

Was this tuna caught around a FAD or not?



Image: Siosifa Fukafuka.

Scientists of the Stock Assessment Section of the Secretariat of the Pacific Community Oceanic Fisheries Programme (SPC-OFP) have developed a relatively simple statistical technique that is based on observer catch sampling, to determine whether the tuna catch from a purse-seine set is likely to have been associated with a fish aggregation device (FAD).

Tuna purse-seine catches associated with FADs are typically more diverse than catches set on free school tuna, including both smaller target tuna and a variety of bycatch species that are often discarded, which is prompting conservation and sustainability concerns. Furthermore, tuna retailers and consumers have shown an increasing demand for 'FAD-free' tuna and, in many regions, consumers have indicated a willingness to pay a premium for certified FAD-free tuna or even to boycott non-FAD free tuna.

FAD-fishing moratoria, covering the months of July to September, have been instituted across the western and central Pacific since 2009. Nevertheless, there are concerns about adherence to FAD-free fishing requirements and a method for independently verifying FAD-free fishing claims has been sought. OFP's new methodology, which can be easily implemented 'in the field', has a prediction accuracy rate of up to 86%. Details of the methodology have been published, in Open Access format, in the December 2015 issue of the journal *Fisheries Research*¹.

A number of uses of this technique can be envisioned. Most importantly, it provides managers with a means of verifying claims by vessels, particularly during the FAD-closure period, as to whether their catches were likely made on free school tuna. Additionally, observer classification of sets, early in their employment, can be monitored to determine whether they are accurately identifying FAD-association, which is not always a straightforward task as they adapt to the rigors of at-sea sampling. Finally, this methodology allows OFP scientists to retroactively classify historical purse-seine sets by providing valuable information on changes in targeting and capture efficiencies, which will assist in developing appropriate management and conservation targets for tuna in the western and central Pacific.

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¹ <http://authors.elsevier.com/sd/article/S0165783615300515>