Data from abandoned, lost or discarded drifting fish aggregating devices recovered at sea and ashore in the IOTC area

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Summary

The use of drifting fish aggregating devices (dFADs) continues to threaten endangered, threatened, and protected species (ETP), as well as the broader marine environment in the form of marine litter and abandoned, lost, and discarded fishing gear (ALDFG) that can damage fragile coastal ecosystems. In the Indian Ocean, as in all other ocean regions, there is an urgent need to improve the management of dFADS, primarily to reduce catches of juvenile tropical tunas, but also to help mitigate the other ecological impacts associated with drifting FADs, including marine plastic pollution, ghost fishing and the bycatch of turtles, sharks and marine mammals. The lack of transparency in how dFADs are deployed, tracked and retrieved and the lack of responsibility dFAD owners take for the ecosystem and habitat damage and the pollution caused by these devices is of great concern.

IPNLF is concerned that, despite years of discussions to develop measures to manage drifting fish aggregating devices (dFADs) within the IOTC area of competence, evidence collected from retrieved dFADs continue to show systematic non-compliance with management measures. Resolution 23/02 was adopted during the 6th Special Session of the IOTC, this measure is not in force until January 2024, therefore, this review will focus only on compliance with the existing Resolution 19/02. Resolution 19/02, which was adopted in 2019 and came into force on 1 January 2020, mandates that vessels follow 300 FADs at any one time and that FADs be non-entangling and be marked with the vessel's unique IOTC registration number. However, anecdotal evidence of dFADs collected in the waters of IOTC coastal states by a FAD recovery project through the University of Exeter shows persistent non-compliance with this resolution (see Table below). The ongoing ecosystem, habitat and pollution impacts of these non-compliant drifting FADs is of serious concern and requires the attention of the Commission.

Data collected from sightings and recoveries of dFADs in the Indian Ocean

None of the dFADs opportunistically (sighted and) recovered from the Western Indian Ocean (WIO) region since January 2020 have shown full compliance with Resolution 19/02. This may reflect the continued misuse and regular abandonment of now prohibited dFAD designs, the use of which are detrimental not only to tuna stocks, but also to the region's biodiversity and marine ecosystems.

Primary areas of anecdotally persisting non-compliance include the ongoing use of entangling dFAD designs with netting and/or other meshed materials, low replacement of plastics with biodegradable components within dFAD designs, and a lack of compliance with the requirement to have the deploying vessel's unique IOTC registration number clearly marked on each operational buoy. Despite recoveries of 65 FADs, concerned citizens of coastal regions are yet to record a single recovered dFAD since January 2020 with the deploying vessel's unique IOTC registration number clearly marked on its operational buoy, as required by Resolution 19/02. There is no known obstacle to this simple, yet important, requirement, particularly since, within this sample, many other

markings such as the names of vessels were still clearly visible on retrieved FAD buoys despite the time these devices were exposed to the sun and sea. In addition, it is important to note that the ad-hoc FAD Working Group has not yet developed additional marking requirements for consideration by the Commission, as initially proposed to occur in 2020 within CMM 19/02 but now, under CMM 23/02 is pushed back until 2024.

Details of non-compliant FADs found in this opportunistic survey are provided in Table 1 and Table 2. It should be noted that this report is not exhaustive and that additional anecdotal reports of non-compliant dFADs were not included in this report due to the lack of specific details, such as the date and location were such dFADs were encountered

Table 1. Anecdotal evidence of dFAD non-compliance with CMM 19/02, as collected within the WIO since January 2020

FAD no.	Date	Location	Habitat	Compliance with Resolution 19/02			Photos	
				Non-entangling	IOTC number	Bio-degradable	FAD	Buoy
Data from original paper submitted by Kenya								
1	22/10/21	Mogadishu, Somalia		N	N/A	N		
2	23/11/21	Uyombo, Kenya		N	N	N		

3	10/04/21	Sodwana Bay, South Africa		N	N	N		
4	14/11/21	Lamu, Kenya		N	N	N		

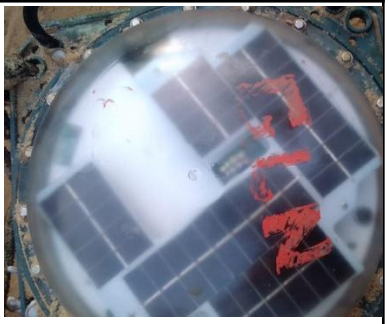
5	13/11/21	Gemanafushi, Maldives		N	N/A	N		
6	14/08/21	Lhaviyani, Maldives		N	N/A	N		
7	19/09/21	Lhaviyani, Maldives		N	N/A	N		

