DATE: Friday, 29 November 2024
TIME: During the Lunch Break - approximately 12:30-13:30 PLACE:
WCPFC21 Meeting Venue (Breakout Room TBC)

FAD retrieval issues and initiatives in the Western and Central Pacific Ocean

Hosted by:

International Seafood Sustainability Foundation (ISSF)

Drifting Fish Aggregating Devices (dFADs) have become essential tools in tropical tuna purse seine fishing, enhancing catch rates and promoting fishing efficiency. However, the increase in dFADs in the oceans has raised concerns about their environmental impact when lost or abandoned FADs contribute to marine litter, pollution and damage of vulnerable ecosystems. To address these issues and promote responsible fishing practices, several FAD retrieval initiatives have been launched and the First International Workshop on FAD Retrieval was held to consider the future implementation of such initiatives.

The objectives of this event are: (1) to provide stakeholders in the WCPFC with an overview of specific FAD retrieval issues and initiatives in the Pacific region and the outcomes of the First International Workshop on FAD Retrieval, which was held in May 2024 in the Galapagos Islands and (2) to promote discussion and dialogue on the topic in the Western and Central Pacific Ocean to facilitate the exchange of knowledge and experiences.

AGENDA

Welcome - Holly Koehler, Vice President Policy and Outreach, ISSF

Overview of Outcomes of the First International FAD Retrieval Workshop – Victor Restrepo, Vice President for Science, ISSF

Economic and Feasibility Analysis to Decreases dFAD Loss and Abandonment in the Pacific, including Retrieval Programs - Paul Hamer, SPC

FAD stranding events in French Polynesia - Thibaut Thellier, Marine Resources Department, French Polynesia

FAD retrieval program in Palmyra - Craig Heberer, The Nature Conservancy

Q&A and Discussion

FAD retrieval initiatives

ISSF- Side Event |

WCPFC 21 (Nov 29, 2024)

ISSF INTERNATIONAL SEAFOOD SUSTAINABILITY FOUNDATION

Photo: David Itano

Lost, Abandoned, and Discarded FADs

ISSF INTERNATIONAL SEAFOOD SUSTAINABILITY FOUNDATION

FAD LOSS

- FADs sink
- FADs are appropiated by other fleets
- FADs communications malfunction

FAD Abandonment

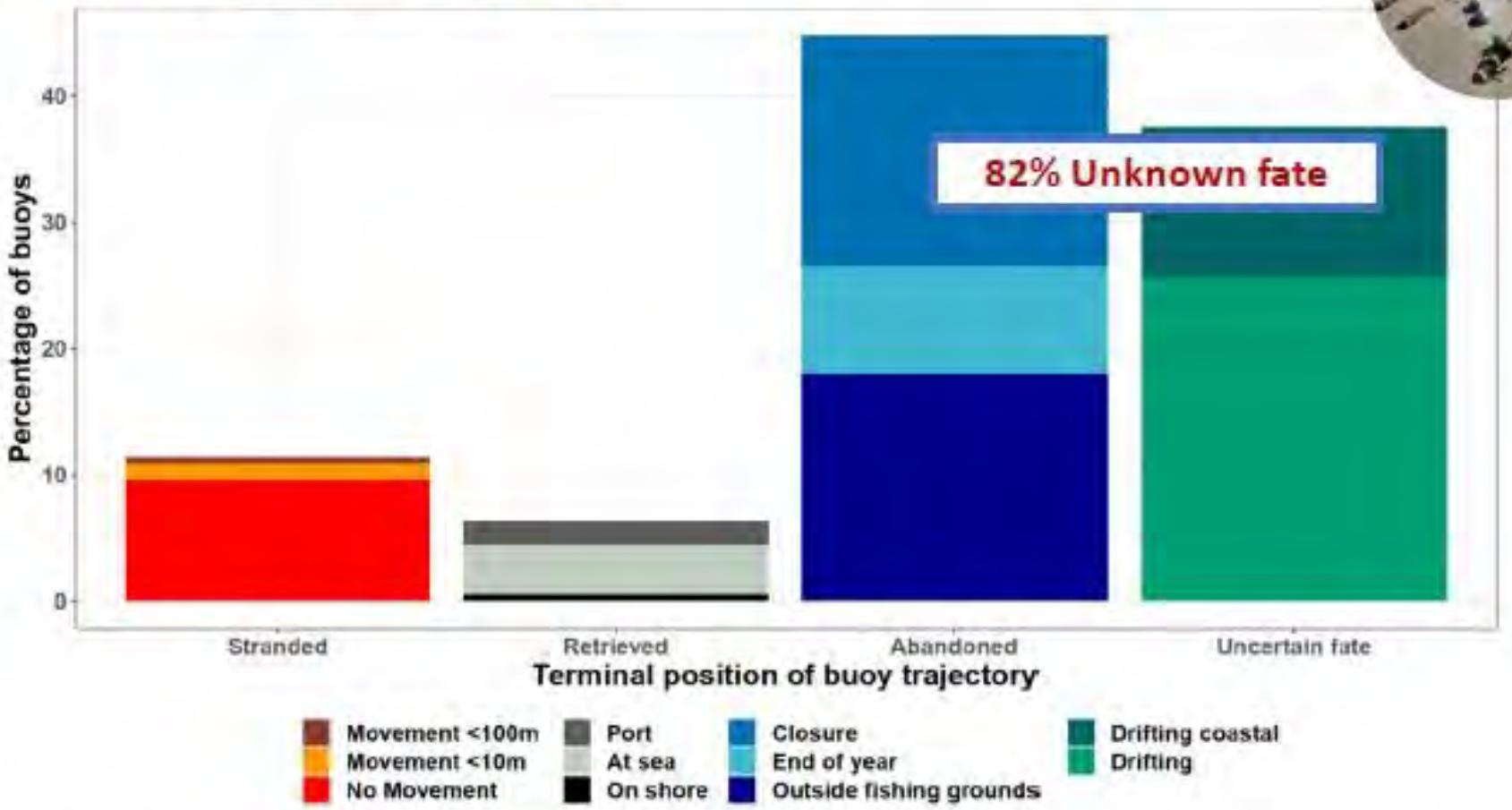
- Drift out of the fishing zone:
  - End up stranding, sinking, appropiated by other fleets

