Drifting fish aggregating device interactions with Indian Ocean coastal communities and non-compliance with IOTC Resolution 19/02

Information paper submitted to the 29th Session of the Indian Ocean Tuna Commission

Blue Marine Foundation, April 2025

A basin-spanning citizen science programme led by the University of Exeter has recorded the interactions of drifting fish aggregating devices (dFADs) with the coastal environment around the Indian Ocean for the past four years. The FAD Recovery Project has documented over 500 dFADs, showing both their widespread distribution and the rate at with which dFADs released by the industrial purse seine fleet wash up after being abandoned by their parent vessels.

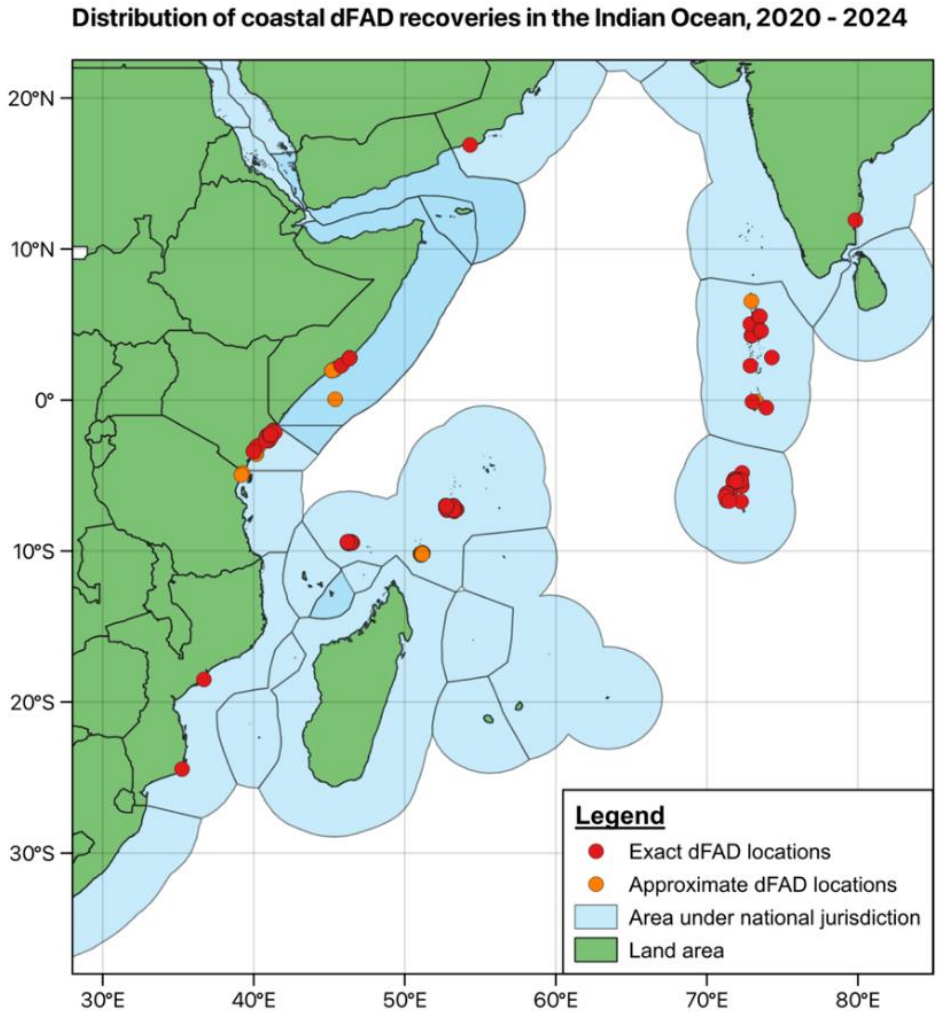


Figure 1. Locations of dFAD encounters and retrievals. Exact coordinates are indicated by red dots. Sites where exact coordinates were not provided, but locations were, are marked in orange. Exclusive Economic Zones (EEZs) indicated by pale blue.

The 540 dFADs were recovered by NGOs, fishers and scientists in nine Indian Ocean coastal states between January 2020 and November 2024. Their location, construction materials and identifying markings were recorded, along with information about the ecosystems where the dFADs were found. The full details of all 540 dFADs will be available in a forthcoming publication.[1]

Remarkably, not a single recovered dFAD was found to be fully compliant with the requirements of IOTC Resolution 19/02, which was adopted in 2019 and came into force on 1st January 2020. Primary areas of non-compliance included the ongoing use of entangling features like netting and other meshed materials, low replacement of plastics with biodegradable components, and the absence of the deploying vessel's unique IOTC registration number clearly marked on each operational buoy.

