

Scientific paper on merits and demerits of drifting fish aggregating devices in tuna fisheries

A scientific paper on drifting fish aggregating devices (dFADs) used in tuna fisheries has been issued recently (<https://doi.org/10.1111/faf.12780>). The title of the paper is “Benefits, concerns, and solutions of fishing for tunas with drifting fish aggregation devices (Maite Pons et al., “Benefits, concerns, and solutions of fishing for tunas with drifting fish aggregation devices”.(2023), Fish and Fisheries, 00,1–24.)” This paper lists up various problems caused by dFADs used in purse seine fisheries, which have been occupying the majority of the tuna catch for a long time. It makes a substantial reading by covering information on merits and demerits of dFADs in a comprehensive manner and providing analyses in a balanced way. This article is aimed at introducing main points of the paper.

It may be easier for readers to understand the main points by looking at the abstract of the paper:

“Drifting fish aggregating devices (dFADs) are human-made floating objects widely used by tropical tuna purse seine (PS) fisheries to increase catch of target species. However, dFAD use has several negative impacts, including increased potential for overfishing, higher juvenile tuna catch, higher bycatch compared to other PS fishing modes, ghost-fishing, and generation of marine litter. Based on these impacts, some stakeholders, especially environmental non-governmental organizations and other competing fishing industries, suggest that dFADs should be completely banned. We list the pros and cons of dFAD fishing; address how to improve current management; and suggest solutions for the sustainability of dFAD fishing in the long term. A dFAD ban would lead to major changes in the availability and sourcing of tuna for human consumption and decrease the licensing revenue received by many developing states. Most importantly, we argue that tools exist today to manage for, reduce or eliminate most of the negative impacts of dFADs (e.g., bans on discards, limits on active dFADs, biodegradable non-entangling constructions, time-area deployment closures, recovery programs, and full data transparency, among others). Management decisions based on sound scientific reasoning are needed to address the legitimate concerns surrounding dFAD use and ensure the sustainability of both pelagic and coastal ecosystems and tropical tuna PS fisheries.”

The main text consists of several sections: 1. Introduction; 2. Benefits of fishing with dFADs; 3. Concerns of fishing with dFADs; 4. Consequences of prohibiting dFAD use; 5. Management solutions; and 6. Conclusions. A large number of pages are used on Sections

4. And 5. Section 4 indicates that prohibition of fishing with dFADs is not realistic (e.g., there is no alternative fishing method which can compensate for the large reduction of skipjack catch) and may cause negative impacts (increasing pressure on yellowfin tuna by shifting fishing efforts from dFADs to free school). Then, Section 5 provides various solutions to ensure the sustainability of the fishing with dFADs: (1) improvement of stock assessment; (2) allocation between fishing gears/set types; (3) discard bans and valorization of non-target species; (4) availability of echosounder buoy biomass and position data to science; (5) increase in observer coverage; (6) limits on the number of deployment and active dFADs; (7) bycatch mitigation measures and best release practices; (8) requirement of low entanglement risk dFADs; (9) biodegradable dFADs; (10) establishment of ownership rules; (11) dFAD recovery programs; and (12) spatial management of dFADs deployments.

The conclusion of the paper indicates that while fishing with dFADs poses several concerns, its merits are more than the demerits and the concerns could be addressed by appropriate management actions. This reminds me that continuous efforts should be devoted for other tuna fisheries such as long line, pole and line, drift net, traps to ensure transparency of fishing operations and overcome demerits of the fishing method.