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Proposed FAD data fields and notes on their use for the work of the WCPFC

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Submitted by the Secretariat
and
Oceanic Fisheries Programme (OFP) Pacific Community (SPC)

Purpose

1. At the 20th Meeting of the Scientific Committee (SC20), PNA and Tokelau, represented a proposal to establish FAD minimum data fields for collection by vessel operators (SC20 Statistics Theme Working Paper 6 *FAD Minimum Data Fields to be Recorded by WCPFC Vessel Operators*). The paper notes that this proposal responds to a WCPFC12 outcome (2015)[1] and is compatible with requirements for provision of data on FAD design and construction and FAD activity by vessel operators that have been applied to PNA+ licensed purse seine vessels since January 1st, 2022. The proposed data fields have also been submitted to the FAD Management Options IWG for consideration (see TCC20 Working Paper 16 *Progress of the FADMO-IWG Priority Tasks and Discussions for 2024*).

2. SC20 recommended that the WCPFC Secretariat and the SSP (SPC) respond to a request from the United States delegation for more information on the needs of FAD data fields set out in SC20 Statistics Theme Working Paper 6 for the work of the WCPFC. The specific text of the SC20 recommendation follows:

   Development of a FAD Logbook

   9. SC20 requested that SPC identify what FAD information fields are anticipated to be used by SPC to support stock assessments and other scientific analyses. SPC indicated that the FAD data fields also relate to WCPFC work involving management and monitoring.

   10. SC20 recommended that SPC and the WCPFC Secretariat develop a paper for TCC20's and the FADMO-IWG's consideration, responding to the request to identify the needs for the FAD data fields for the work of the WCPFC (science, management, and monitoring).

3. This paper was prepared in response to this request.

Information about the need for the proposed FAD data fields for the work of the WCPFC

4. The scientific requirements for the FAD data fields have already been summarized in paragraph 3 of SC18 ST IP-09, which has been reformatted below:

   "*This information is critical for scientific analyses to guide management of FADs in the waters of the PNA and the WCPO, as well as to monitor compliance. In particular, the last three most recent tropical tuna CMMs (CMM-2018-01; CMM-2020-01 and CMM-2021-01) have included additional requirements related to FADs:*

   i) a limit on the number of active buoys monitored by a vessel at any given time;
   ii) the requirement to use Low-Entanglement risk FADs or Non-entangling FADs; and
   iii) encouragement to use biodegradable FADs. Scientific and compliance analyses have highlighted that critical information is missing in the current observer information, such as information related to FAD design and the type of materials (i.e. biodegradable or synthetic) and information on satellite buoys used.

[1] WCPFC12 Summary Report paragraph 596. The Commission agreed that vessel operators should provide data on FADs covering the following two major areas: a. FAD design and construction of FAD to be deployed or encountered (materials, electronics, size, etc) b. FAD activity (deploying, retrieving, setting, visiting, loss etc.)"

In addition, analyses of the PNA FAD tracking program as well as WCPFC scientific project (project 88: FAD acoustic, project 110: Non-Entangling and Biodegradable FADs) highlighted the critical importance of better matching buoy ID between observer, logsheet and FAD Tracking data for scientific and compliance needs. Limited recording of some of the fields in the ROP minimum FAD data fields which are difficult for observers to get access to, such as the buoy ID, also indicated that vessel operators would be better placed to record this information."

5. The left side of Table 1 (below) provides the columns from Table 1 of SC20 Statistics Theme Working Paper 6 *FAD Minimum Data Fields to be Recorded by WCPFC Vessel Operators*. The right-most column responds to the SC20 request, by providing information about the needs of the proposed FAD data fields for the work of the Commission.

Recommendation

6. TCC20 is invited to
    a. Consider the information in the right-most column in Table 1 below, related to the needs for the proposed draft FAD data fields to support WCPFC work (science, management, and monitoring) and;
    b. Provide advice and recommendations to the Commission about the potential utility and/or any technical constraints of the proposed data fields being included in a FAD Logbook to be collected by Vessel Operators.

