

Options for Improving dFAD Recovery and Accountability to Minimize Coastal Habitat Damage and Marine Litter

*Adam Baske (1), M. Shiham Adam (2), David Kerstetter (3)
& Yaiza Dronkers Londoño (1)*

International Pole & Line Foundation. London, United Kingdom; (2) Ministry of Fisheries, Marine Resources & Agriculture. Male, Republic of the Maldives; (3) The Halmos College of Natural Sciences and Oceanography, Nova Southeastern University, Florida, USA.



Problem statement:

Thousands of dFADs wash ashore on coastal habitats and contribute to marine litter.

How should RFMOs - as the bodies responsible for minimizing impacts on marine environment and contributions to abandoned, lost, and discarded fishing gear - respond?



Photo: Raven Hoflund

dFAD stranding events

- dFAD accountability goes beyond the fishing industry
 - Coastal state inhabitants
 - Coastal habitats/ecosystem services
 - Beachgoers
 - Coast Guard
 - Tourists
 - Coastal ocean economy



Photo: Raven Hoflund

Other relevant international instruments



UN General Assembly Resolution A/Res/60/31



UN Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks



MARPOL Convention - Annex V



International Guidelines on Bycatch Management and Reduction of Discards
(FAO 2011)



Agreement of Port State Measures to Prevent, Deter and Eliminate Illegal,
Unreported and Unregulated Fishing (FAO 2009)



Voluntary Guidelines for Flag State Performance (FAO 2015)



Committee on Fisheries (COFI/FAO) Increased global concern: Sustainable
Development Goal target 14.1 requests action on marine litter and marine
pollution of all kinds which includes ALDFG.

DISPOSAL OF ALL GARBAGE PROHIBITED EXCEPT OTHERWISE SPECIFIED

MARPOL Annex V and the domestic law prohibit dumping of waste in the ocean and navigable waters of the United States including the Great Lakes. Depending on the nature of the object, discharge of some waste is permitted outside of specific distances offshore except in 'Special Areas' designated under Section 151.06.

Type of Waste	Discharge Permitted
Plastics- including synthetic ropes, fishing nets, and plastic bags	Prohibited in all areas
Floating dunnage, lining and packing materials	Prohibited less than 25 nautical miles from nearest land
Food waste, paper, rags, glass, metal, bottles, crockery, and similar refuse	Prohibited less than 12 nautical miles from nearest land
Comminuted or ground floor waste, paper, rags, glass, etc.	Prohibited less than 3 nautical miles from nearest land

Violation may result in heavy penalties.

SmartSign.com • 800-952-1457 • S-9327

It is illegal for any vessel to dump plastic trash anywhere in the ocean or navigable waters of the United States. Annex V of the MARPOL TREATY is an

International Law for a cleaner, safer marine environment. Violation of these requirements may result in civil penalty up to \$25,000, fine and imprisonment.



U.S. Lakes, Rivers,
Bays, Sounds and
3 miles from shore
ILLEGAL TO DUMP
Plastic & Garbage
Paper Metal
Rags Crockery
Glass Dunnage
Food

3 to 12 miles
ILLEGAL TO DUMP
Plastic



12 to 25 miles
ILLEGAL TO DUMP
Plastic
Dunnage, lining &
packing materials
that float



Outside 25 miles
ILLEGAL TO DUMP
Plastic

State and local regulations may further restrict the disposal of garbage.