FAD Discard

- FAD structures are discarded at sea when damaged

FAD loss and abandonment: WCPO

FAD fates – from tracking data



- 11.3% stranded
- 6.0% were retrieved
- 44.8% of buoys were abandoned
- 37.6% deactivated or signal lost within the fishing grounds

Escalle et al. 2019

Current Global FAD retrieval initiatives

→Indian Ocean:

1. Oceanika FAD retrieval program
2. SFA Seychelles FAD retrieval program

→Pacific Ocean:

3. Palmyra FAD watch program
4. Galapagos FAD retrieval program

Photo: Kydd Pollock_TNC

→ Efforts in French Polynesia: census and collection of FADs

Initiatives by buoy manufacturers

Repurposing buoys (plastic and ghost net recovery, research, etc.)

- Marine instruments: Blue Recovery
- Satlink: Recon
- Zunibal: Searcle

Retrieval programs are **voluntary** so far

CMM 2023-01 **encourages** industry-led recovery programs

If programs are voluntary, it is important that they are effective

Question: What makes a program effective?

WCPFC 20 instructed the FADMO-IWG

Consider ways to implement FAD recovery programs/strategies, including economic aspects and standards required for programs to be effective

WCPFC21-WP-19 (FADMO-IWG) suggests guidelines/best practices based on input from CCMs and other stakeholders.

Also relevant:

First International FAD Retrieval Workshop (Galapagos Is., May '24)

Today

- SPC Survey
- FP projects
- Palmyra project
- Q&A

THE WORLD BANK

Pacific Community
Communauté du Pacifique

Economic and feasibility analysis to decrease dFAD loss and abandonment in the Pacific including retrieval programs

To participate in the stakeholder's consultation

Send us your email and contact information

Or write to SPC: laurianee@spc.int

Participate in the stakeholder's consultation

What to expect ?

- **Fill out surveys to share your views on the subject**

Options to decrease dFAD loss in the Pacific, including retrieval programs

- **Participate in follow up interviews with the SPC team**

- **Get feedback information on the results from the study**

To participate
Send us your email and contact information

Or write to SPC: laurianee@spc.int

Stranded dFADs projects in French Polynesia

French Polynesia overview

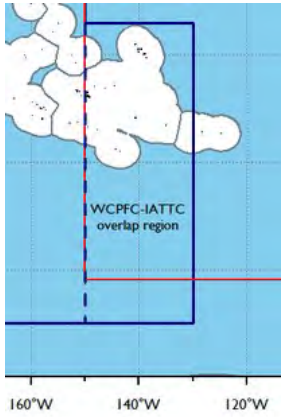
- 5 archipelagos
(Society, Tuamotu, Gambier, Marquesas, Austral islands)

- 118 islands (76 inhabited)

- FP EEZ : 5,5 millions km² (mostly in the overlap)

- No foreign vessels allowed to fish in the FP EEZ

- Purse seine prohibited in the FP EEZ



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GESTION DURABLE DE LA PÊCHE

1- Citizen science project (since 2019)

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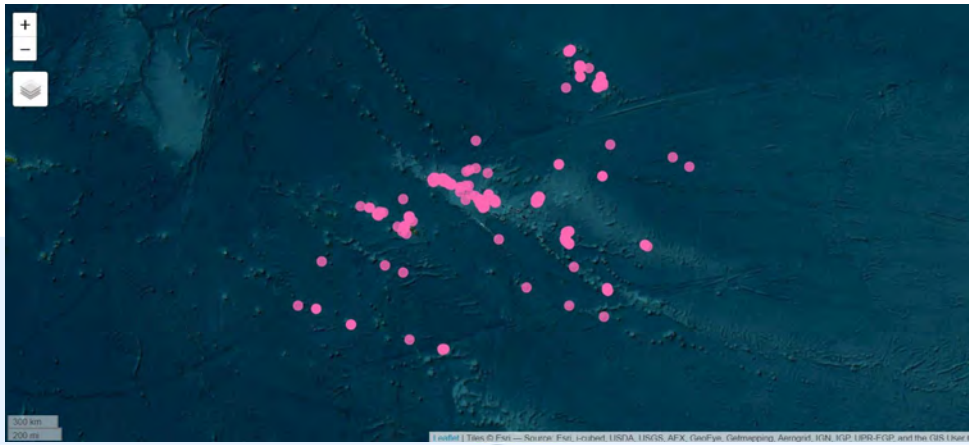
The inhabitants of French Polynesia islands are likely to find drifting or stranded dFADs, and are invited to declare these observations to the Marine Resources Department using specific and simple form they can fill in.

The form is also available online :

