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# POLICY BRIEF

## Small-scale tuna fishery development: Lessons learned and way forward

### Purpose

The aims of this policy brief are to:

- identify lessons that have been learned in the many attempts to develop small-scale tuna fisheries in the Pacific region; and
- use those lessons to provide guidance to fisheries agencies and donors for future efforts.

### Key messages

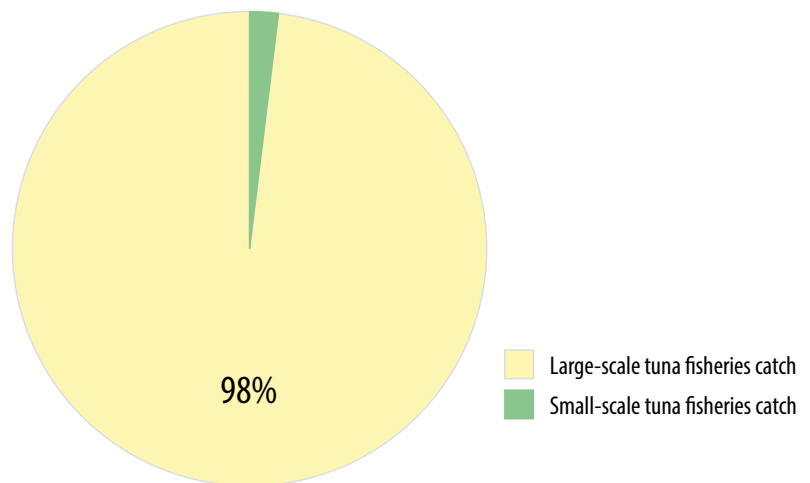
In the past five decades in the Pacific region, there have been hundreds of projects aimed at developing small-scale tuna fisheries, many of which have not been successful. In late 2018, SPC convened a meeting of fishery specialists to discuss small-scale tuna fishery development efforts that have occurred in the past, analyse the experiences, and focus on common features that emerge, with a view to providing guidance for future development. The group identified several key lessons and priorities for government interventions for small-scale tuna fishery development. The major recommendations relate to fish aggregating devices, fisher associations and sea safety.



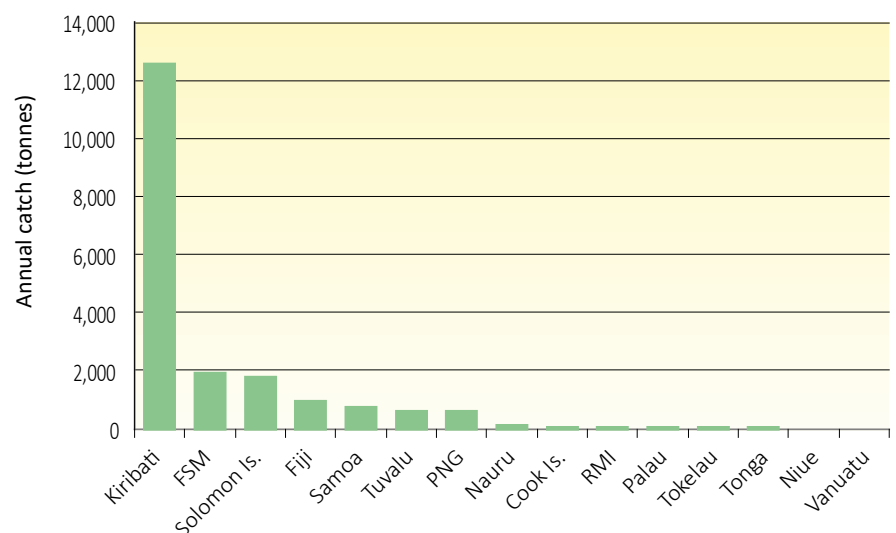
## Small-scale tuna fisheries in the Pacific Islands

Although small-scale tuna fishing<sup>1</sup> in the Pacific region is responsible for only about 2% of the total tuna catch (Figure 1), those landings represent much of the tuna that enters the domestic food supply of most countries in the region. The cash earned by small-scale tuna fishers is also significant. As the catch rates in coastal fisheries decline, the large tuna resources represent a real opportunity for small-scale fishers. Other important aspects of small-scale tuna fisheries in the Pacific region are as follows:

- small-scale fishing produces about 24,000 tonnes of tuna annually;
- almost half of the small-scale tuna catch in the region is made in Kiribati (Figure 2);
- small islands, especially those that lack substantial areas with fertile soil and/or with only small lagoons, have the most small-scale tuna fishing activity;
- significant development opportunities have occurred where small-scale operations take advantage of existing larger-scale infrastructure and supply chains;
- small-scale fishing for tuna is most prevalent near urban areas (with markets that pay high prices) and around nearshore anchored fish aggregating devices (FADs), where catch rates are highest; and
- the lack of monitoring tools such as TAILS<sup>2</sup> for data collection.



