness and in some cases complacency of the purse seine industry in the WCPO for transitioning to non-entangling and biodegradable FADs.</p> <p>Project 110 has also recognised that the level of visits and purse seine sets on individual FADs is lower than expected. Industry partners involved in the Project 110 do so as part of their day-to-day fishing operations and treat the trial FADs the same as standard drifting FADs; that is, they typically will not go out of their way to disproportionately visit and or set on the trial FADs. Furthermore, delays due to procurement challenges and industry inability to commit to participate due to COVID19, have also led to delayed deployments. This has mean that the recently deployed trial FADs time at-sea time will now overlap with the FAD closure, precluding any visits by purse seiners for 3 months. These issues mean the level of data obtained per trial FAD deployment is now lower than expected when planning Project 110 and additional FAD deployments are needed to increase the statistical rigour and robustness of advice from these experimental trials.</p> <p>While our collaborative efforts on non-entangling and biodegradable FAD trials in the Pacific region with the International Sustainable Seafood Foundation (ISSF) have been incredibly beneficial in many areas of the work (i.e., joint training activities, applying standardised designs and materials to allow pooling of data across trials in different regions of the Pacific), more opportunity to deploy non-entangling and biodegradable FADs and work with industry will be important to underpin transition to wide use of non-entangling and biodegradable FADs in the WCPO.</p> <p>Project 110 has built expertise and gained momentum after being severely impacted by COVID19 and will now be extended (at no cost) to December 2025 to allow the current trial deployments and analytical work to be completed and reported. This additional project will capitalise on the momentum and expertise in Project 110 by supporting deployment of additional (up to 150) non-entangling and biodegradable FADs that can be analysed alongside those deployed in Project 110.</p> <p>Project 110 has also provided an opportunity to understand the training requirements, logistical and materials supply obstacles to building and supplying non-entangling and biodegradable FADs to purse seine fleets in the WCPO. The project has trained local staff in construction methods in Pohnpei (Federated States of Micronesia), and training by ISSF has also occurred in Pago Pago (American Samoa), and Manta (Ecuador). SPC also now has in house staff with expertise to run</p>

	<p>training in non-entangling and biodegradable FAD construction, based on the ISSFs developed jelly-FAD design. However, additional bases for non-entangling and biodegradable FAD construction need to be identified and training in those location is required to facilitate non-entangling and biodegradable FADs supply options and support wider industry adoption. Further, the core materials for the non-entangling and biodegradable FADs in the current trial have had to be shipped into Pacific locations from as far away as Spain and are not locally readily available. This adds to time delays, expense and carbon footprint of non-entangling and biodegradable FADs. Therefore, exploration of alternative material supply options and/or locally produced materials are required to support industry adoption and enhance the environmental credentials of non-entangling and biodegradable FADs use in the WCPO. This additional project will also provide opportunity to explore alternatives for materials sourcing and non-entangling and biodegradable FAD construction locations in the WCPO.</p>
<b>Assumptions</b>	<p>SPC has the personnel available to undertake this work and or suitable consultants are available to support SPC to conduct the work. Travel in the region remains open to run training and explore materials options and alternative locations to construct and supply non-entangling and biodegradable FADs. Industry partners remain engaged in deploying non-entangling and biodegradable FADs, supporting data collection and cover costs of satellite buoys for at least 150 additional non-entangling and biodegradable FADs. Industry engages in training activities and advice on regional supply options for non-entangling and biodegradable FADs.</p>
<b>Scope</b>	<p>The project has two key work areas, the first being to construct and deploy up to 150 additional non-entangling and biodegradable FADs (using the jelly FAD design as the basis).</p> <p>The second work area is to build regional capacity to support the purse seine industry to adopt non-entangling and biodegradable FADs. This component will involve running additional trainings on non-entangling and biodegradable FAD construction at selected locations that are considered suitable as hubs for non-entangling and biodegradable FAD manufacture and direct supply to purse seine vessels. These locations will be chosen based on criteria such as analysis of purse seine visits for transshipment/restocking etc., discussions with industry representatives, consideration of materials availability and supply logistics and suitable port areas and facilities for materials storage and construction. Options for regional materials supply that require less transport and or identify suitable materials that can be locally sourced or produced will be explored.</p>
<b>Budget</b>	<p>Salary: (SPC scientific and technical) 70,00 Euro  Operational (materials, freight, and labour for 150 bioFADs): 70,000 Euro  Travel (training workshops, communications, investigate materials and construction options in WCPO): 50,000 Euro  Project management cost: 28,000 EU  <b>Total: 218,000 Euro (242,000 USD)</b></p> <p><b>20% co-funds contribution 44,000 Euro (49,000 USD)</b></p>