http://www.ressources-marines.gov.pf/dcpech/

→ **Stranded dFADs are everywhere in all FP islands**



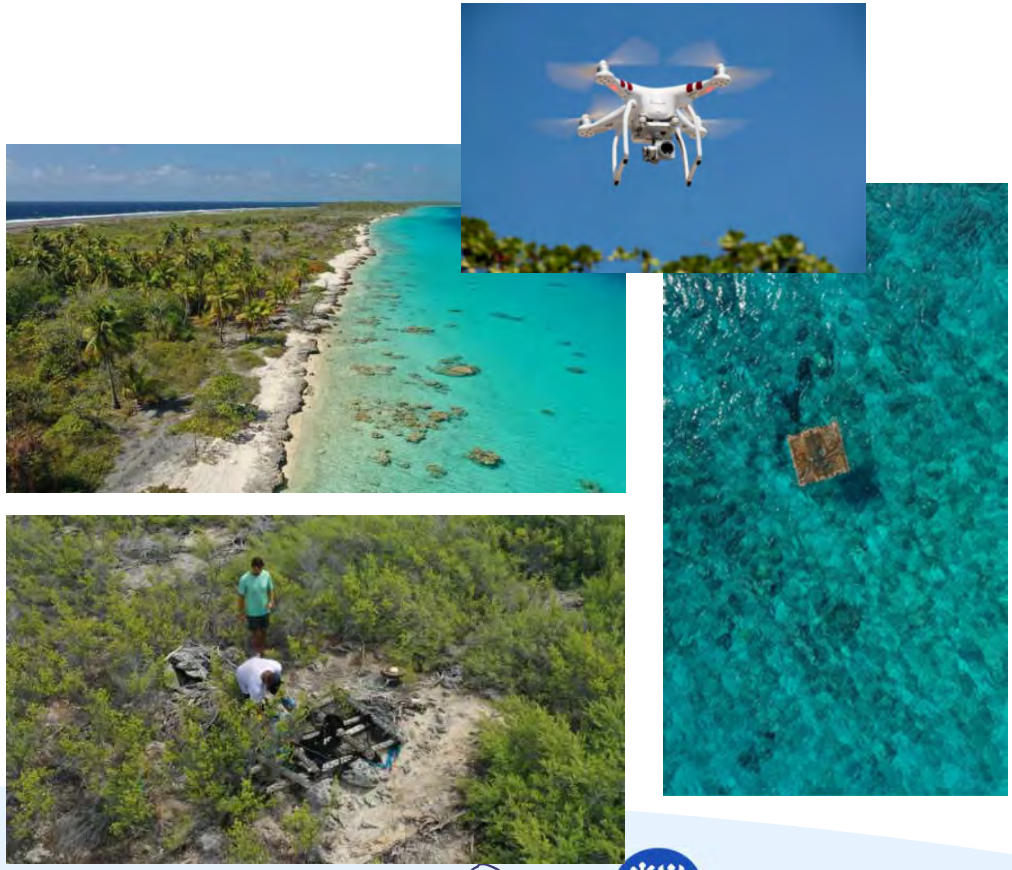
2- dFADs collection project
Tuamotu Islands (2022)

Dedicated protocols using :

- **Drone survey**
- **On-shore prospection**

In 9 islands of the Tuamotu :

- Amanu
- Hao
- Rangiroa
- Raroia
- Reao
- Tikehau
- Tureia
- Fakarava
- Raraka



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2- dFADs collection project
Tuamotu Islands (2022)

→**4 dFADs/km** of shoreline in some islands (among 8800km of shoreline in FP)

→ **590 dFad buoys** collected in these 9 islands (among 118 islands in FP)

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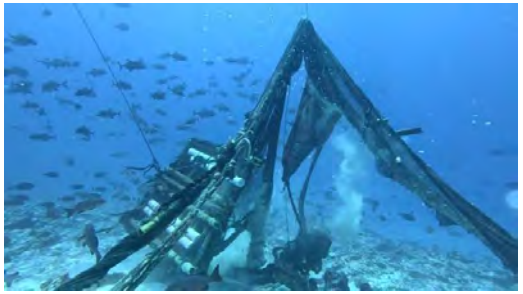
3- dFADs collection project
Marquesas Islands (2024)

+ Drone survey
+ On-shore prospection
+ Scubadiving and subwing tows (underwater transects)

→Many dFADs are also underwater, stuck in the reef or rocks

→What we found stranded onshore was just a part of the issue as many dFADs or dFADs parts are underwater



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→The more we look for, the more we find dFADs all around French Polynesia

→To date, 1500 dFADs (including satellite buoys) found in French Polynesia

→**dFADs HAVE TO be retrieved at sea before being stranded, lost or abandonned !**

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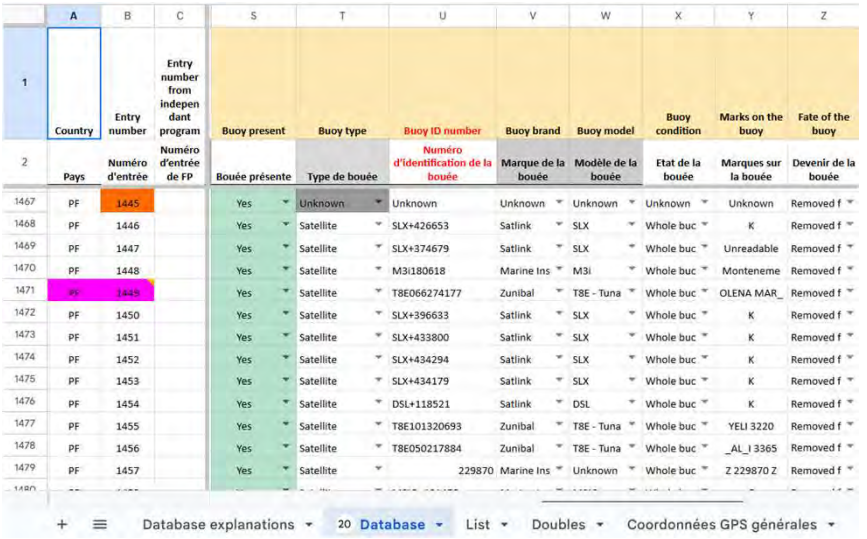
Stranded dFADs database

→ All the FP data is integrated in the Pacific Community regional database on stranded dFads, with other regional data