**Figure 1.** Large vs small-scale tuna catches in the Pacific Island region. (Source: Gillett 2011a)



**Figure 2.** Annual small-scale tuna catches in the Pacific Island region. (Source: Gillett 2011b)

## Past development efforts in the region

Efforts to develop small-scale tuna fisheries commenced over 60 years ago. Since then, there have been many development attempts (over 50 initiatives, with hundreds of individual projects) in the general areas of nearshore FADs, gear and fishing techniques, vessel/engine design, infrastructure, and post-harvest processes. These initiatives have been carried out in all Pacific Island countries and territories.

## Identifying the lessons from past development efforts

In October 2018, SPC brought together a small group of people highly experienced in small-scale tuna fishery development<sup>3</sup> to discuss what has occurred in the past, analyse the experiences, and focus on common features that emerge, with a view to providing guidance for the future. This group represented about 300 years of combined experience in small-scale tuna fishery development in the region. Much of this policy brief is based on the output of the consultation.<sup>4</sup>

<sup>1</sup> In this policy brief, 'small-scale tuna fishing' is defined as fishing for tuna from boats that range in size from five to ten metres. Open undecked boats, partially decked or fully decked boats can spend up to two days at sea and cabined boats can spend up to ten days at sea, depending on their icing capacity, safety and exposure.

<sup>2</sup> TAILS is a mobile or tablet application designed by SPC for use by small-scale fishers to collect 'catch' information, recording the quantity of fish they catch and the different species.

<sup>3</sup> The group consisted of (in alphabetical order): Joelle Albert, Mike Batty, Michel Blanc, Ian Cartwright, Tricia Emberson, Robert Gillett, Noah Idechong, Mike Savins, William Sokimi and Mainui Tanetoa.

<sup>4</sup> A detailed account of the meeting has been published in SPC Fisheries Newsletter #157: <http://purl.org/spc/digilib/doc/5bm3n>

The main lessons learned from past small-scale tuna fishery development are set out below.