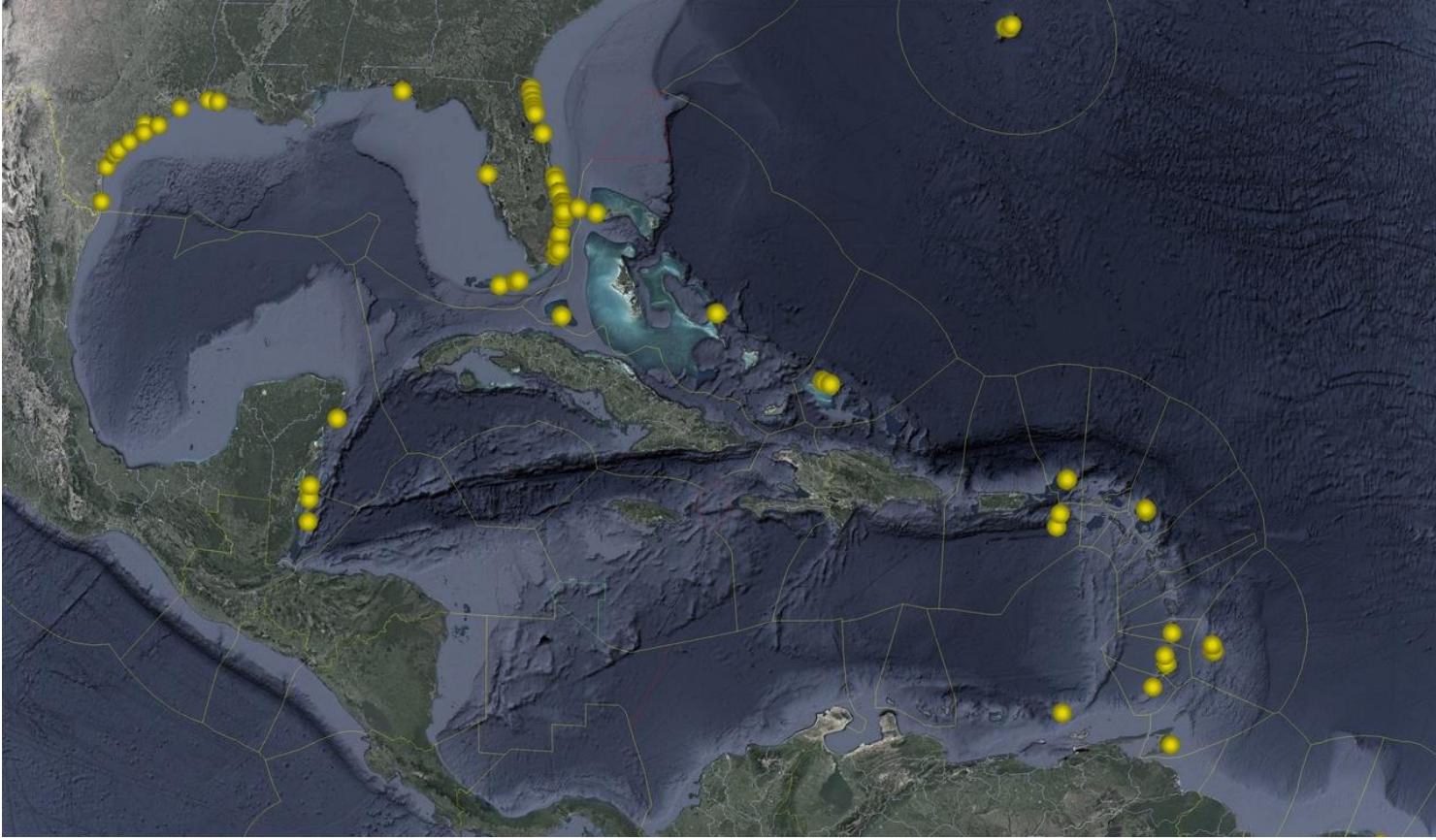
ATENCION

PROHIBIDO ARROJAR PLÁSTICOS AL MAR

PRESERVAR EL MEDIO AMBIENTE
ES RESPONSABILIDAD DE TODOS

REGLAMENTACIÓN DE DISPOSICIÓN DE
LA BASURA
MARPOL 73/78 ANEXO V

TIPO DE BASURA	FUERA DE AREAS ESPECIALES
PLÁSTICOS - INCLUIDOS CABOS SINTÉTICO, REDES DE PESCA, BOLSAS PLÁSTICAS	ELIMINACION PROHIBIDO
ELEMENTOS DE ESTIBA QUE FLOTEN, LINO Y PRODUCTOS DE PAPEL	A MAS DE 25 MILLAS FUERA DE LA COSTA
PAPEL, TRAPOS, VIDRIO, METALES, BOTELLAS, LOZA, Y SIMILARES	A MAS DE 12 MILLAS FUERA DE LA COSTA
PAPEL, TRAPOS, VIDRIO, ETC. PULVERIZADO O TRITURADO -*	A MAS DE 3 MILLAS FUERA DE LA COSTA
ALIMENTOS NO PULVERIZADOS O TRITURADOS	A MAS DE 12 MILLAS FUERA DE LA COSTA
ALIMENTOS PULVERIZADOS O TRITURADOS	A MAS DE 3 MILLAS FUERA DE LA COSTA
MEZCLADA	CUANDO LA BASURA ESTÉN MEZCLADA CON OTRAS SUBSTANCIAS PERJUDICIALES SUJETAS A PRESCRIPCIONES DIFERENTES SOBRE ELIMINACIÓN O DESPACHO SE APPLICARÁN LAS DISPOSICIONES DEL ESTÁNDAR MÁS RIGUROSO