→ IATTC is developping the same kind of stranded dFADs database format



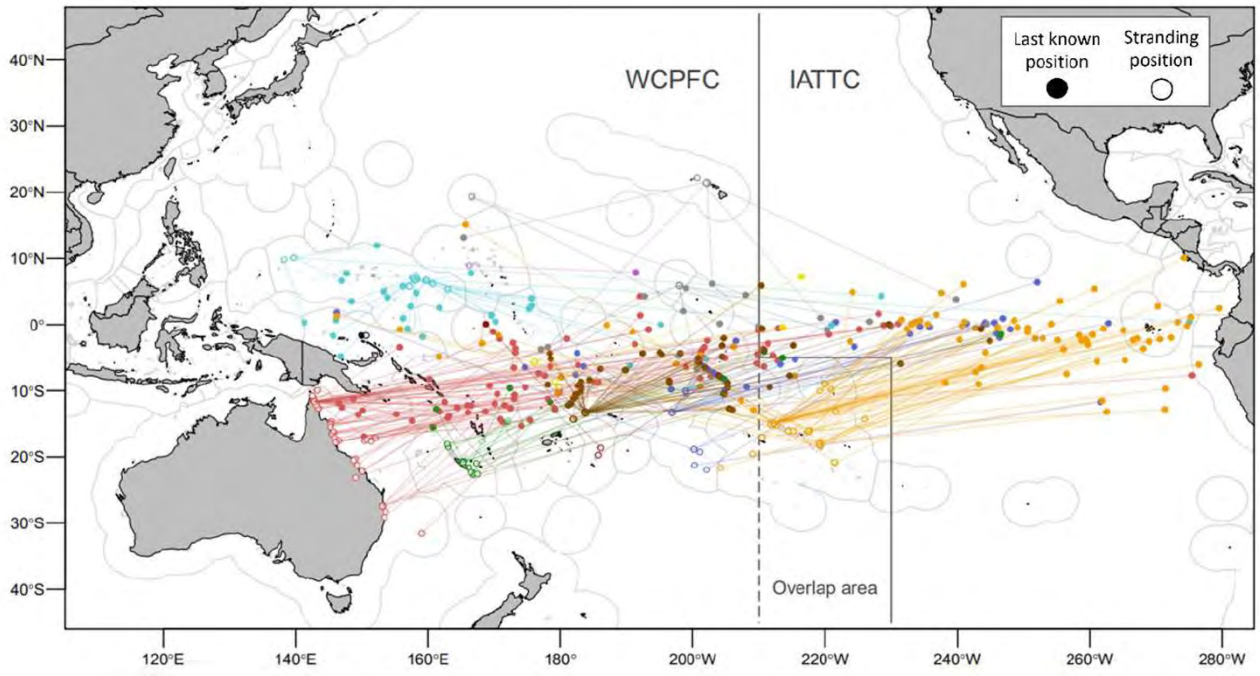
	A	B	C	S	T	U	V	W	X	Y	Z
1	Country	Entry number	Entry number from indepen dant program	Buoy present	Buoy type	Buoy ID number	Buoy brand	Buoy model	Buoy condition	Marks on the buoy	Fate of the buoy
2	Pays	Numéro d'entrée	Numéro d'entrée de FP	Bouée présente	Type de bouée	Numéro d'identification de la bouée	Marque de la bouée	Modèle de la bouée	Etat de la bouée	Marques sur la bouée	Devenir de la bouée
1467	PF	1445		Yes	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Removed f
1468	PF	1446		Yes	Satellite	SLX+426653	Satlink	SLX	Whole buc	K	Removed f
1469	PF	1447		Yes	Satellite	SLX+374679	Satlink	SLX	Whole buc	Unreadable	Removed f
1470	PF	1448		Yes	Satellite	M3i180618	Marine Ins	M3i	Whole buc	Monteneme	Removed f
1471	PF	1449		Yes	Satellite	T8E066274177	Zunibal	T8E - Tuna	Whole buc	OLENA MAR_	Removed f
1472	PF	1450		Yes	Satellite	SLX+396633	Satlink	SLX	Whole buc	K	Removed f
1473	PF	1451		Yes	Satellite	SLX+433800	Satlink	SLX	Whole buc	K	Removed f
1474	PF	1452		Yes	Satellite	SLX+434294	Satlink	SLX	Whole buc	K	Removed f
1475	PF	1453		Yes	Satellite	SLX+434179	Satlink	SLX	Whole buc	K	Removed f
1476	PF	1454		Yes	Satellite	DSL+118521	Satlink	DSL	Whole buc	K	Removed f
1477	PF	1455		Yes	Satellite	T8E101320693	Zunibal	T8E - Tuna	Whole buc	YELI 3220	Removed f
1478	PF	1456		Yes	Satellite	T8E050217884	Zunibal	T8E - Tuna	Whole buc	_AL_I 3365	Removed f
1479	PF	1457		Yes	Satellite	229870	Marine Ins	Unknown	Whole buc	Z 229870 Z	Removed f

Database explanations | 20 Database | List | Doubles | Coordonnées GPS générales

Stranded dFADs database

WCPFC-SC19-2023/EB-WP-04

IATTC DOCUMENT FAD-07 INF-A



Recommendations

→ Increasing cooperation among purse seine vessels/companies to retrieve dFADs before being stranded, lost or abandonned ;

→ Encouraging purse seine industry to operate vessels dedicated to the retrieval of such dFADs ;

→ Engaging Pacific purse seine industry and buoy service providers, with coastal states/territories into dFAD retrieval programs.

→ **The problem is known, and has to be adressed now !**

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Recommendations

→ Provision of the Tropical Tuna measure CMM 2023-01 para 22

22. (1) CCMs shall also encourage their flag vessels to:

(a) responsibly manage the number of drifting FADs deployed each year;

(b) carry equipment on board to facilitate the retrieval of lost drifting FADs;

(c) make reasonable efforts to retrieve lost drifting FADs;

(d) report the loss of drifting FADs to CCM fisheries authorities, and if the loss occurred in the EEZ of a coastal State, also report the loss to the coastal State concerned; and

(e) initiate retrieval programs for lost, abandoned or stranded FADs through cooperative initiatives among fishing vessels or other vessels implementing programmes for the recovery of such FADs.

