

## A PROPOSAL FOR NEW IOTC FORMS TO REPORT DETAILED INTERACTIONS WITH ANCHORED FLOATING OBJECTS

PREPARED BY: IOTC SECRETARIAT, LAST UPDATED: 13<sup>TH</sup> NOVEMBER 2023

### Purpose

To inform participants at the 19<sup>th</sup> Working Party on Data Collection and Statistics (WPDCS19) of the status of development of an electronic form to report interactions with anchored floating objects as requested by IOTC Resolution 23/01 *On the management of anchored Fish Aggregating Devices (aFADs)*.

### Background

IOTC Resolution 19/02 *Procedures on a Fish Aggregating Devices (FADs) management plan* includes provisions for the collection of several data elements for both *drifting* and *anchored* fish aggregating devices. Yet, its scope of applicability is limited to purse seiners fishing on drifting fish aggregating devices (see para. 2), *de facto* preventing that data elements in its Annex IV could be collected and reported for fisheries operating on aFADs.

Very little information on activities, efforts, and catches on aFADs is currently available to the IOTC Secretariat, notwithstanding the fact that the latter two types of data should *already* be provided through form 3-CE / 3-AR (depending on the case) by reporting the [proper fishery code](#) among those interacting with anchored objects<sup>1</sup>.

On top of this, resolution 23/01 introduces further requirements for the collection and reporting to the IOTC Secretariat of detailed data elements specific for interactions with aFADs which should be reported separately from form 3-CE / 3-AR.

### Data elements by requirements

Two IOTC resolutions (15/02 and 23/01) are currently enforced that contain explicit requirements for the collection and reporting of data for fisheries of any nature operating on aFADs.

While IOTC Resolution 15/02 mainly focuses on the reporting of catch and effort details, resolution 23/01 calls for a more specific reporting of interactions with aFADs.

The distinct requirements from these resolutions can be combined to produce a distinct, new type of data set summarised in the table below.

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<sup>1</sup> e.g., **DLLS** (*Dropline on anchored-FAD*), **HLLS** (*Handline with payao*), **LNPA** (*Liftnet on anchored-FAD*), **PLPA** (*Pole and line on anchored-FAD*), **PSPA** (*Purse seine with payao*), **PSRP** (*Ringnet with payao*), **PSSA** (*Coastal purse seine on anchored-FAD*)

Table 1 Data elements for the reporting of detailed aFAD activities. Elements in boldface uniquely identify a stratum

Category	Element	Requirement	Element data type	Mandatory	Notes
Date	<b>Year</b>	15/02 6.c.i, 23/01 annex 2.b.ii	Integer	Y	
	<b>Month</b>		Integer	Y	
	<b>Day</b>		Integer	Y	
Location	<b>Longitude</b>	15/02 6.c.i, 23/01 annex 2.b.i	Decimal	Y	
	<b>Latitude</b>		Decimal	Y	
aFADs	<b>Identifier</b>	15/02 6.c.i, 23/01 annex 2.b.iii	Identifier	Y (when present)	Also beacon ID
	<b>Type</b>	15/02 6.c.i, 23/01 annex 2.b	Dictionary entry	Y	Extended CECOFAD classif.
	<b>Activity type</b>	15/02 6.c.i, 23/01 annex 2.b	Dictionary entry	Y	Extended CECOFAD classif.
Catches #1	Species code	23/01 annex 2.a	ASFIS Identifier	Y (activity followed by set)	Single species
	Fate	23/01 annex 2.a	Dictionary entry		Retained / Disc.
	Catches / discards	23/01 annex 2.a	Decimal		Amount
	Unit	23/01 annex 2.a	Dictionary entry		weight or number
...	...	...	...	...	...
Catches #N	Species code	23/01 annex 2.a	ASFIS Identifier	Y (activity followed by set)	Single species
	Fate	23/01 annex 2.a	Dictionary entry		Retained / Disc.
	Catches / discards	23/01 annex 2.a	Decimal		Amount
	Unit	23/01 annex 2.a	Dictionary entry		weight number

**Table 1** includes the data elements describing each interaction between a fishery and an aFADs, with clear indication of the date and location where this happened.