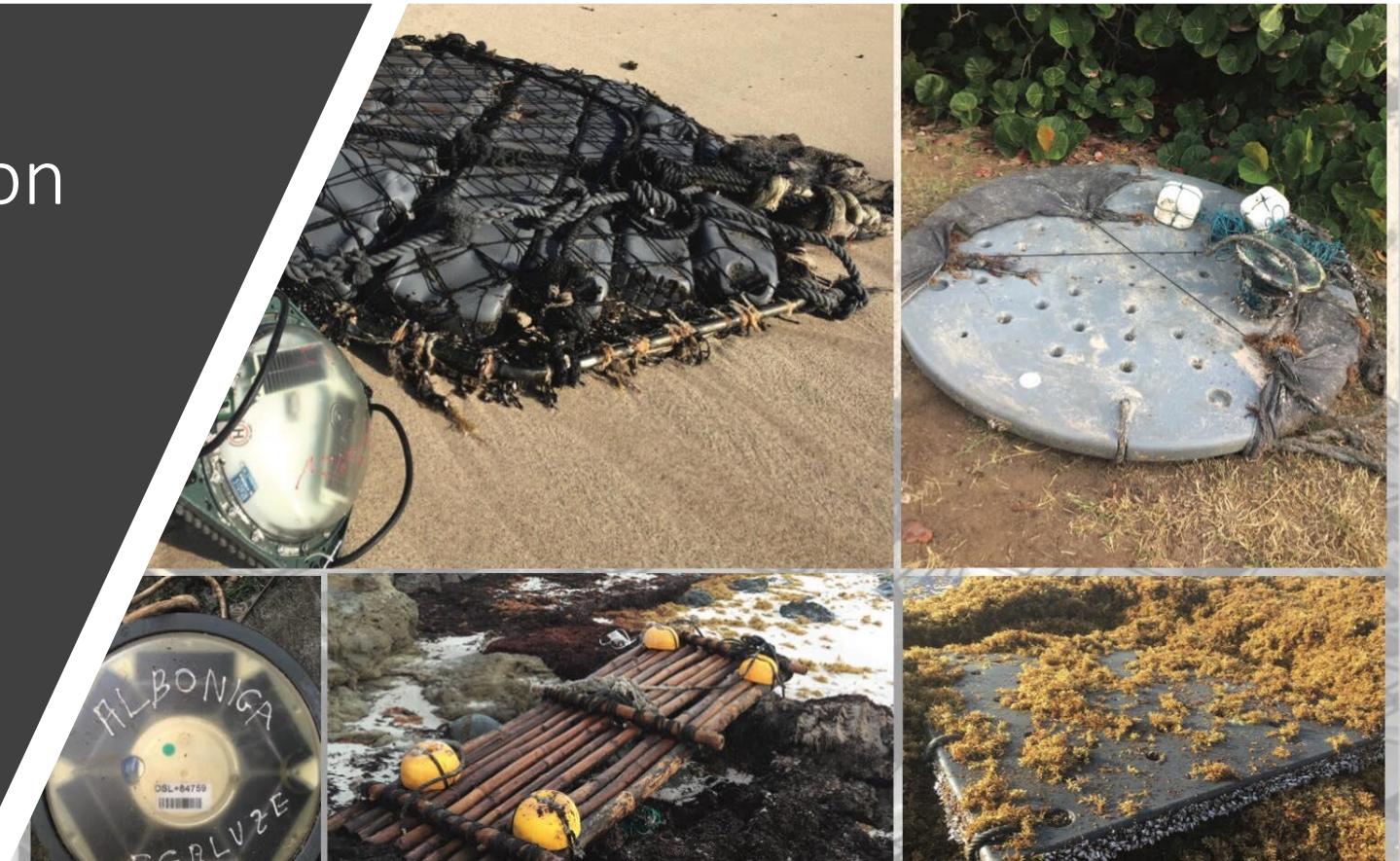
Crowd-sourced data from
Atlantic region

- Stranding events recorded from online keyword searches for blogs and social media posts, as well as traditional media reporting.
- Once event confirmed, information on device/raft requested and photos collected.



Examples of photo collection

- While incomplete, the dataset nonetheless provides an indication of the types of identifying information available on the devices and the geographic scope of the problem



Level of information available on 109 stranded dFADs in Atlantic region

Location Range of dFAD stranding events	Flag State	Vessel	dFAD types	Beacon Identification	Photos
Caribbean, Florida, Gulf of Mexico, South America, Mexico, Bermuda, Azores, Scotland	33 can be attributed to a specific flag state	34 can be attributed to a specific vessel	79 satellite beacons, 21 raft-only, 9 Zunfloats	61 satellite beacons with readable identifiers	photos available for 100 events

Options for improving dFAD accountability and recovery

1. Definitions of ownership and associated responsibilities
2. Clear requirements on “deactivation” of dFADs that are still adrift
3. Strengthening of dFAD recovery requirements
4. Independent RFMO-wide tracking of dFADs
5. Clear mechanisms through which coastal states, in collaboration with RFMOs, can communicate with dFAD owners on stranding events and ALDFG

Definitions of ownership and associated responsibilities

- Several options: whichever vessel deploys the dFAD, the owner of the vessel or fleet, or even the respective flag state.
- Where dFADs are deployed by supply vessels, RFMOs should consider clear guidance on how to clearly apply ownership responsibility
- Clear ownership responsibilities for dFADs should be applied consistently across the tRFMOs in line with international instruments on gear marking, the reporting of ALDFG, and reporting of plastic pollution under MARPOL Annex V

Clear requirements on “deactivation” of dFADs to minimize harm to coastal habitats

- “Deactivated” dFADs become “ghost gear” until a stranding event or interdiction.