→and IATTC resolution C-23-03 on dFAD retrieval

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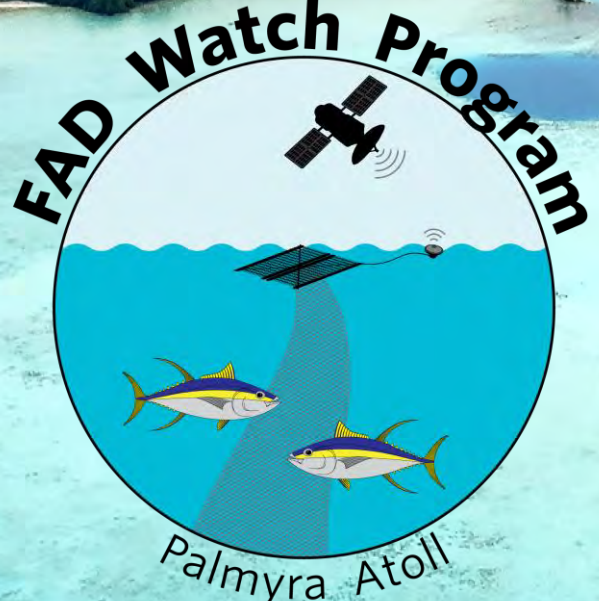
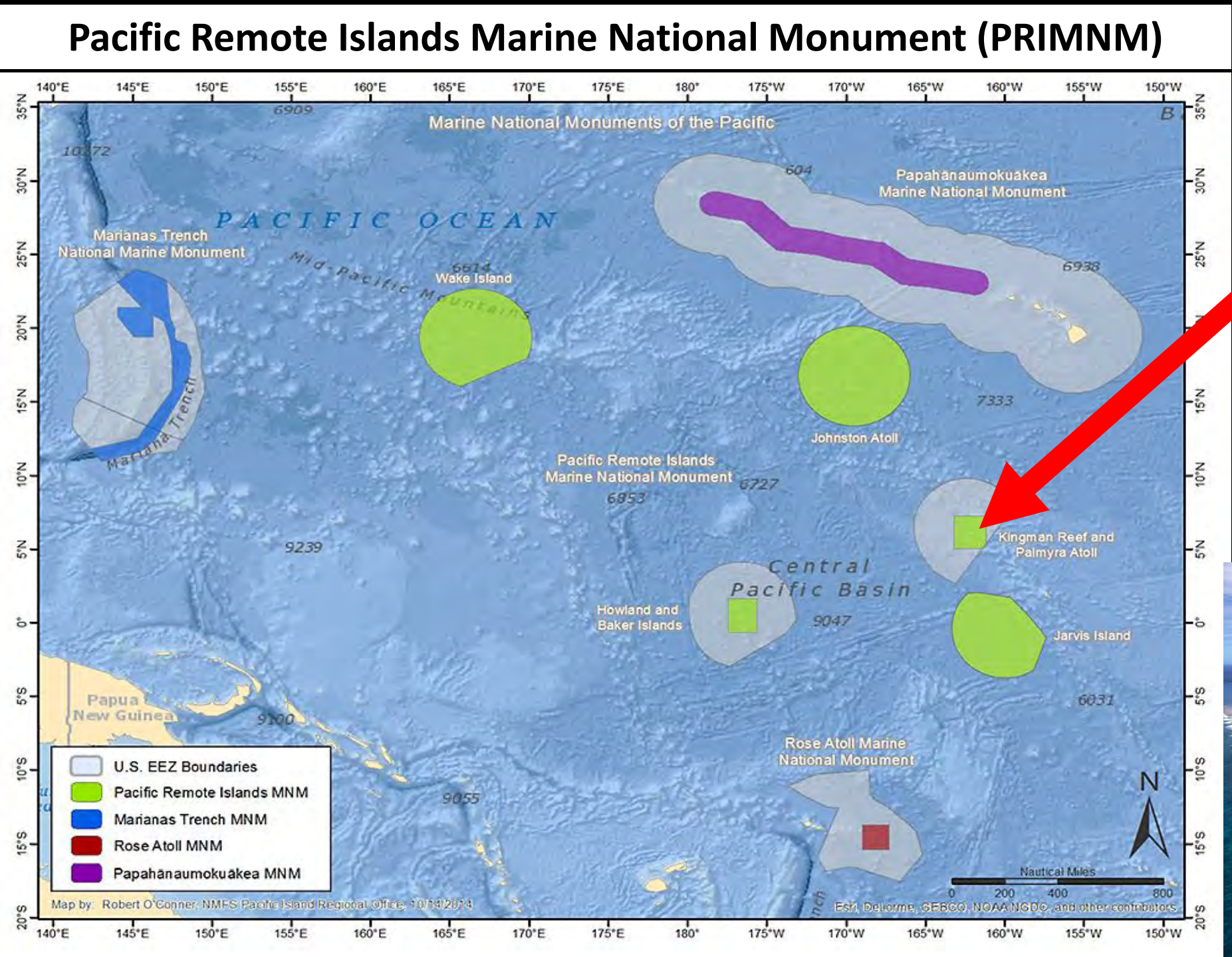
PALMYRA ATOLL dFAD STRANDING HISTORY AND DEVELOPMENT OF THE PACIFIC'S FIRST FAD WATCH PROGRAM