Area	Main lessons
FADs	<p>The anchored nearshore FAD is undoubtedly the most important tool for the development of small-scale tuna fisheries – but sporadically deploying anchored nearshore FADs when external resources allow is not a good strategy.</p> <p>Government-supported FAD programmes have been effective in the region, particularly when the government has provided support for marketing infrastructure, as well as directly to local fishers and associations, together with clear information.</p>
Site selection	<p>Several positive features must be present at a location for the development of a small-scale tuna fishery. Some of these features can be engineered (e.g. setting anchored nearshore FADs, teaching site-specific fishing techniques). Other features are the inherent characteristics of the site, such as favourable geography and environmental conditions, the local tuna fishing heritage, and specificities of the local economy. Appropriate site selection (i.e. the presence of favourable non-engineerable factors) appears to be important for success in the small-scale tuna fishery development process.</p>
Fisher associations	<p>Associations of small-scale fishers have been effective in getting more attention focused on small-scale tuna fishing – and are often successful in getting improved outcomes.</p> <p>A fisher association seems to be most effective when the government: (a) formally recognises the association; (b) has a process for real engagement with the association; and (c) includes the association in advisory committees.</p>
Government interventions	<p>Government initiatives that generally seem to work in the development of small-scale tuna fisheries are: (a) well-funded and well-organised national nearshore FAD programmes; (b) safety at sea programmes; (c) provision of critical infrastructure (e.g. wharves, markets); (d) maritime school training; and (e) efforts to shield small-scale fishers from the negative effects of large-scale tuna fishing.</p> <p>Government initiatives that generally seem not to work are government fish collection schemes and ‘giveaways’, especially: (a) in the absence of a well-designed programme (e.g. the dropping-off of a few boats); and (b) setting up activities that undermine/conflict with the commercial sector.</p>
Subsidies	<p>In the development of small-scale tuna fisheries there have been both effective and ineffective subsidies used. Evidence suggests that an effective subsidy in small-scale tuna fishing has clear objectives, is transparent and has a realistic exit strategy. In some cases, the costs of subsidies appear to have far outweighed the benefits, such as the donation of boats to individuals and communities outside well-planned programmes.</p> <p>There is justification for certain types of support to the fisheries sector not to be categorised as subsidies. Examples are: (a) support to nearshore FAD programmes as ‘essential infrastructure’, similar to roads on land, and (b) free or un-taxed safety gear as ‘humanitarian assistance’.</p>
Interaction with large-scale tuna fisheries	<p>Small-scale tuna fisheries have potential benefits, given their interaction with the large-scale operations and infrastructure. In fact, many of the small-scale tuna fisheries would not exist without piggybacking.</p>
Sea safety	<p>Fishing FADs have both positive and negative implications for sea safety. They concentrate fishing effort into small locations but the promise of easy access to fish can lure boats further offshore into unsafe or unfamiliar situations.</p> <p>There has been a remarkable improvement in small boat sea safety in countries where appropriate safety regulations have been introduced and effectively enforced.</p>
Post-harvest	<p>The low price of skipjack caught by purse-seine vessels and the complexity and costs associated with post-harvest export requirements and processes generally constrain the small-scale tuna catch to the domestic market.</p> <p>Small-scale fishers can successfully take advantage of large-scale commercial operations (piggybacking), especially in transport, processing and marketing.</p>
Boats and fuel use	<p>The introduction of new boat designs for small-scale tuna fishing is characteristically successful only when accompanied by long-term technical assistance and subsidies.</p> <p>The viability of small-scale tuna fishing operations is strongly affected by the relatively high fuel use of outboard motors. Apart from fuel subsidies, one of the few ways in which the high cost of fuel for small-scale tuna fisheries can currently be mitigated is through the use of nearshore FADs.</p>
Role of women	<p>In general, benefits from small-scale tuna fisheries flow mostly to the men. While the contribution of women to small-scale tuna fisheries is substantial, there have not been as many opportunities to increase the benefits available to women as there have been to men.</p>
Data on small-scale tuna fishing	<p>Collecting data on small-scale tuna fisheries is important for a number of reasons, including determining their national importance, the impacts of various development efforts, and the effects of large-scale tuna fishing. Despite the importance, the reality is that most estimates of national small-scale tuna catches are poor – and recent efforts to improve the situation have not been very effective.</p>

## Priority actions

Many actions are required to successfully develop a small-scale tuna fishery. Priority government interventions, based on the lessons of the past, are listed below.

1. Government fishery agencies should create and provide substantial ongoing support to well-funded, well-organised national nearshore FAD programmes. Such programmes should not be reliant on volatile donor or regional organisation funding/expertise, and there should be mechanisms to enhance the status and sustainability of the programmes within fishery agencies and/or fishers' associations.
2. Government fishery agencies should recognise that small-scale fisher associations can have substantial benefits to fishery stakeholders, and therefore should formulate mechanisms for facilitating and interacting with these associations. The agencies should also facilitate national and international development partners that provide support for establishing and enhancing fisher associations.
3. Encouraging small boats to venture offshore in search of tuna has significant sea safety implications. Government fishery agencies should ensure that their national nearshore FAD programmes have an effective sea safety component.

## Further reading

- Gillett R. 2011a. Bycatch in small-scale tuna fisheries: a global study. Fisheries and Aquaculture Technical Paper. No. 560, Food and Agriculture Organization of the United Nations, Rome. 113 p.
- Gillett R. 2011b. Issues in small-scale tuna fisheries in FFA member countries. Honiara, Solomon Islands: Forum Fisheries Agency. 13 p.
- Gillett R., Blanc M., Cartwright I., Batty M., Savins M., Albert J., Tanetoa M., Idechong N., Emerson T. and Sokimi W. 2018. Forty years of small-scale tuna fishery development in the Pacific Islands: Lessons learned. SPC Fisheries Newsletter 157:60–68.
- Pacific Community. 2017. Sustainable national artisanal FAD programmes: What to aim for. Policy Brief 31/2017. Noumea, New Caledonia: Pacific Community. 4 p.

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FAD fishing, Niue. © William Sokimi, SPC

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