- Such actions amount to an intentional disposal of ALDFG and should be characterized as a contribution to plastic marine litter under MARPOL Annex V.
- Better defining the conditions under which a dFAD can be “deactivated” or even requiring that all dFADs be tracked until a stranding event or other interception occurs would greatly reduce their contribution to ALDFG

Strengthening of dFAD recovery requirements

- As dFAD deployments increase, so do contributions to ALDFG and marine litter
- The tuna RFMOs should seriously consider the adoption of dFAD recovery requirements to reduce such contributions.
- Such requirements could include, for example, target recovery percentages of overall deployments (e.g., 80% of all dFADs deployed must be recovered) with the aspirational goal of achieving 100% recovery.

Independent RFMO-wide tracking of dFADs

- dFAD tracking systems could be implemented on a larger scale in the future, and that it is possible to share dFAD transmission data with independent bodies.
- However, for such systems to be effective across an RFMO, greater levels of transparency and independent verification would be needed as the current flow of information in both projects has been largely controlled by vessel owners and is not independently verified.

Clear systems for coastal states, in collaboration with RFMOs, to communicate stranding events

- Should coastal state stakeholders who discover a dFAD inform the RFMO or should they inform their local government, and ask them to do so?
- What type of information about the dFAD should be submitted?
- Should inquiries and information go directly to vessel owners?
- Should there be information on dFADs (and beacons) regarding how to contact dFAD owners when stranding events occur?

Conclusion

- RFMOs take urgent management action to address the contribution of dFADs to marine pollution and habitat damage.
- Compensatory mechanisms should also be developed when dFADs cause damage in coastal states.
- Real time tracking of dFADs by independent parties, either the RFMO secretariats or by independent third parties appointed by the RFMOs, may be the best solution.



Thank you