The Nature Conservancy
Hawai'i and Palmyra



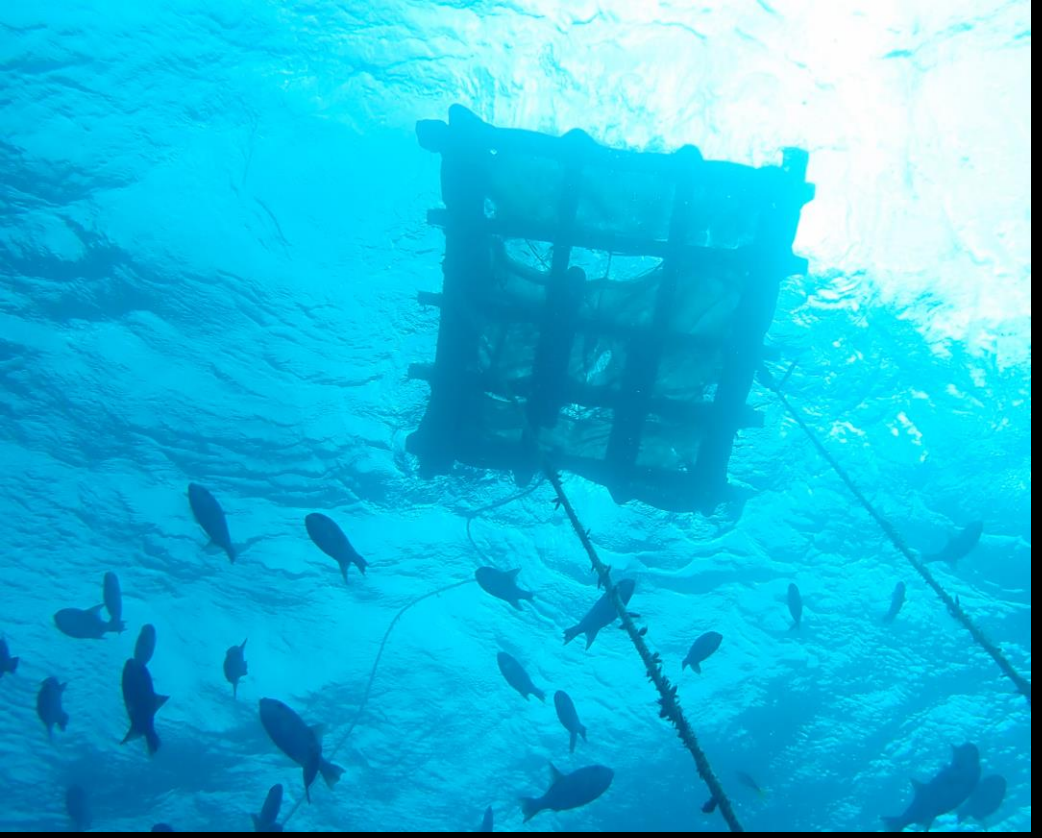
Kydd Pollock, Pelagic Conservation Strategy Lead-TNC
Craig Heberer, Associate Director, Large Scale Fisheries Program-TNC

Pacific Remote Islands Marine National Monument (PRIMNM)



Palmyra Atoll

- ~6 degrees north of the equator
- 960 miles SSW of Hawaii
- US Territory
- Northern Line Islands
- Multiple layers of protection



Palmyra Atoll

- ~ 10 miles long and ~2 miles wide
- 25 islets / 580 acres of land
- 6,500 acres of pristine coral reef

2 drifting FAD (dFAD) Data Sets-

1- 2009-present stranded **dFAD data**-longest running in the Pacific

2- **Palmyra FAD Watch Program** (PFWP) data covered by a strict Memorandum of Understanding (MOU)

The Nature Conservancy
Hawai'i and Palmyra

dFAD CONSERVATION AND MANAGEMENT OBJECTIVES AT PALMYRA ATOLL

MISSION

The primary mission of the Palmyra FAD Watch Program (PFWP) is to track and intercept drifting FADs before they strand onto Palmyra's protected coral reef and lagoon ecosystems.

OBJECTIVES

- Quantify the number of dFADs drifting near Palymra and Kingman Reefs
- Estimate the cost for intercepting and removing dFADs at-sea before they strand
- Quantify the number of dFAD stranding events at Palmyra since 2009
- Assess pollution and ecosystem impacts
- Evaluate and document dFAD materials and designs
- Develop a FWP and at-sea recovery model that is scalable to other Pacific Island nations

Palmyra FAD Watch Program includes-

- Over 20 Pacific PS industry collaborating companies
- Satellite Buoy vendors
- TNC
- Program Lead Sponsor- Anthropocene Institute