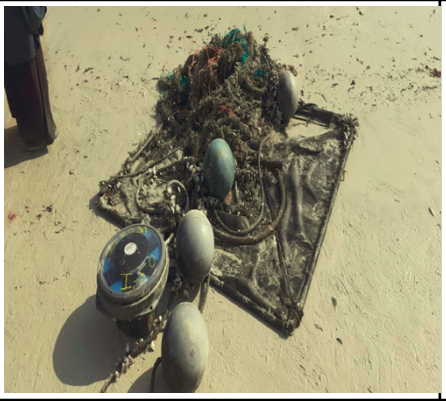
8	01/12/21	North Male atoll, Maldives		N	N	N		
9	22/11/21	Gemanafushi, Maldives		N	N/A	N		
10	28/10/21	Watamu, Kenya		N/A	N	N		

11	9/11/20	Gemanafushi, Maldives		N	N/A	N		
12	10/11/20	Gemanafushi, Maldives		N	N/A	N		
13	17/11/21	Gemanafushi, Maldives		N	N/A	N		
New data								

14	14/04/2023	Watamu, Kenya	Coastal waters	N	N	N		
15	01/07/2022	Lamu, Kenya	Open water	N/A	N	N/A		
16	09/09/2022	Watamu, Kenya	Beach	N	N	N		

17	12/09/2022	Watam, Kenya	Open water	N	N	N		
18	07/10/2022	Lamu, Kenya	Open water	N	N	N		
19	08/11/2022	Watamu reef, Kenya	Reef	N/A	N	N/A		

20	26/12/2023	Lamu, Kenya	Open ocean	N	N	N		
21	23/01/2023	Lamu, Kenya	Open Ocean	N	N	N		
22	11/03/2023	Pondicherry, India	Beach	N/A	N	N/A		

23	01/08/2022	Liido, Somalia	Open ocean	N	N	N		
24	**03/03/2022**	Liido, Somalia	Open ocean	N	N	N		
25	24/03/2022	Warsheekh, Somalia	Beach	N	N/A	N		NA

26	22/09/2022	Liido, Somalia	Beach	N	N	N		
27	12/10/2022	Liido, Somalia	Beach	N	N	N		
28	26/10/2022	Liido, Somalia	Beach	N	N	N		

29	30/10/2022	Jazeera, Somalia	Mangrove	N	N	N		
30	14/09/2022	Liido, Somalia	Open ocean	N	N	N		
31	11/08/2022	Adale, Somalia	Beach	N	N	N		

32	03/08/2022	Adale, Somalia	Beach	N	N	N		

Table 2. Additional data tentatively linking recovered dFADs to vessels licensed to fish in the IOTC area of competence

FAD no.	Buoy markings	Buoy serial number	Vessel Name	IOTC number	Flag	Fishery
Data from original paper submitted by Kenya						
1	ARITZATXU Vo1 267286 ANZORAS	267286	Playa de Aritzatxu	IOTC000187	Spain	
			Playa de Anzoras	IOTC000186	Seychelles	
2	B ISLE SLX+366740	366740	Belle Isle	IOTC015115	Mauritius	
3	Illegible					
4	IZD 621903	621903	Izurdia	IOTC000879	Spain	
5	N/A					
6	N/A					
7	N/A					
8	ADR 704 BLO 1174	Not visible	Adria	IOTC000369	Korea	
			Blue Ocean	IOTC016214	Korea	
9	N/A					
10	AUNDI 263762	263762	Txori Aundi	IOTC000815	Seychelles	
11	N/A					
12	N/A					
13	N/A					
New data						
14	T. ZURI 98078	98078	Txori Zuri	IOTC000195	Spain	OPAGAC
15	A1 - AB 2 - ABC 343291	343291	A1 - Unknown	-	-	
			Albatun Dos	IOTC000811	Spain	
			Albacan	IOTC000159	Spanish when FAD was found, now Mauritian	
16	T.GORRI 101285 ZURI'	101285	Txori Gorri	IOTC008281	Spain	OPAGAC
			Txori Zuri	IOTC000195	Spain	OPAGAC

