

Report of Project 110-110a: Non-entangling and Biodegradable FAD Trial in the Western and Central Pacific Ocean

**NON - ENTANGLING
&
BIODEGRADABLE**

**FAD
Trials
in the
WCPO**



Lauriane Escalle,
Gala Moreno , Iker Zudaire , Jon Uranga,
Donald David, and Paul Hamer

SCIENTIFIC COMMITTEE
TWENTY-SECOND REGULAR SESSION
Apia, Samoa
11–19 August 2026

WCPFC project 110 and 110a: Non-entangling and biodegradable FAD trial in the WCPO

NOAA BREP project: Towards the Use of Biodegradable FADs in the Pacific Ocean



Objectives:

1. Explore design and cost-feasibility of non-entangling and bio-FADs.
2. Train dFAD manufacturers on the construction of bio-FADs.
3. Undertake at-sea experiments to compare the performance/functionality of non-entangling and biodegradable dFADs to conventional dFADs. Deploying them together in pairs.
4. Provide robust scientific advice to industry and national fisheries managers on the performance of non-entangling and biodegradable dFAD designs.
5. Dissemination of the bio-FADs, construction and use through workshops with fishers

3

Training workshops

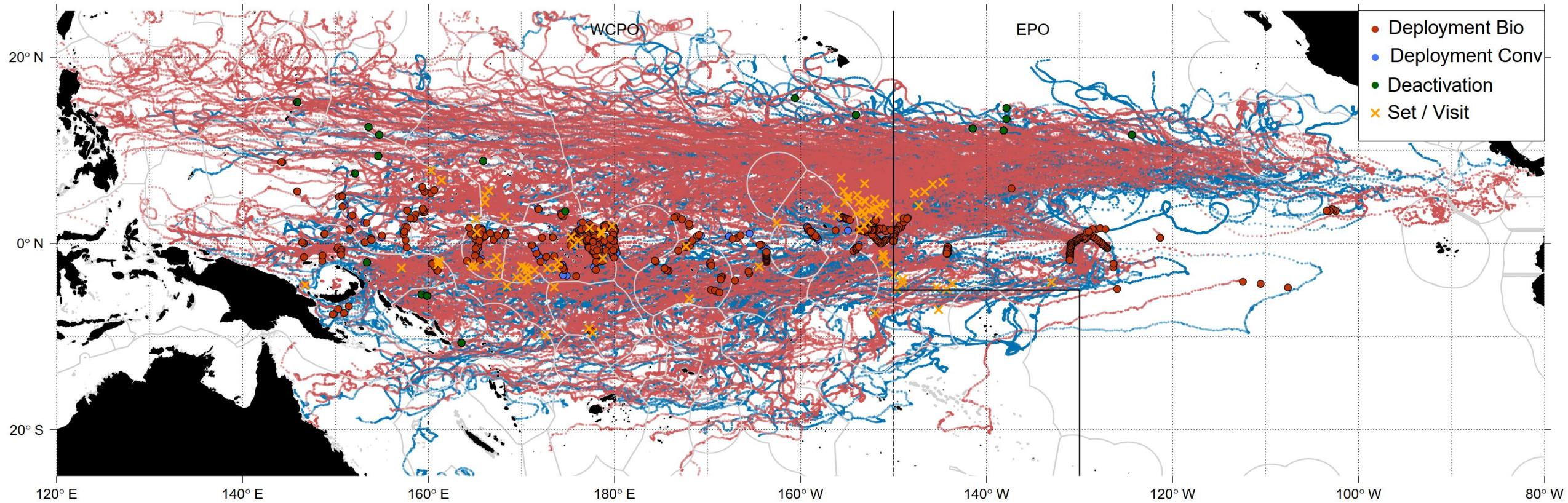
	Dates	Number of participants
Zadar (Croatia)	June 2022	4 participants
Manta (EC)	July 2022 and remote	20 participants
Pohnpei (FM)	December 2022	20 participants
Pago Pago (AS)	May 2023	15 participants
Lae (PG)	July 2024	29 participants
Weihai (CN)	March 2025	30 participants
Majuro (MH)	May 2025	8 participants
Yaizu (JP)	October 2025	18 participants



