

Systematic non-compliance of drifting fish aggregating devices (dFADs) with Resolution 19/02 'Procedures on a Fish Aggregating Devices (FADs) Management Plan'

Information paper to the 19th Session of the IOTC Compliance Committee

8 – 10 May 2022

Kenya is concerned by the ongoing lack of evidenced compliance with IOTC requirements regarding the use of drifting fish aggregating devices (dFADs) within the IOTC Area of Competence. **Resolution 19/02** was adopted in 2019 and came into force on 1 January 2020, yet anecdotal evidence of the dFADs collected in the waters of IOTC coastal states shows persistent non-compliance with this resolution. The ongoing ecosystem, habitat and pollution impacts of these non-compliant drifting FADs is of serious concern and requires the attention of the Commission.

None of the dFADs opportunistically recovered from the Western Indian Ocean (WIO) region since January 2020 have shown full compliance with Resolution 19/02, nor has a trend of increasing compliance with this measure over time been observed. 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 (Table 1).

The following text from Resolution 19/02 also shows the expectation of full biodegradability (beyond the operational buoy) since 1 January 2022 – "CPCs shall encourage their flag vessels to use biodegradable FADs in accordance with the guidelines at Annex V with a view to transitioning to the use of biodegradable FADs, except for materials used for the instrumented buoys, by their flag vessel from 1 January 2022. CPCs shall, from 1 January 2022, encourage their flag vessels to remove from the water, retain onboard and only dispose of in port, all traditional FADs encountered (e.g., those made of entangling materials or designs)". Although the dFADs mentioned in this paper predates the requirement on dFAD biodegradability, it will be important to monitor compliance with this aspect of Resolution 19/02 in the future.

Table 1. Current and future compliance issues in relation to CMM 19/02

Current non-compliance issues	Relevant sections of Res. 19/02	Details of non-compliance	Effective date
Non-entangling and biodegradable FADs	<p><u>Para 17</u>: "To reduce the entanglement of sharks, marine turtles or any other species, CPCs shall require their flagged vessels to use non-entangling designs and materials in the construction of FADs as outlined in Annex V".</p> <p>Annex V contains the following bullets:</p>	<ul style="list-style-type: none"> - All derelict FADs encountered had entangling designs, with materials such as netting and/or meshed material being the norm. - Both the surface structures (rafts) and 	1 January 2020

	<p>1. <i>The surface structure of the FAD shall not be covered, or only covered with non-meshed material</i></p> <p>2. <i>If a sub-surface component is used, it shall not be made from netting but from non-meshed materials such as ropes or canvas sheets.</i></p>	sub-surface structures (tails) contains such entangling designs and materials.	
FAD Marking	<p><u>Para 21:</u> “Until the marking scheme referred to in paragraph 20 is adopted, CPCs shall ensure that the instrumented buoy attached to the DFAD contain a physical, unique reference number marking (ID provided by the manufacturer of the instrumented buoy) and <u>the vessel unique IOTC registration number</u> clearly visible.”</p>	<ul style="list-style-type: none"> - None of the instrumented buoys on encountered derelict FADs contained the unique IOTC vessel registration number. - Although some of the retrieved instrumented buoys had ‘clearly visible’ numbers on them, none of these matched the IOTC vessel registration numbers of vessels on the IOTC register. 	1 January 2020
Future non-compliance issues	Relevant sections of Res. 19/02		Effective date
Non-entangling and biodegradable FADs	<p><u>Para 18:</u> “To reduce the amount of synthetic marine debris, the use of natural or biodegradable materials in FAD construction should be promoted. CPCs shall encourage their flag vessels to use biodegradable FADs in accordance with the guidelines at Annex V with a view to transitioning to the use of biodegradable FADs, with the exception of materials used for the instrumented buoys, by their flag vessel from 1 January 2022. CPCs shall, from 1 January 2022, encourage their flag vessels to remove from the water, retain onboard and only dispose of in port, all traditional FADs encountered (e.g. those made of entangling materials or designs). The reference year prescribed above shall be reviewed in light of the Scientific Committee’s recommendation pursuant to Resolution 18/04 On BioFAD experimental project.”</p>	<ul style="list-style-type: none"> - None of the derelict FADs encountered after 1 Jan 2022 were constructed of biodegradable materials. It is however likely that these FADs were deployed before this requirement became effective. - It is an issue that will require further monitoring in the future to ensure that the only component of FADs that are not constructed of biodegradable materials are the instrumented buoys. The rest of the FADs should in future be made of 100% biodegradable materials. 	1 January 2022

Concerned citizens in coastal states are yet to note a single recovered dFAD, or even photograph of a dFAD deployed 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, while many other markings are made on the buoy to help fleets identify their operational buoys. It's noteworthy that the ad-hoc FAD Working Group has not yet developed additional marking requirements for consideration by the Commission, as proposed to occur in 2020 within CMM 19/02.