17	A1/ABC/ABT2 397281 SCRT	397281	A1 - Unknown	-	-	
			Albatun Dos	IOTC000811	Spain	
			Albacan	IOTC000159	Spanish when FAD was found, now Mauritian	
18	ISD+357411 ABT2 ABC A1	357411	A1 - Unknown	-	-	
			Albatun Dos	IOTC000811	Spain	
			Albacan	IOTC000159	Spanish when FAD was found, now Mauritian	
19	RIS ARI 401089	401089	Playa de Ris	IOTC015569	Spain	
			ARI - unknown	-	-	
20	IZD 105843	105843	Izurdia	IOTC00879	Spain	ANABAC
21	GLN	-	Glenan	IOTC03575	France	
22	DNN 373306	373306	Doneine	IOTC00172	Spain	
23	Jai Alai 369606	369606	Jai Alai	IOTC016019	Seychelles	Echebaster
24	IZO +360871	360871	Izaro	IOTC015361	Seychelles	
25	N/A					
26	DNN – IZD ISL+155841	155841	Doneine	IOTC00172	Spain	
			Izurdia	IOTC00879	Spain	ANABAC
27	DOL 391913	391913	Dolomieu	IOTC013979	France	
28	T Gorri (SLX+353924)	353924	Txori Gorri	IOTC008281	Spain	OPAGAC
29	Pacific Star (SLX+385774)	385774	Pacific Star	IOTC018037	Tanzania	
30	JAI 1587 (TX+288888)	TX+288888	Jai Alai	IOTC016019	Seychelles	Echebaster
31	373543 ALKR	373543	Alakrana	IOTC000907	Spain	
32	ISL+250522 (DRCO ITT3)	250522	Draco	IOTC003606	Seychelles	
			Intertuna Tres	IOTC000138	Seychelles	

Recommendations

The EU, Mauritius, Seychelles, Korea and Tanzania, as well as all other IOTC CPCs, are parties to the UN Fish Stocks Agreement (UNFSA, ratified 24 October 1996) which imposes a number of duties on flag States. As such, these flag States are under a duty as regards high seas fishing to '*take such measures as may be necessary to ensure that vessels flying its flag comply with subregional and regional conservation and management measures and that such vessels do not engage in any activity which undermines the effectiveness of such measures*' (article 18(1)). Moreover, these flag States are inter alia required:

a) *to control their flagged vessels that fish on the high seas through fishing licenses, authorisations or permits* (hereafter 'high seas fishing licences') (article 18 (3)(a)).

b) *to adopt regulations that provide for the inclusion of conditions in high seas fishing licenses such that these flag States can fulfil their subregional, regional or global obligations* (article 18 (3)(b)(i))

c) *to ensure that their flagged vessels do not conduct unauthorized fishing within areas under the national jurisdiction of other States* (article 18 (3)(b)(iv)).

d) *to establish a national record of fishing vessels authorized to fish on the high seas and to provide access to directly interested States subject to any applicable confidentiality provisions* (article 18 (3)(c); and

e) *to require their flagged fishing vessels to be marked 'in accordance with uniform and internationally recognizable vessel and gear marking systems, such as the Food and Agriculture Organization of the United Nations Standard Specifications for the Marking and Identification of Fishing Vessels'* (article 18 (3)(d);

In addition, these flag States may only authorise high seas fishing by their vessels '*where it is able to exercise effectively its responsibilities in respect of such vessels'* under (the LOSC) and (the Fish Stocks Agreement)' (article 18(2).

Noting the above concerns, and the detailed information and photographs of dFADs recovered within the IOTC Area of Competence since January 2020, IPNLF recommends that the IOTC Compliance Committee further investigate and consistently report on compliance with all the measures of Resolution 19/02. This evidence also highlights the lack of accountability within the IOTC, which has likely led to such widespread non-compliance, and emphasises the importance of implementing systems such as the FAD registry and independent Monitoring System under Resolution 23/02.

As mentioned, many of the recovered dFADs had instrumented buoys attached with buoy serial numbers permanently written on them, although the unique IOTC vessel registration numbers were absent in all cases. Vessels should be required to share this information with the Compliance Committee when derelict dFADS are recovered. This will ensure that purse seine vessels take greater responsibility to ensure that their dFADs are compliant with Resolution 19/02, ultimately ensuring better monitoring, control and surveillance of the purse seine fishery within the IOTC Area of Competence.