*Table 1. Proposed FAD data fields in **SC20 Statistics Theme Working Paper 6** FAD Minimum Data Fields to be Recorded by WCPFC Vessel Operators and information about the needs for the data fields to the work of the Commission.*

FAD DATA FIELD		OBSV	LOG	Information about the needs for these FAD data fields for the work of the WCPFC
TRIP LEVEL INFORMATION				
Vessel Name	Record the full name of vessel (as per the main logsheet)	X	X	• Key data fields to match to other WCPFC data sources (e.g., logbook, observer) • Should facilitate link to WCPFC Vessel Identifier (VID) for cross-verification with other WCPFC data sets
Departure Date	Record the UTC date the vessel departed from port (as per the main logsheet)	X	X	
FAD ACTIVITY INFORMATION				
Date of new FAD activity	Record UTC date of each new FAD activity.	X	X	• Management and monitoring of fishing activities covered by the tropical tuna measure, including but not limited to: FAD time/area closures, dFAD quantitative limits, requirements for non-entangling FADs, potential stepwise introduction of biodegradable FADs, potential future FAD recovery programs and potential future WCPFC Satellite Buoy transmission rules.
Time of new FAD activity	Record UTC time of each new FAD activity.	X	X	
FAD Activity – **Code**	Describes the distinct activity that the boat is involved with the FAD. Refer to Table A1.	X	X	
Latitude	Record Latitude where FAD activity occurred.	X	X	
Longitude	Record Longitude where FAD activity occurred.	X	X	
BUOY INFORMATION				
Buoy attached (Y/N)	Enter Y or N if there is a Buoy attached.		X	• Management and monitoring of fishing activities covered by the tropical tuna measure, including but not limited to: FAD time/area closures, dFAD quantitative limits, requirements for non-entangling FADs, potential stepwise introduction of biodegradable FADs, potential future FAD recovery programs and potential future WCPFC Satellite Buoy transmission rules • Monitoring of technologies used on dFADs to potentially inform effort creep which feeds into CPUE standardisation and stock assessments.
Buoy Manufacturers Serial No.	Enter the Buoy Manufacturers Serial No.	X	X	
Buoy Make/Model	Enter the Buoy Make/Model.		X	
Buoy Type – **Code**	Enter the code for the Buoy type. Refer to Table A2.		X	
Buoy Operator	Enter the Buoy operator (if known).		X	
Buoy lifted (Y/N)	Enter Y or N if **the buoy was lifted out of the water.**	X	X	

FAD DATA FIELD		OBSV	LOG	Information about the needs for these FAD data fields for the work of the WCPFC
GENERAL FAD INFORMATION				
FAD ID or Markings	Enter any specific FAD ID or Markings.	X	X	• Management and monitoring of fishing activities covered by the tropical tuna measure, including but not limited to: FAD time/area closures, dFAD quantitative limits, requirements for non-entangling FADs, potential stepwise introduction of biodegradable FADs, potential future FAD recovery programs and potential future WCPFC Satellite Buoy transmission rules.
Origin of FAD – **Code**	Select the Origin of the FAD (how did it get to be in the water) Refer to Table A3	X	X	
How FAD was found - Code	***Indicate how the FAD was found. Refer to Table A4.***		***X***	
FAD Type as found – **Code**	**Indicate the type of FAD, as found.** Refer to Table A5	X	X	
FAD Lifted (Y/N)	Enter Y or N if **the FAD was lifted out of the water.**	X	X	
FAD Type as left – **Code**	**Indicate the type of FAD, as left.** Refer to Table A5	X	X	
FAD deployment date	Record date when FAD deployment occurred.	X	X	
FAD deployment location	Record Latitude and Longitude when FAD deployment occurred.	X	X	
RAFT DESIGN INFORMATION				
Raft Design – **Code**	**Indicate the code corresponding to the type of raft design (see Table A6) and referring to relevant images in ANNEX 2.**		X	• Management and monitoring of fishing activities covered by the tropical tuna measure, including but not limited to: FAD time/area closures, dFAD quantitative limits, requirements for non-entangling FADs, potential stepwise introduction of biodegradable FADs, potential future FAD recovery programs and potential future WCPFC Satellite Buoy transmission rules. • Comparing the effectiveness of different FAD designs to potentially inform CPUE
Raft Main (1st) Materials – **Code**	**Indicate the code corresponding to the raft main material (top/1st) (see Table A7).**	X	X	
Raft Main (1st) Materials %[2]	**Enter Raft Main Materials (top/1st) percentage (%)**		X	
Raft Main (2nd) Materials – **Code**	**Indicate the code corresponding to the raft main material (2nd) (see Table A7).**	X	X	
Raft Main (2nd) Materials %	**Enter Raft Main Materials (2nd) percentage (%)**		X	