Details of non-complaint FADs found in this opportunistic survey are provided in Table 2 and Figure 1 with additional details on potential FAD ownership provided in Annex 1. 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 where such dFADs were encountered.

Table 2. Anecdotal evidence of dFAD non-compliance with CMM 19/02, as collected within the WIO since November 2020

FAD no.	Date	Location	Photos available (Y/N)	Collected by	Compliance with Res 19/02			
					Non-entangling	Buoy #	IOTC #	Bio-degradable
1	22/10/21	Mogadishu, Somalia	Y	Local fishers	N	N/A	N/A	N
2	23/11/21	Uyombo, Kenya	Y	Local fishers	N	Y	N	N
3	10/04/21	Sodwana Bay, South Africa	Y	Scuba divers	N	N	N	N
4	14/11/21	Lamu, Kenya	Y	Local fishers	N	Y	N	N
5	13/11/21	Gemanafushi, Maldives	Y	Local Fishers, FV Kanduroalhi	N	N/A	N/A	N
6	14/08/21	Lhaviyani, Maldives	Y	Olive Ridley Project	N	N/A	N/A	N
7	19/09/21	Lhaviyani, Maldives	Y	Olive Ridley Project	N	N/A	N/A	N
8	01/12/21	North Male atoll, Maldives	Y	Olive Ridley Project	N	N	N	N
9	22/11/21	Gemanafushi, Maldives	Y	Local Fishers, FV Ufaa	N	N/A	N/A	N
10	28/10/21	Watamu, Kenya	Y	Local Fishers	N/A	Y	N	N
11	9/11/20	Gemanafushi, Maldives	Y	Local Fishers, FV Kanduroalhi	N	N/A	N/A	N
12	10/11/20	Gemanafushi, Maldives	Y	Local Fishers, FV Kanduroalhi	N	N/A	N/A	N
13	17/11/21	Gemanafushi, Maldives	Y	Local Fishers, FV Ufaa	N	N/A	N/A	N

Figure 1 Netting on rafts and operational buoys without the deploying vessel's unique IOTC registration number clearly visible collected within the Indian Ocean since September 2021

DFAD No. 1: 22/11/21; Mogadishu, Somalia



- Entangling netting on raft
- No IOTC vessel registration number

DFAD No. 2: 23/11/21; Uyombo, Kenya

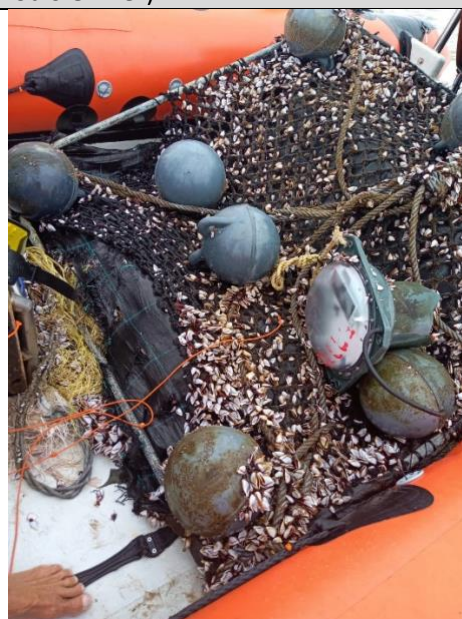


- Entangling netting on raft
- No IOTC vessel registration number

DFAD No. 3: 10/04/22; Sodwana Bay, South Africa (Photos: Louis Olivier)



- Entangling netting on raft
- No IOTC vessel registration number on satellite buoy



