

Tropical tuna under surveillance

Excessive development of fishing practices using artificial floating objects could threaten populations of tuna and other vulnerable marine species caught accidentally.



Tuna fishing vessel using FADs, Seychelles.

Any object floating on the surface of the ocean is likely to attract tropical tuna. In the early 1990s, this observation led fishermen to use artificial floating objects (“fish aggregating devices” or FADs) to concentrate fish and catch them more easily with large sliding nets called seines, which encircle shoals of fish. This undoubtedly increases their catch, but it also raises concerns about the sustainability of tuna resources and the environmental impact of this practice.

Research has confirmed that FADs tend to concentrate young fish (juveniles) for yellowfin and bigeye tuna, which have life spans of around 15 years. This could have harmful consequences for these two populations. However, a lack of knowledge about the natural mortality of juvenile fish prevents us from having a clear idea of the real impact of this method of fishing. Fishing with FADs also generates the most bycatch of non-target and vulnerable species, such as sharks, rays and swordfish. Some are kept on board and others thrown back, usually dead.

... Data on tropical tuna fishing, collected since the late 1960s, can be used to measure the environmental impact of this fishery and changes in tuna populations ...

Since French fishing vessels began catching tropical tuna in the late 1960s, the Observatory of Exploited Tropical Pelagic Ecosystems has been mandated to collect and verify commercial data from French vessels operating in tropical waters, in collaboration with fishing professionals and partners in the Global South. Fishing data is collected from fishermen’s logbooks, which record fishing locations and dates, catch by species and fishing method used (FAD or open shoal).

This information is corrected and validated by catch samples taken when fishing vessels land, as well by scientific observers regularly taken

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“The lack of knowledge about the number of fish aggregating devices (FADs) used each year by fishing vessels leads to major uncertainties in stock assessments. FADs are therefore an important and topical research theme for developing countries, whose leaders need scientific advice if they are to respond effectively to the challenges of sustainable development.”

Justin Monin Amandé, Oceanology Research Centre, Côte d'Ivoire



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FADs ready for use, Seychelles.

on board, who add observations on bycatch and accidental catch. Electronic observation methods can also sometimes complement human observation. This data is used by scientists at regional fishery management organisations to assess the state of tropical tuna stocks and certain species caught accidentally, and to measure the environmental impact of this fishing, although they have not yet been able to exactly quantify the FAD effect. Watch this space...

OUR SHARED OCEAN

Science in the Global South
for a Sustainable World

IRD Éditions
Collection Grands enjeux
Marseille, 2025

Editorial management

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Cover photo

Children fishing on a reef flat in Reao, French Polynesia. © IRD/S.Andréfouët

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ISBN Papier: 978-2-7099-3070-3

ISBN PDF: 978-2-7099-3071-0

ISBN Open/epub: 978-2-7099-3072-7

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