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Smart Fishing Initiative

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WWF STATEMENT ON FISH AGGREGATION (FADs) IN TUNA FISHERIES

Why are FADs used in tuna fisheries?

A fish aggregation device, or FAD, is simply a floating object that attracts fish. Fishing beside/under FADs takes advantage of the fact that tuna and other pelagic fish naturally congregate around floating objects in the open ocean and can be substantially more efficient than setting on unassociated schools. There are two main types of FADs - natural and man-made. Man-made FADs can be found either drifting or anchored. Natural FADs are naturally occurring floating objects such as logs and large live marine organisms (whales, whale sharks, manta rays, etc), which can occasionally kill the marine organism (which are vulnerable due to their life history characteristics), and has similar bycatch as in sets on other floating objects.

Purse seine nets are used to encircle a school of fish, with the boat driving around the fish in a circle in a process known as setting. Sets can be placed around free-swimming schools or set on FADs. Restrictions on purse seine sets on dolphins in the Eastern Pacific, as well as the move towards more efficient fishing methods, have resulted in an increase in the use of FADs globally and have become a major tool of the industrialised purse seine fleet. Purse seine FAD sets supply mainly the canned skipjack, and greater than of global canned tuna currently comes from purse seine FAD sets. Fishing with FADs saves on resources and fuel.

For example, over 90% of purse seine sets on FADs are successful, compared to only 50% of sets on free-schooling tuna, and the total catch of tuna in

weight per set is higher in FAD sets relative to unassociated sets[1]. In addition, drifting FADs usually have location devices so are relatively easy to locate, while free schools are often encountered by chance. Thus, FAD fishing saves time, resources and fuel and has become a major tool of the industrialised purse-seine tuna fleet globally.

FADs are also used by hand line, troll, pole and line and even gillnet fisheries. (Thus the livelihoods, food security and economies of many regions and countries dependent on tuna fisheries are also therefore based on FADs). In the Coral Triangle, FAD use in tuna hand line, troll and pole and line fishing are increasing and in some instances, have also been used to catch baitfish.

What are the issues with the use of FADs?

(Fishing by its very nature impacts the marine environment, yet fish are a vital source of protein and income for communities throughout the world.) Fishing on FADs has two major impacts compared to fishing on free schools[1]:

- Increases the catch of 'non target' species and sizes of tunas (especially undersized, juvenile Bigeye[2] and Yellowfin)
- Relatively high bycatch of sharks, other unmarketable species and sizes of fish, and other vulnerable species groups
- Without clear ownership can become persistent marine debris impacting marine habitats such as reefs
- Networks of thousands of artificial drifting and anchored FADs aggregate tunas and other pelagic species from surrounding waters, and possibly act as 'ecological traps' of pelagic species by altering their spatial and temporal distributions, habitat associations, migration patterns and residence times.

WWF Views

- The impacts of fishing with a lack of adequate management are further exacerbated by improvements in fishing efficiency, including the use of FADs in purse seining.
- The current use and management of FADs do not meet WWF's expectations for sustainable fisheries.
- All gear types that use FADs must be adequately managed and their impact on bycatch minimized
- Improvements in fishing gear technology/fishing practices for reducing bycatch in purse seine sets on FADs are in the research and development stages and, with increased investment; promise to be an effective way to mitigate the impacts. These developments include:
    - Fishing gear technology changes
    - development and implementation of management plans to control the number and density of FADs, and
    - time/area closures for purse seine FAD sets could, in theory, mitigate ecological problems currently associated with purse seine FAD fishing.

[1] Gilman, E.L. (2011) Bycatch governance and best practice mitigation technology in global tuna fisheries. *Marine Policy* 35: 590–609.

[2] Bigeye is overexploited in some regions and raises an issue of allocation with pelagic longline tuna fisheries that target adult bigeye for *sashimi* markets

WWF Statement

WWF does not view purse seine sets on large live organisms to be sustainable.

WWF will not promote FADs nor encourage their increased use until their negative consequences (especially in terms of bycatch) are addressed through adequate ecosystem management;

WWF only promotes tuna that is MSC certified. Unfortunately, no tuna fishery using FADs currently meets MSC certification standards. Therefore, WWF will keep working with the tuna industry and partners to improve management and conservation practices in tuna fisheries, including the reduction of bycatch associated with FAD fishing.

WWF will:

- Work with the fishing industry partners such as ISSF to increase the understanding of the impacts of FAD fishery bycatch and ways to reduce these impacts;
- Work with the fishing industry to develop and implement mitigation measures, such as:
    - improving gear technology and fishing practices,
    - changing the use of gear or modifying gear, and
    - training on techniques for minimizing FAD impacts;
- Push for regional fisheries management organisations and national governments to sustainably manage tuna fisheries by imposing appropriate controls on the use of FADs. These controls include:
    - Setting catches at sustainable, science-based levels, retention of all bycatch except living and healthy individuals able to survive if thrown back,
    - Temporary closures to fishing in areas of high concentration of small tunas,
    - Increased observer coverage (at least 100% electronic observation), and
    - Implementation of sufficient management measures to deter illegal, unreported and unregulated (IUU) fishing. This includes S-AIS for all purse seine vessels
- Encourage the public to consume IUU-free, Marine Stewardship Council (MSC)-certified tuna.
- Encourage tuna product be traceable to the vessel.
- Work with retailers to encourage moving towards sustainable sourcing (IUU-free and MSC-certified).

Our Smart Fishing Vision and Goals:

Vision: The world's oceans are healthy, well-managed and full of life, providing valuable resources for the welfare of humanity.

2020 Goals: The responsible management and trade of four key fishery populations results in recovering and resilient marine eco-systems, improved livelihoods for coastal communities and strengthened food security for the Planet.

WWF

Why we are here

To stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature.

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For more information

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