US PURSE SEINE TUNA GROUP

satlink

CAPE FISHERIES
MANAGEMENT COMPANY LLC

FAD Watch Program
Palmyra Atoll

marine instruments

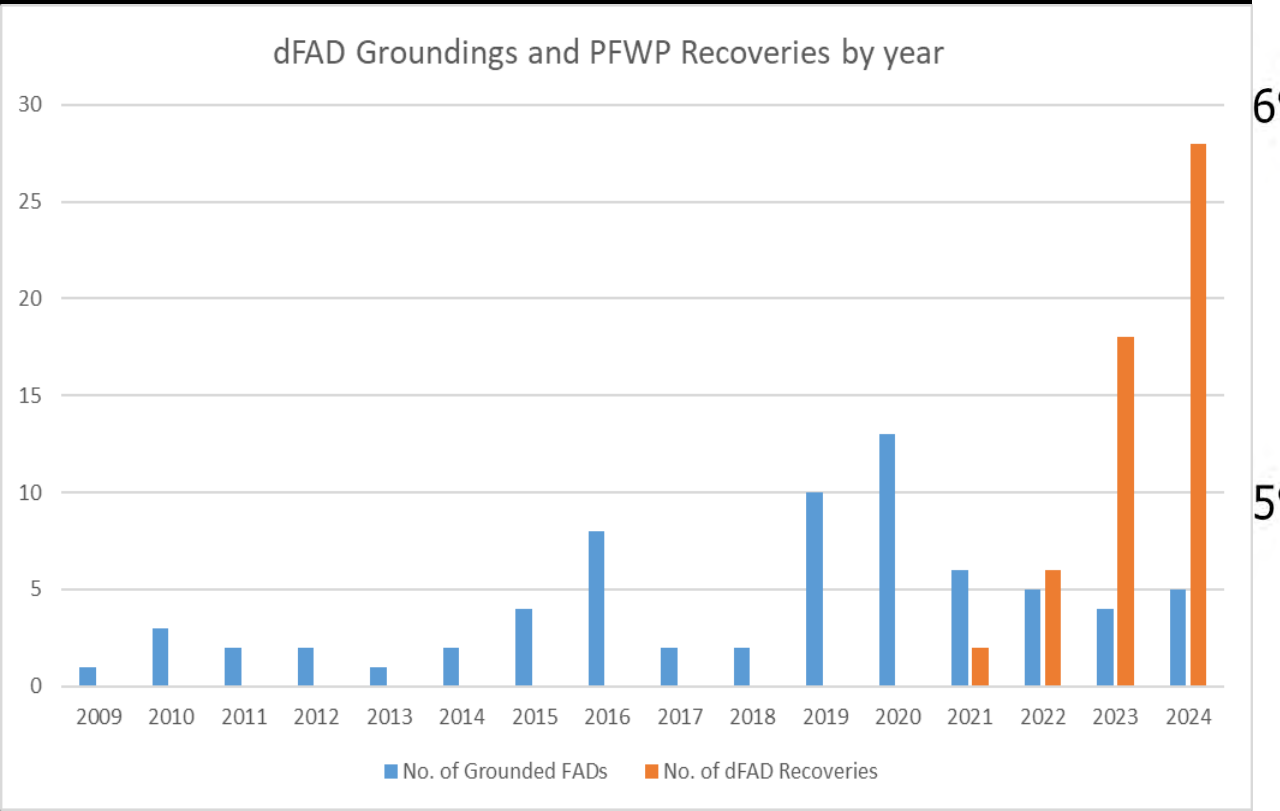
The Nature Conservancy
Hawai'i and Palmyra

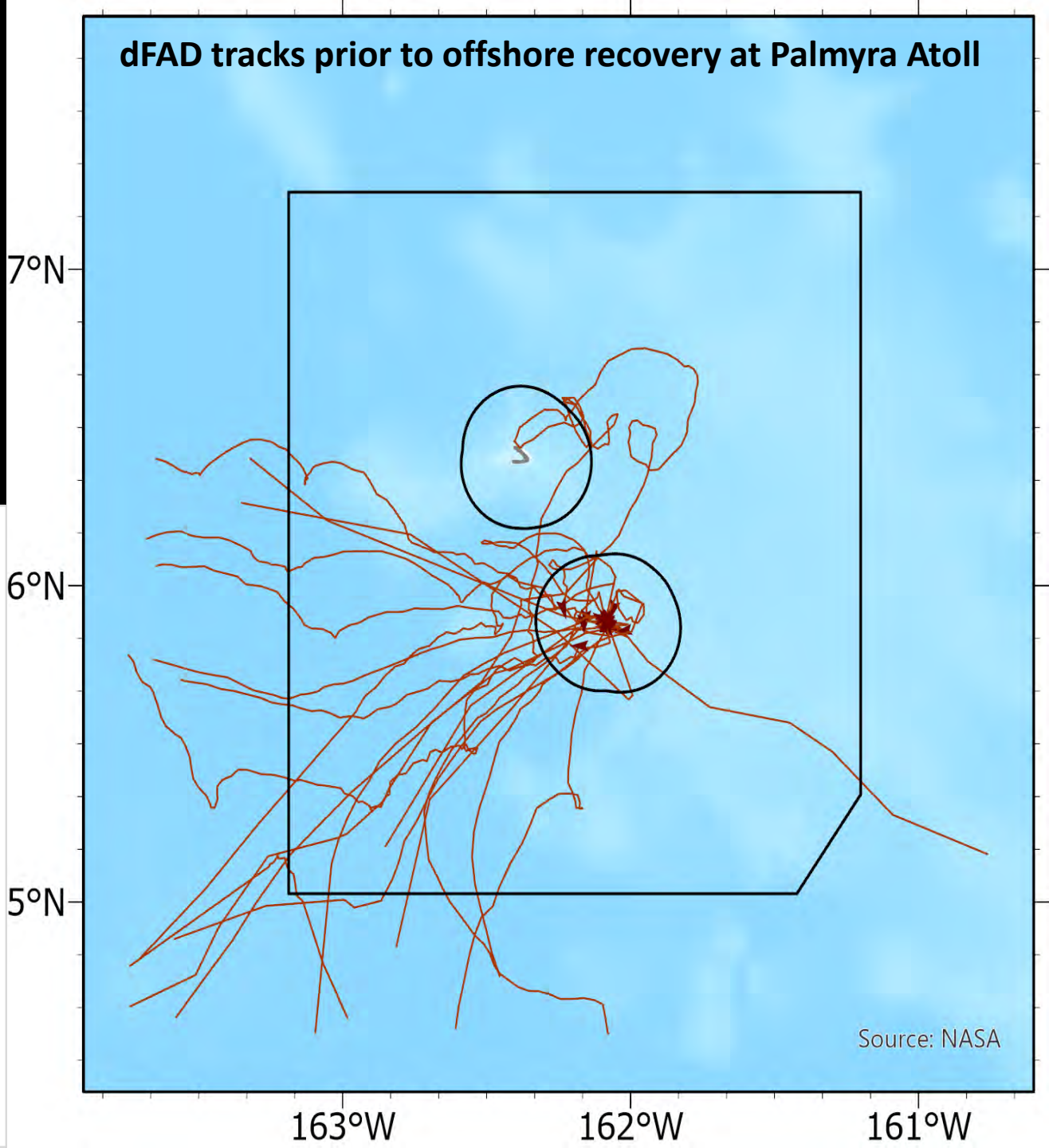
zunibal MOVED BY THE OCEAN

AGAC

Palmyra dFAD Recoveries

To date,
>50 dFAD recoveries at Palmyra within the MOU protocols of 6 nautical miles
-**>5,000' (~1,500m)** of ropes, nets, canvas, shade cloth, bamboo, PVC pipes and buoys recovered prior to grounding on Palmyra's fragile coral reefs





Offshore reef dFAD groundings at Palmyra

Lagoon and Island dFAD groundings at Palmyra

TNC Palmyra utilizes small scale recreational class vessels to recover dFADs at-sea

dFAD Retrieval at Palmyra Atoll = Human Power!