## Data reporting rationale

Another resolution exists (Res. 19/02) that introduces very detailed requirements for the collection – at vessel level – of information related to interactions with *drifting* floating objects and catches that eventually follow these interactions.

In the case of Res. 19/02, the spatio-temporal resolution is identical to that of Res. 23/01 (i.e., by exact location and day of the month) but the stratification is at the *vessel* level, which is an element currently missing from the requirements of Res. 23/01.

Nevertheless, even with the vessel dimension missing from the data requirements, the elements in **Table 1** remain very valuable to understand the dynamics of fisheries operating on aFADs and should be collected and reported to the IOTC Secretariat.

However, it is worth noting how:

- 1) According to Res. 15/02 it remains necessary that CPCs submit a separate form 3-CE / 3-AR that includes catch and effort data by fishery, and this applies also to those fisheries operating on aFAD-associated schools
- 2) Therefore, form 3-CE / 3-AR can be used to cross-verify the total effort (number of sets) and retained catches reported by the vessels participating to a specific fishery operating on aFAD-associated schools

## Proposed data reporting form (3-AA)

The IOTC Secretariat has prepared a new electronic form (Form 3-AA, described below) and is in the process of implementing an interactive data validator (as those already available for the other types of IOTC forms) to help CPCs verifying that their submissions are in agreement with the IOTC requirements.

Form 3-AA, in its *standard* form, supports the submission of data for a given fishery and month, whereas in its *multiple* form can support the submission of data for multiple fisheries for a given month.

Table 2 Comparison between current and past forms. In boldface, elements of form 3-AA that improve over 3-CE

Type of form	3-CE (15/02)	3-AA (15/02, 23/01)
Applies to	Fishing Vessels (FV)	Fishing Vessels (FV)
Fleet resolution	Flag	Flag
Temporal resolution	Year / month	Year / month / <b>day</b>
Spatial resolution	CWP grid	<b>Coordinates</b>
Fishery resolution	By fishery / type of school	By fishery
aFAD types	N/A	<b>Extended CECOFAD</b>
aFAD activity types	N/A	<b>Extended CECOFAD</b>
aFAD data	N/A	Type, activity, <b>identifier</b>
Effort units	Fishing days / hours, Number of sets, Number of trips	Number of activities, Number of sets (derived)
School type	To be explicitly provided	Implicit (aFAD associated)
Catches (FV only)	By species retained	By species retained / <b>discarded</b>
Catch unit (FV only)	Live weight equivalent	Live weight equivalent / <b>numbers</b>
Data raised to totals	Yes	Yes (formally)

**Table 2** indicates how form 3-AA captures more information, and at a higher level of spatio-temporal resolution than what currently included in form 3-CE, and therefore should complement the latter rather than replaced it in its entirety.

## Conclusions

The electronic Form 3-AA designed by the Secretariat and presented hereby can capture all elements in **Table 1**, references well-known classifications, and provides a convenient way of reporting data to the IOTC in agreement with Res. 15/02 and 23/01.

Questions remain on the intention of the original proponents of Res. 23/01 that no vessel identification information<sup>2</sup> be included in the list of data elements to be collected and reported to the IOTC Secretariat. Also, clarity should be made by concerned CPCs on whether it would be possible for all their fisheries on aFADs, which are often semi-industrial when not fully artisanal in nature, to properly record the information requested, and particularly the exact time and location of the interaction.

## Data confidentiality

The information provided through Form 3-AA has a very fine-grained resolution, yet as it does not contain explicit references to vessel identifiers, its content can in principle be disseminated *as is*, as it would not violate any of the key principles of Res. 12/02 (*Data confidentiality policies and procedures*).

