

Benefits of Secure and Transferable Fishing Rights with Catch and Effort Restrictions in the Fijian Longline Fleet



CONTEXT

South Pacific albacore is of great importance to the domestic longline fisheries of the Pacific Island Countries and Territories (PICTS). The Albacore fishery, heavily utilized by foreign registered fleets, also targets Yellowfin and Bigeye tuna. Unlike the purse seine Skipjack fishery, longline fishing activities are not concentrated in the Exclusive Economic Zones (EEZs) of the PICTs, but occur largely in high seas waters between and among EEZs. Because foreign fleets expend a significant amount of effort on the high seas, PICTs have limited control over this fishery's management. Additionally, many foreign fleets operate with fuel (and other) subsidies provided by their governments, which makes it challenging for PICT fleets to compete on a level playing field¹.

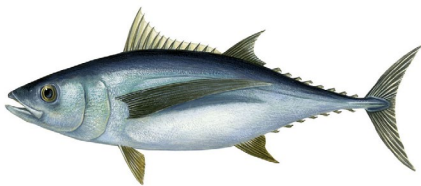
The PICTs share an overarching goal to increase control over longline fishing in the region—especially on the high seas—while also protecting the viability of local, domestic fleets. Due to Fiji's unique situation of having an unsubsidized, largely domestic fleet, both the Fijian government and the domestic longline fishing fleet felt it important to better understand the options and implications of potential management regimes for its longline fishery. This would help identify ways to improve profitability, revenue and the fishery's competitiveness in the global market. To accomplish this goal, Pacific Catalyst supported the Fijian government and industry with a socio-economic analysis to evaluate the impact of various management options on the Fijian longline fleet.

METHODS

Members of the Fiji Fishing Industry Association (FFIA) and government officials were interviewed to develop a thorough understanding of how the fishery operates, along with some of the constraints and challenges it faces. Both government and industry shared their views on national and regional management options and provided data required to support this economic analysis.

The economic analysis was based on the following three datasets:

- **Vessel Cost and Earnings Data** from 2012 – 2014 for fishing companies that previously shared this data with the [Forum Fisheries Agency](#) for a review of financial and economic performance. This data was only available from a subset of the overall longline fleet²;
- **Weekly Catch and Effort** for each longline vessel flagged to Fiji from 2015 -2018 was provided by the [Pacific Community \(SPC\)](#); and
- **Vessel Characteristics** for each of the Fijian flagged longline vessels were provided by the Fiji Ministry of Fisheries.



Albacore Tuna
Image Courtesy of MSA

Because economic data was only available for a portion of the fleet and was a number of years old, a model was developed to estimate costs and revenue from all longline vessels fishing in Fiji's EEZ. Fishing behavior and net revenue of each Fijian fishing vessel was characterized, which identified three distinct longline fishing fleets: one that **primarily targets albacore**, one that has a **fairly even mix between albacore and yellow-fin/bigeye tuna**, and a third group that primarily targets **other species such as billfish** with a small component of albacore. This third group was excluded from the analysis.

Using the modeled net revenue, the economic effects of longer-term (more secure) licenses that are also transferable within a company were estimated under three scenarios: (1) status quo fishing effort, measured in number of active fishing days; (2) status quo catch of albacore; and (3) no limits on catch or effort. The economic analysis was complemented by a qualitative description of common tradeoffs between catch- and effort-based fisheries management systems and a high level overview of the relative strengths and weaknesses of Fiji's current longline management system. This was intended to help elucidate potential benefits and drawbacks of Fiji employing a catch-based or an effort-based management program in the future³.

RESULTS

During interviews, the industry and government representatives expressed a range of similar concerns, with the primary issue being that the Fijian fleet is aging and is limited in its ability to compete against foreign fleets. The modelling results suggest that if Fiji were to replace a few of the oldest, less efficient vessels with new vessels, the domestic fleet could realize a 25 to 35 percent increase in net revenue, even without increasing catch. These gains are the result of a decrease in operating costs. Newer boats would enable Fijians to fish more days per year by avoiding frequent breakdowns associated with inefficient older vessels. It is generally assumed that longer-term tenure of fishing rights and transferability of fishing permits among vessels (within a fishing company) would be required to facilitate the replacement of aging vessels. There may, however, be other regulatory pathways Fiji can explore to achieve this outcome.

Although introducing newer vessels into the fishery would increase the capacity of Fiji's fleet; the model also illustrates that increased net revenue can be maintained under scenarios where either catch or effort is limited to current (2015-2017) levels. Although there are overarching logistical, economic and biological tradeoffs between catch- and effort-based management programs, either systems would allow for the economic improvements described above. With Fiji's existing strengths in accountability—exemplified by their robust monitoring and data collection program and their “exclusivity,” (only selling fishing licenses to Fijian companies)—there are a variety of pathways available to optimize the fishery.



CONCLUSION AND NEXT STEPS

The key “takeaway” from this analysis is that there are avenues available to increase net revenue of Fiji's longline fishery that do not require increasing catch or putting additional strain on the South Pacific Albacore stock. Increasing tenure of fishing rights in this fishery (without transferring them in perpetuity), and allowing for transferability between vessels within fishing companies would likely make possible the financing required to purchase and outfit new vessels. In this way, Fiji could modernize its fleet, which would in turn become more competitive with foreign, subsidized fleets.

Fiji is well positioned to both improve the profitability of the domestic longline industry and act as a leader in one or more of the regional arrangements seeking to improve management of longline fishing in the Western and Central Pacific. Recommended next steps include convening a joint meeting of the Ministry of Fisheries and Fiji Fishing Industry Association to discuss outcomes of this study, what regulatory changes may be appropriate and to identify any other analysis that would help meet Fiji's goals for the longline fishery. This may include conducting a more complete and detailed fleet analysis based on current economic and catch data.

If additional questions or areas of research are identified, Pacific Catalyst is willing to help find resources and/or additional partners to support that work.

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Pacific Catalyst is developing innovative, long-term policy guidance and training in partnership with fisheries managers, scientists, students, policymakers and fishermen throughout the Western and Central Pacific. To learn more about our work and the projects we're engaged in please visit pacificcatalyst.org.

¹Sumaila, R.U., Dyck, C.A., and Baske, A. (2014) Subsidies to tuna fisheries in the Western Central Pacific Ocean. *Marine Policy*. Volume 43: 288-294. <https://doi.org/10.1016/j.marpol.2013.06.012>

²See 2016 Fiji Financial Performance Report at <https://www.ffa.int/node/1823>

³Catch-based systems directly manage fisheries by limiting overall volume of catch. Effort-based systems manage indirectly by limiting the numbers of vessels, fishing days or amount of fishing gear being deployed.