665 jelly-FADs to be tested

Partners	Vessels	Flag	Construction	No. of BioFADs		Deployments
				WCPFC 110/110a	BREP	
Caroline Fisheries Corporation	6	FSM	Pohnpei	58		50
FCF Co. Ltd	8	Chinese Taipei	Pohnpei	50		47
American Tunaboat Association	16	US	Manta and Pago Pago	80	216	208
Silla	2	Korea	Pohnpei	34		14
Fishing Industry Association (FIA)	12	PNG	Lae	60		14
Koo's	2	Marshall Islands	Majuro	10		2
Chinese fleet	8	China	Weihai	145		100
KAIMAKI	2	Japan	Pohnpei	20		20
TOTAL	32			449	216	455

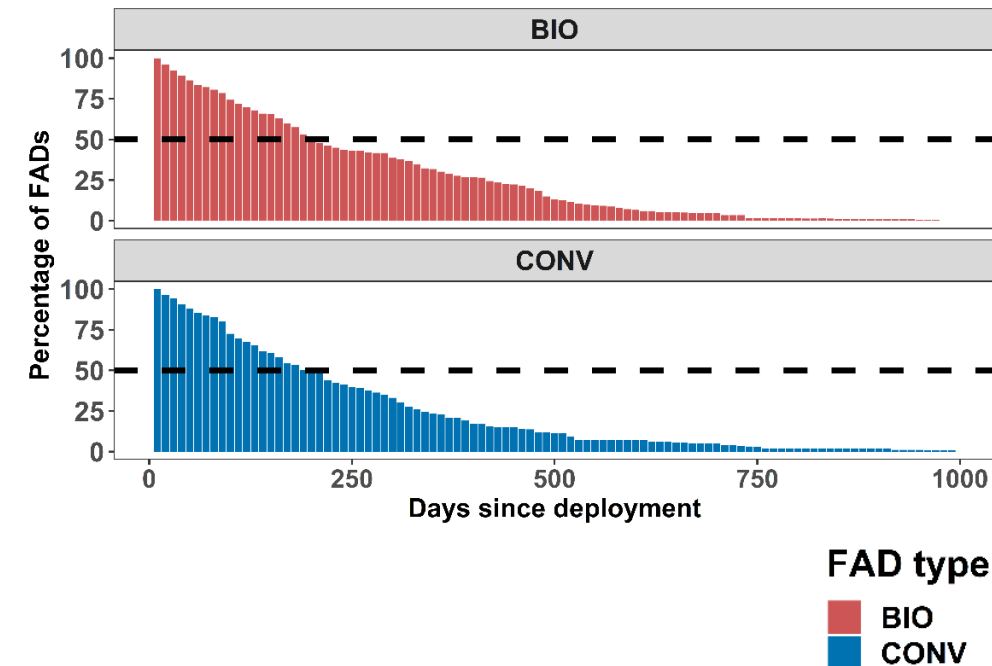
At-sea trials



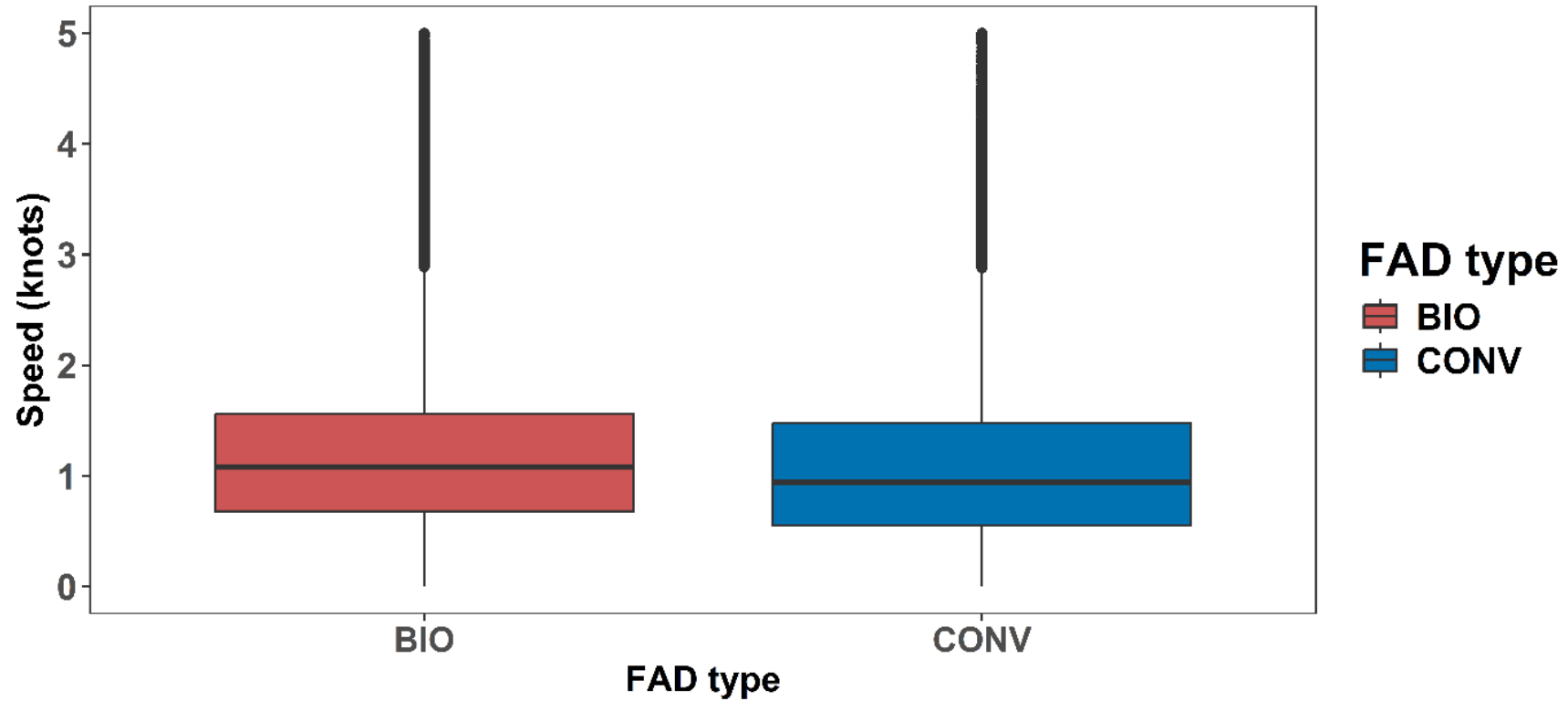
Deployments	Visits	Sets	Buoy deactivation	Stranding
445	12	46	91	7

At-sea trials: duration at-sea

	Other fleets	
	Jelly-FADs	Conventional
Deployments	455	340
Data available	393	294
Transmissions (positions or biomass)		
Min	3	5
Mean	631	678
Max	4,958	6,200
Duration (days)		
Min	0	0
Mean	251	230
Max	969	983



At-sea trials: speed



SPEED	Other fleets	
	Jelly-FADs	Conventional
Min	0.0	0.0
Mean	1.1	1.1
Max	4.9	4.9

At-sea trials: catch

FAD type	Number of sets	Total tuna catches (mt)			
		Min	Mean	Median	Max
Jelly-FAD	46	0	34.8	25.5	185
Conventional	64	5	68.2	43.5	260
2023 WCPO FADs	15050		47.5	30.0	
2024 WCPO FADs	11178		54.9	35.0	
2025 WCPO FADs	16796		43.9	30.0	