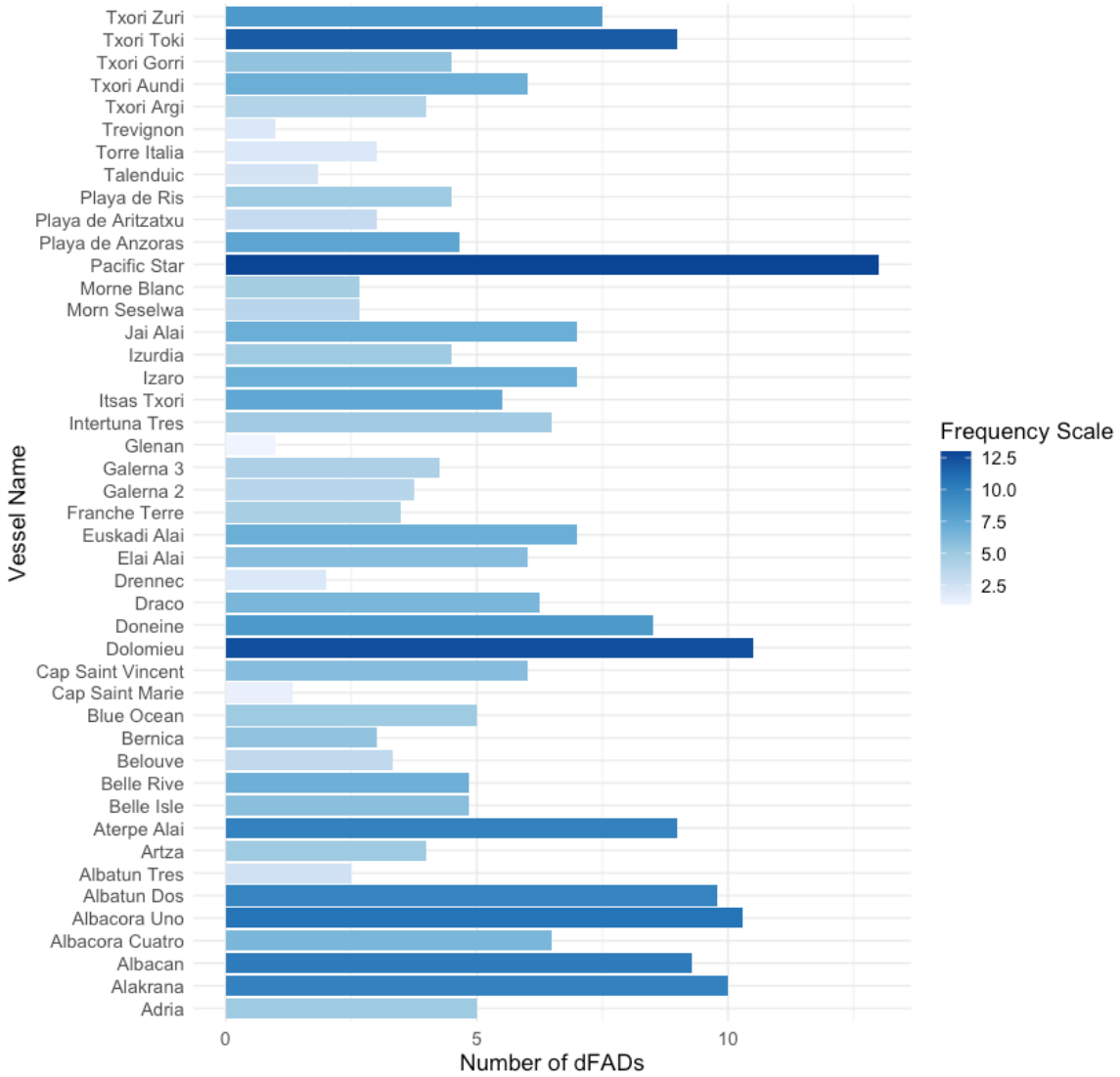


Figure 2. The number of dFADs deployed since 2020 that were recovered and are attributable to purse seine vessels of the Indian Ocean. Vessel names were determined using the IOTC Record of Active Vessels based on abbreviations written on satellite buoys with medium to high confidence in connection. Where multiple vessel names were written on a buoy, the count has been split equally between the vessels

[1] Dyer, E. (2025). Indian Ocean Purse Seine Tuna Fisheries Using Drifting Fish Aggregating Devices: Compliance and Environmental Impacts. Thesis submitted for MScbyRes Biological Sciences, University of Exeter.