Funding needed to procure a fit for purpose recovery vessel with mechanical advantage

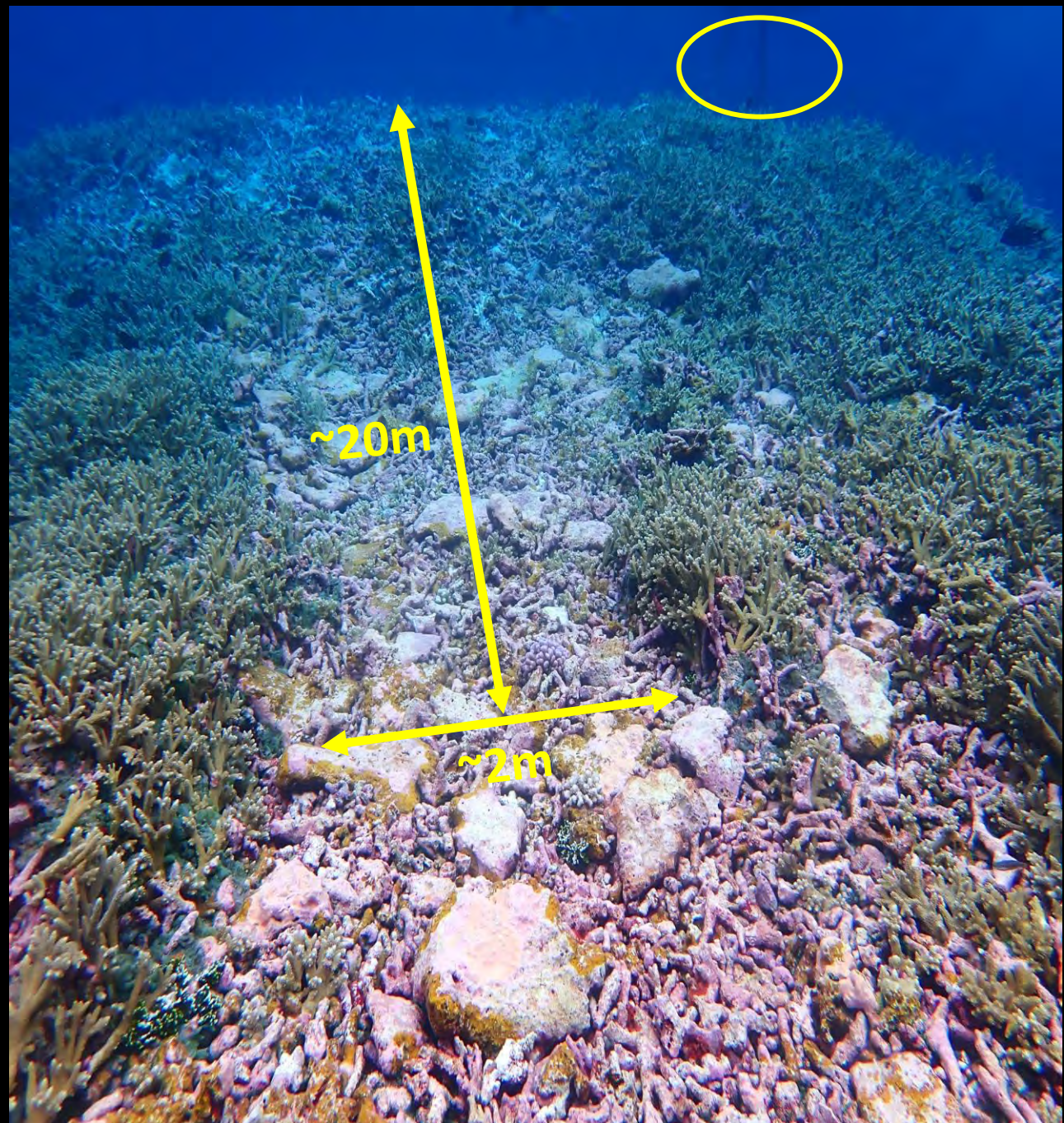
Palmyra FAD Watch Program Costs

- **TNC has covered start up and program implementation costs including staff time, satellite account set up, and continued monthly data transfer**
- **TNC currently covers all dFAD at sea recovery costs which, on average, cost ~$800/event.**
- **TNC currently expending ~$20,000-$30,000 per year to run the program. Industry-led cost recovery options need to be explored and implemented**
- **Industry partners covers the cost of satellite drift tracks and echosounder data while dFADs transit through the zone**

Challenges of Recovering a dFAD at Palmyra

- Staff and offshore vessel availability
- Buoys not responding to polls
- Intermittent internet connectivity
- Poor weather conditions during recovery- wind, rain squalls, waves
- dFADs sinking below the surface

*Impact to fragile coral reefs if dFADs are **NOT** recovered



Marine debris disposal issue on a small island

KEY OPERATIONAL LESSONS LEARNED

The Nature Conservancy
Hawai'i and Palmyra

- Collaboration with and from the PS industry is critical, but not all the players at the table
- TNC has seen tangible conservation value through this relationship with the PS industry
- Access to real time buoy locations is essential to successful recoveries
- FAD Watch can be carried out on a relatively limited budget but with limitations and caveats
- Funding is challenging and a constant concern… we need real and lasting commitments!

THANK YOU

- ACKNOWLEDGMENTS
- US Purse Seine Tuna Group
- Cape Fisheries
- Asociaicón de Grandes Atuneros Congeladores (AGAC)
- US Fish and Wildlife Service
- TNC's Large Scale Fisheries Program