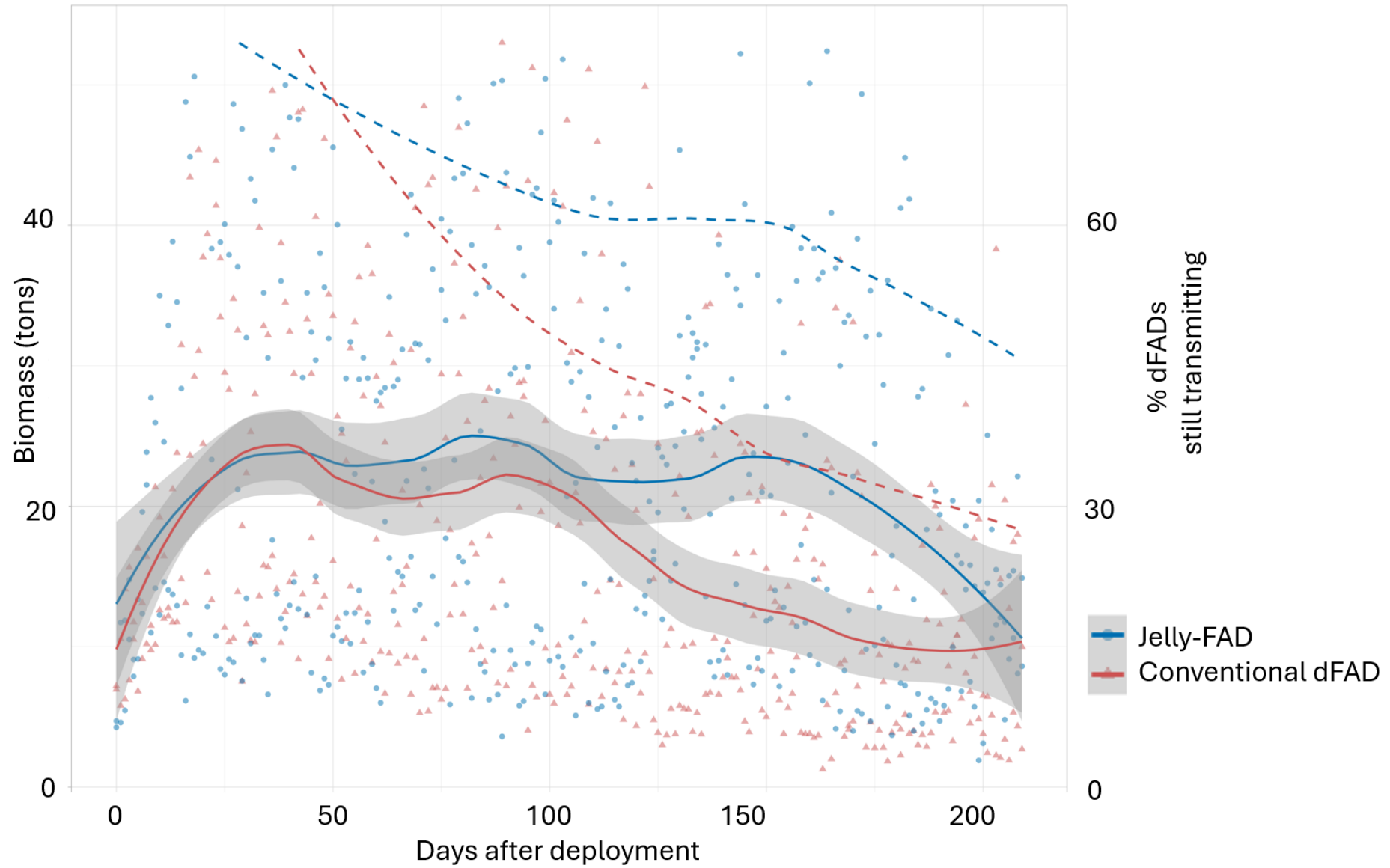
At-sea trials: catch

FAD type	Number of sets	Total tuna catches (mt)			
		Min	Mean	Median	Max
Jelly-FAD	46	0	34.8	25.5	185
Conventional	64	5	68.2	43.5	260
2023 WCPO FADs	15050		47.5	30.0	
2024 WCPO FADs	11178		54.9	35.0	
2025 WCPO FADs	16796		43.9	30.0	