Well over 300 of the dFADs were suspected of being deployed during the period where Resolution 19/02 was in force, yet widespread compliance failures persisted. Markings on the buoys meant that many of these were clearly attributable to purse seiners operating in the Indian Ocean, as set out in Figure 2.

This compliance failure has severe implications for the Indian Ocean marine environment. The fine plastic mesh and fishing nets routinely used to build dFADs trap and entangle wildlife like turtles and sharks that are attracted to the dFADs. Many of the dFADs were recovered in sensitive habitats like reefs and beaches, where they can drag along the bottom in shallow water and destroy the seabed. In addition, over 300 FADs were found in marine protected areas set up to protect vulnerable ecosystems. The failure to include IOTC-mandated identifying information makes it challenging for coastal communities to trace this polluting behaviour back to the vessels responsible. It is not clear what is preventing purse seine vessel operators from marking their buoys appropriately.

The high frequency with which dFADs are stranded on coastlines around the Indian Ocean was highlighted by a recent paper that analysed FAD Recovery Project data from Somalia[2]. Over a six-month period, 80 dFADs were recorded along a four-sample coastline, and the study estimated that there are potentially 1,395 dFADs washing up over the Somali shelf every year.

Some details of non-compliant dFADs found in this research are provided in Table 1. These data were provided to the FAD Recovery Project in the last two years. The dFADs are connected to vessels based upon identifying features of the buoys.

The data in Table 1. show that the European Union continues to fail in its duty to effectively manage its industrial, distant-water tuna purse seine fleet. The same is true for Seychelles and Mauritius, both of which allow EU-owned purse seine vessels to fly their flags, utilise their tuna quota and pollute their waters with thousands of destructive dFADs.

Blue Marine Foundation is calling for a moratorium on the use of drifting FADs in the Indian Ocean until the European Union and its Spanish and French-owned purse seine fleets take responsibility for the destruction they cause and implement responsible, legal, sustainable fishing practices and management measures, including a closure period for dFADs in the region.

[2] Sheik Heile, A., Dyer, E., Bealey, R. et al. (2024). Drifting fish aggregating devices in the Indian ocean impacts, management, and policy implications. npj Ocean Sustain 3, 60. https://doi.org/10.1038/s44183-024-00091-5

Table 1. Evidence of dFAD non-compliance with Conservation Management Measures 19/02 collected within the Western Indian Ocean. These data have been provided to the FAD Recovery Project in the last two years.

2025 update							
Date	**Location**	**Vessel details (name, IOTC number, flag state)**	**Compliance with Resolution 19/02**			**Photos and notes**	
			Non-entangling	**IOTC number**	**Bio-degradable**	**FAD**	**Buoy**
30/07/2021	Unknown habitat. Maldives	Elai Alai IOTC000175 Spain (EU)	N/A	N	N/A		

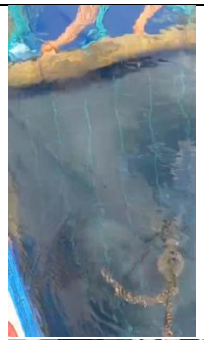
09/02/2023	Unknown habitat. Somalia	Pacific Star IOTC018037 Tanzania	N	N	N		
20/03/2023	Open ocean Kenya	Izaro IOTC015361 Seychelles	N/A	N	N/A		
14/06/2023	Open ocean. Guitanja, Mozambique	N/A	N	N/A	N		

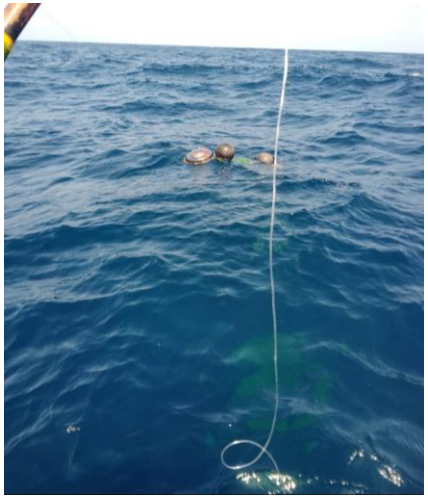
						Dead turtle engtangled in shade cloth.	
~01/09/2023	Open ocean. Kenya	Intertuna Tres IOTC000138 Seychelles Draco IOTC003606 Seychelles	N/A	N	N/A		
22/09/2023	Open ocean. Kenya	Intertuna Tres IOTC000138 Seychelles Draco IOTC003606 Seychelles	N	N	N	No photos, description of big metal frame and nets	