DFAD No. 4: 14/11/21; Lamu, Kenya



- Non-compliant netting
- Non-compliant buoy – no vessel IOTC registration number (serial number only)

DFAD No. 5: 13/11/21; Maldives EEZ, FV 'Kanduroalhi'



- Non-compliant netting on raft

DFAD No. 6: 14/08/21; Lhaviyani Atoll, Kuredu, Maldives



- Non-compliant netting on FAD raft

DFAD No. 7: 19/09/21; Lhaviyani Atoll, Kuredu, Maldives









- Non-compliant netting on FAD raft

DFAD No. 8: 01/12/21; North Male atoll; Maldives



- Non-compliant netting
- Non-compliant buoy – no vessel IOTC registration number (serial number only)

DFAD No. 9: 22/11/21; Gemanafushi Island, Maldives; by fishers aboard vessel FV 'Ufaa'	
	<ul style="list-style-type: none"> - Non compliant entangling netting on FAD raft
DFAD No. 10: 28t/10/21; Watamu, Kenya	
	<ul style="list-style-type: none"> - Non-compliant buoy - no vessel IOTC registration number
DFAD No. 11: 19/11/20; Gemanafushi Island, Maldives by fishers from FV Kanduroalhi	
	<ul style="list-style-type: none"> - Non-compliant entangling netting on FAD raft

DFAD No. 12: 10/11/20; Gemanafushi Island, Maldives by fishers from FV Kanduroalhi	
	 <ul style="list-style-type: none"> - Non-compliant – entangling materials used in FAD raft construction
DFAD No. 13: 17/11/21; Gemanafushi Island, Maldives by fishers from FV 'Ufaa'	
	<ul style="list-style-type: none"> - Non-compliant – entangling materials used in FAD raft construction

Recommendations

Noting the above concerns, and the detailed information and photographs of dFADs recovered within the IOTC Area of Competence since November 2020 (11 months since Resolution 19/02 came into force), Kenya recommends that the IOTC Compliance Committee further investigate and consistently tracks compliance with all measures of CMM 19/02.




Mechanisms need to be put in place to independently verify the materials used in the construction of dFADs and the dimensions of dFAD components such as the rafts, attractors, 'tail' etc. Such monitoring may be achieved through reviews of observer data on dFAD designs and use, while also requiring fleets to directly provide information to the IOTC about dFAD designs, deployment/recovery dates, locations, observer oversight and ultimate fates of dFADs after their deployments.

The photographed buoys may be used as case studies. As mentioned, many of the recovered dFADs had instrumented buoys attached with buoy IDs, although the unique IOTC vessel registration


numbers were absent in all cases. Buoy suppliers have all the details of the purse seine vessels that are assigned to each of the operational buoys and 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.

Annex 1:

Additional Data on Information Paper Submitted by Kenya to Compliance Committee

FAD no.	Buoy ID	Serial number	Vessel Name	Flag State	IOTC Vessel Register	Vessel image	Additional comments
1	ARITZATXU Vo1 267286 ANZORAS	267286	Playa de Aritzatxu?	Spain	Playa de Aritzatxu		Non-compliant netting and buoy
			Playa de Anzoras?	Seychelles	Playa de Anzoras		
2	B ISLE SLX+366740	366740	Belle Isle?	Mauritius	Belle Isle		Non-compliant netting and buoy
3	Illegible	NA	NA	NA	NA		Non-compliant netting and buoy

4	IZD 621903	621903	Izurdia?	Spain	Izurdia		Non-compliant netting and buoy
5	NA	NA	NA	NA	NA		Non-compliant netting, no buoy
6	NA	NA	NA	NA	NA		Non-compliant netting, no buoy
7	NA	NA	NA	NA	NA		Non-compliant netting, no buoy
8	ADR 704 BLO 1174	Not visible	Adria?	Korea	Adria		Non-compliant buoy
			Blue Ocean?	Korea	Blue Ocean		
9	NA	NA	NA	NA	NA		Non-compliant netting, no buoy

10	AUNDI 263762	263762	Txori Aundi?	Seychelles	Txori Aundi		Non-compliant netting and buoy
11	NA	NA	NA	NA	NA		Non-compliant netting, no buoy
12	NA	NA	NA	NA	NA		No buoy
13	NA	NA	NA	NA	NA		Not compliant netting, no buoy