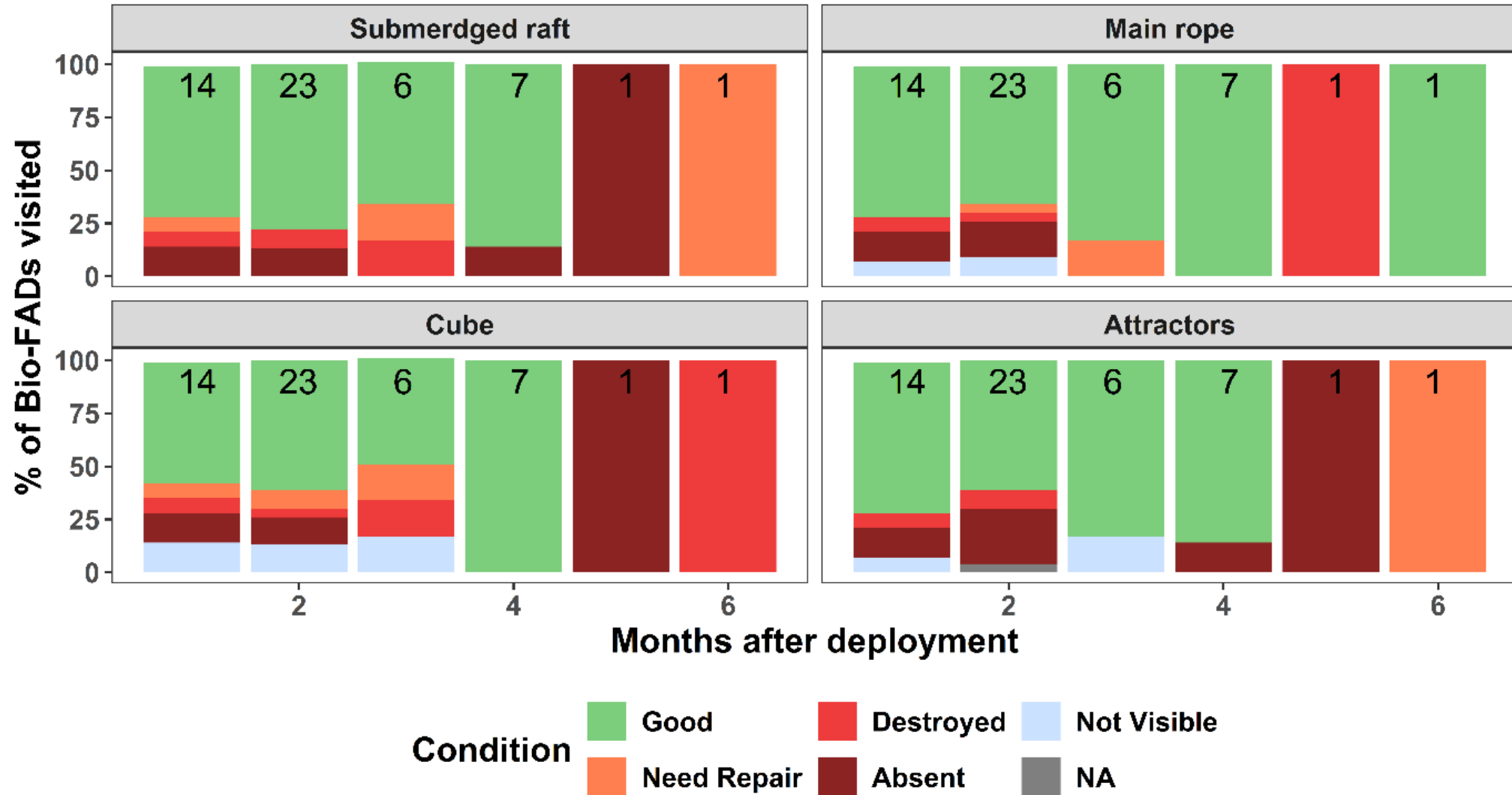
EPO trials

		Soaking Time (days)			Catch (tons)		
FAD Prototype	N	min	mean	max	min	mean	max
JellyFAD organic (CAT II)	34	37	132	335	0	38,5	125
JellyFAD hybrid (Cat IV)	36	33	113	238	0	40,2	120
JellyFAD total	70	33	122	335	0	39,4	125
Conventional	46	28	106	267	0	35,9	265

At-sea trials – tuna aggregation



At-sea trials: condition



- **Supplier of biodegradable materials are available in the Pacific region.**
- **Eight planning and training workshops have been held, including six in construction locations and more than 125 people attending.**
- **Cost: 500–550 USD / jelly-FAD, but 350–362 USD / jelly-FAD if only materials and their shipment are considered.**
- **Most fleets have been engaged, but the requirement to follow scientific trials are not always followed.**
- **Need to deploy a large number of bio-FADs to get meaningful results, 665 jelly-FADs planned for the current projects and 546 deployed. Few still to be deployed, others damaged in port or lost by industry partners.**
- **Cube jelly-FAD and newly developed cylinder jelly-FAD tested.**
- **The performance of non-entangling and biodegradable dFAD in terms of speed, tuna aggregation and catch are similar to conventional dFADs.**

WCPFC-SC22 is invited to:

- Note that results of WCPFC project 110 and 110a indicate feasibility and availability of biodegradable materials for a transition to the use of non-entangling and biodegradable dFADs in the Western and Central Pacific Ocean.
- Recommend that a framework to monitor the transition to biodegradable materials and designs should be considered, in view of the step-wise adoption proposed by the FAD IMO-WG to be adopted in 2026.
- SPC could continue to support this transition, through advice, training and learning workshops, as well as scientific analyses of the performance of dFADs constructed and deployed by fishing companies.

Further information and the Term of Reference for a project in EB-IP06



For additional information, contact
laurianee@spc.int or gmoreno@iss-foundation.org



KOO'S FISHING CO LTD



大洋世家
OCEAN FAMILY



Pacific Community
Communauté du Pacifique



NOAA
FISHERIES