~01/10/2023	Open ocean. Kenya	Jai Alai IOTC016019 Seychelles	Unknown	N	N		 No clear connection between '218' and the vessel.
05/11/2023	Open ocean. Kenya	Aterpe Alai IOTC017253 Spain (EU)	Y	N	N		

10/11/2023	Open ocean. Kenya	Euskadi Alai IOTC016233 Seychelles	N/A	N	N/A		
14/11/2023	Open ocean. Kenya	Izurdia IOTC000879 Spain (EU)	N	N	N	No photos, description of 7 buoys, metal frame with shade netting	
01/01/2024	Open ocean. Salalah, Oman	Txori Aundi IOTC00815 Seychelles	N/A	N	N/A	No photos, couldn't pull it up to retrieve or see materials	

05/01/2024	Beach. Dovela, Mozambique	Albacan IOTC000159 Mauritius Pacific Star IOTC018037 Tanzania	N	N	N	 	 No clear connection between '846' and the vessels.
06/01/2024	Open ocean. Kenya	Adria IOTC000369 Korea Blue Ocean IOTC016214 Korea	N/A	N	N/A		

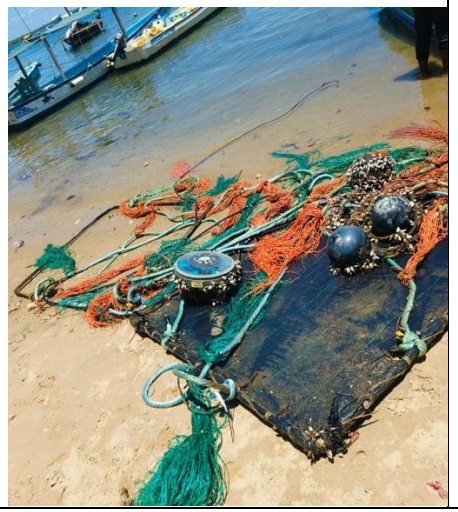
10/03/2024	Open ocean. Kenya	Aterpe Alai IOTC017253 Spain (EU)	N	N	N	 	
02/04/2024	Open ocean. Kenya	Albacan IOTC000159 Mauritius Pacific Star IOTC018037 Tanzania	N	N	N		

28/09/2024	Open ocean. Kenya	Itsas Txori IOTC015353 Spain (EU)	N	N	N	 Couldn't be recovered at this time. Described shade cloth on frame.	 No clear connection between '296' and the vessel
15/11/2024	Open ocean. Kwale tanga, Tanzania	Elai Alai IOTC000175 Spain (EU)	N/A	N	N/A	N/A	

2024	Uncertain. 8km east of eagle point. Tanzania	Albatun Dos IOTC000811 Spain (EU) Albacora Uno IOTC000164 Spain (EU)	Unknown	N	Unknown	Raft not pictured or well described.	

19/10/2024	Open ocean. Kenya.	Elai Alai IOTC000175 Spain (EU)	Y	N	N	Raft and curtain not pictured. Described with plastic sheet, no meshed materials noted.	
22/10/2024	Reef. Fair Lagoon, Maldives	Artza IOTC000814 Seychelles	N	N	N		

05/11/2024	Reef. Bodugaafaru, Maldives	N/A	N	N/A	N		
05/11/2024	Reef. Trix Caves, Maldives	Intertuna Tres IOTC000138 Seychelles Draco IOTC003606 Seychelles Galerna 2 IOTC015507 Seychelles	N	N	N		

		Galerna 3 IOTC015856 Seychelles					
4/12/2024 *Not included in above analysis due to date of recovery	Open ocean. Kenya	Franche Terre IOTC008743 France (EU)	N	N	N		

12/12/2024 *Not included in above analysis due to date of recovery	Open ocean. Kenya	Txori Toki IOTC000193 Seychelles	N	N	N	Raft not pictured but described with net.	
24/12/2024 *Not included in above analysis due to date of recovery	Open ocean. Kenya	Bernica IOTC009828 France (EU)	U	N	U	Raft and curtain couldn't be recovered.	

25/12/2024 *Not included in above analysis due to date of recovery	Open ocean. Kenya	Playa de Aritzatxu IOTC00187 Spain (EU)	U	N	U	Raft and curtain not recovered. Raft described as covered but unclear what materials.	

The FAD Recovery Project work was conducted by University of Exeter student, Emilia Dyer, under funding from Blue Marine Foundation. Data contributors include Olive Ridley Project, Island Conservation Society, Seychelles, Seychelles Islands Foundation, and Somali Natural Resources Research Center, among others.