[2] ***All % fields to be specified in 10% bins.***

FAD DATA FIELD		OBSV	LOG	Information about the needs for these FAD data fields for the work of the WCPFC
Raft Wrapping – **Code**	**Indicate the code corresponding to the raft wrapping/covering (see Table A8).**		X	• standardisation which feeds into stock assessments. • Additional monitoring of trial non-entangling and biodegradable FADs under WCPFC project 110 and 110a.
Raft Buoyancy Devices – **Code**	**Indicate the code corresponding to the raft buoyancy devices (see Table A9).**	X	X	
Net mesh size	**If nets are used in any component of the raft, indicate the mesh size in centimetres.**	X	X	
Floating structure Width (m)	**Enter the Floating structure. Width in metres.**	X	X	
Floating structure length (m)	**Enter the Floating structure Length in metres.**	X	X	
Condition raft	***Enter the condition of the Raft for Trial FADs* (see Table A10).**		X	
HANGING STRUCTURE INFORMATION				
Hanging Structure dimensions	**Enter 1–Known, 2–Unknown or 3–Estimated**	X	X	• Management and monitoring of fishing activities covered by the tropical tuna measure, including but not limited to: FAD time/area closures, dFAD quantitative limits, requirements for non-entangling FADs, potential stepwise introduction of biodegradable FADs, potential future FAD recovery programs and potential future WCPFC Satellite Buoy transmission rules. • Comparing the effectiveness of different Hanging structures to potentially inform CPUE standardisation which feeds into stock assessments.
Hanging structure length (m)	**Enter the Hanging structure Length in metres.**	X	X	
Hanging Structure – **Code**	**Indicate the code corresponding to the type of Hanging Structure (see Table A11) and referring to relevant images in ANNEX 3.**		X	
Main Appendages (1st) – **Code**	**Indicate the code corresponding to the main appendages (top/1st) of the hanging structure see Table A12).**	X	X	
Main Appendages (1st) %	**Enter Main Appendages (top/1st) percentage (%)**		X	
Main Appendages (2nd) – **Code**	**Indicate the code corresponding to the main appendages (2nd) of the hanging structure (see Table A12).**	X	X	

FAD DATA FIELD		OBSV	LOG	Information about the needs for these FAD data fields for the work of the WCPFC
Main Appendages (2nd) %	**Enter Main Appendages (2nd) percentage (%)**		X	• Additional monitoring of trial non-entangling and biodegradable FADs under WCPFC project 110 and 110a.
Net mesh size	**If nets are used in any component of the hanging structure, indicate the mesh size in centimetres.**	X	X	
Attractors – **Code**	**Indicate the code corresponding to the Attractors on the hanging structure (see** Table A13**).**		X	
Hanging weights – **Code**	**Indicate the code corresponding to the Hanging weights used (see** Table A14**).**		X	
Hanging weight (kgs)	**Enter the hanging weight in kilograms**		X	
Condition_Hanging	**Enter the condition of the Hanging structure *for Trial FADs* (see** Table A10)		X	
GENERAL COMMENTS				
Comments	**Enter any additional comments necessary**	X	X	
SPECIES OF SPECIAL INTEREST INFORMATION				
SSI Entangled (Y/N)	Enter Y or N if a Species of Special Interest (SSI) is entangled	X	X	• Management and monitoring required under the tropical tuna measure, including but not limited to requirements for non-entangling FADs. • Management and monitoring, including reporting, required under the sea turtles measure (CMM 2018-04), Shark measure (CMM 2022-04) and other CMMs to mitigate impacts of fishing on species of special interest. • Understanding potential gaps in observer data collection where an encounter is not possible to be seen from the vessel.
SSI Entangled – Species code	**Enter three-letter code (selected from FAO Species code list) for each SSI entangled**	X	X	
SSI Entangled – Weight (kgs)	**Enter the estimated WEIGHT in kilograms of each SSI entangled**	X	X	
SSI Entangled – Number	**Enter the NUMBER of each SSI entangled**	X	X	