<sup>2</sup> i.e., the IOTC number, for vessels in the RAV, or the name / national registration number for all other vessels

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## Proposed actions and recommendations

That the WPDCS:

- **ENDORSES** the structure of form 3-AA (both in its *standard* and *multiple* version), including the reference classifications adopted therein
- **RECOMMENDS** that aFADs data elements as per **Table 1** are exclusively provided through Form 3-AA starting with the 2024 data reporting cycle (i.e., for the statistical year 2023)
- **REQUESTS** CPCs with fisheries operating on aFADs to confirm that these already collect (or can collect) all data elements in **Table 1**
- **REQUESTS** CPCs with fisheries operating on aFADs to confirm that the [types of aFAD](#) and [aFAD activities](#) currently included in the extended CECOFAD classifications are comprehensive enough to model all possible operations commonly performed on the anchored FADs by these fisheries
- **REQUESTS** CPCs with fisheries operating on aFADs to also report historical data to the IOTC Secretariat through form 3-AA and 3-CE
- **REQUESTS** the Scientific Committee to confirm that vessel information (and more specifically vessel identifiers) should not be included in the data elements listed under **Table 1**
- **REQUESTS** the Scientific Committee to confirm that information reported through Form 3-AA could be publicly disseminated without further aggregation (considering that it does not include details that could lead to the identification of a specific vessel)

## External resources

- MS Excel template of [Form 3-AA \(standard\)](#)
- MS Excel template of [Form 3-AA \(multiple\)](#)
- IOTC reference data catalogue:
  - [aFAD types](#)
  - [aFAD activity types](#)

## Appendices

### Appendix A.1 – metadata and data elements of form 3-AA (standard)

IOTC form 3-AA   metadata			
Form	3-AA	Version	1.0.0
<b>Submission information</b>			
<u>Focal point</u>		<u>Organization</u>	
Full name	<input type="text"/>	Name	<input type="text"/>
e-mail	<input type="text"/>	e-mail	<input type="text"/>
Finalization date	<input type="text"/>		
Submission date	<input type="text"/>		
<b>General information</b>			
Reporting year	<input type="text"/>	Reporting month	<input type="text"/>
<u>Reporting entity</u>	<input type="text"/>	<u>Fishery</u>	<input type="text"/>
<u>Flag country</u>	<input type="text"/>		
<b>Data specifications</b>			
<u>Type of data</u>	<input type="text"/>		
<b>Comments</b>			
<input type="text"/>			

Figure 1: metadata elements for Form 3-AA (standard)

<b>IOTC form 3-AA   data</b>						<b>Catches by species, fate, raising, and unit</b>																					
Main stratum			aFOB			Species																					
Day of month	Latitude	Longitude	Identifier	Type	Activity	Type of fate																					
						Raising	Catch unit																				

**Figure 2:** data elements for Form 3-AA (standard)

## Appendix A.2 – metadata and data elements of form 3-AA (multiple)

IOTC form 3-AA   metadata			
Form	3-AA-multiple	Version	1.0.0
<b>Submission information</b>			
<u>Focal point</u>		<u>Organization</u>	
Full name	<input type="text"/>	Name	<input type="text"/>
e-mail	<input type="text"/>	e-mail	<input type="text"/>
Finalization date	<input type="text"/>		
Submission date	<input type="text"/>		
<b>General information</b>			
Reporting year	<input type="text"/>		
<u>Reporting entity</u>	<input type="text"/>		
<u>Flag country</u>	<input type="text"/>		
<b>Data specifications</b>			
<u>Type of data</u>	<input type="text"/>		
<b>Comments</b>			
<input type="text"/>			

Figure 3: metadata elements for Form 3-AA (multiple)







## Appendix B: extended CECOFAFAD classifications

Table 3 *Types of aFADs*

Code	English description
AFAD	Anchored FAD

Table 4 *Types of activities on aFADs*

Code	English description
DE	Deployment
RE	Retrieval
VF	Visit with fishing
VI	Visit without fishing