



TUNA INITIATIVE



Photo: © Natalie Behring

Value of Pacific tuna

The importance of fish to the people of the Pacific Islands cannot be over-emphasized (see foldout map). The reason – 98% of the 27 million km² under the jurisdiction of the 22 Pacific Island countries and territories is ocean. For many of these ‘large ocean states’ tuna is their greatest resource. Tuna is in demand worldwide, and the catch from Pacific Island waters supplies more than 30% of the global tuna market.

For several Pacific Island countries, access fees paid by industrial fleets to harvest tuna provide 10–80% of all government revenue. In addition, tuna fishing and processing have created more than 23,000 jobs across the region.

Tuna is also vital to local food security. In a region where non-communicable diseases due to unhealthy diets and changes in lifestyle are the worst in the world, increasing local access to fish is a practical way of improving nutrition. The problem is that population growth is driving a gap between sustainable harvests from coastal fisheries and the fish needed for food security. Tuna is needed to fill the gap.

A new Roadmap

Recognising the importance of fisheries, Pacific Island Leaders recently endorsed the *Regional Roadmap for Sustainable Pacific Fisheries*.

The goals of the *Roadmap* include:

- sustaining key tuna species by agreeing on target reference points for harvests within three years, and moving the status of each species clearly towards these targets within 10 years;
- doubling the value of the tuna catch within 10 years;
- creating 18,000 new jobs in tuna processing, and as vessel crew, observers and fisheries management staff, within 10 years; and
- increasing the amount of tuna allocated to domestic consumption each year by 40,000 tonnes within 10 years.

Challenges

The *Roadmap* is a blueprint for progress but several challenges must be overcome to reach the goals. Bigeye tuna is overfished, illegal, unreported and unregulated (IUU) fishing is a constant threat, the region’s longline fisheries are barely economic, increased effort in the purse-seine fishery targeting skipjack tuna is driving down the value of the catch, fishing on the high seas is largely uncontrolled, and almost 90% of the tuna caught in the waters of Pacific Island countries is processed outside the region. In addition, climate change is expected to alter the distribution and abundance of tuna.

The Conservation International (CI) Tuna Initiative will build on strong existing partnerships and engagement throughout the region to assist Pacific Island countries address these challenges, and help fulfill their aspirations for the use of tuna resources in the Western and Central Pacific Ocean (WCPO).

Photo: © ISSF/Jeff Muir

Supporting the *Roadmap*

The goals of the CI Tuna Initiative are to:

- assist national and regional fisheries agencies sustain tuna catches and the ecosystem that supports them; and
- increase the benefits from tuna fisheries for Pacific Island economies and societies.

In partnership with country leaders, and regional and national fisheries agencies, we have identified solutions to address five key challenges identified in the *Roadmap*. The CI Tuna Initiative will help promote the investments needed to assist Pacific Island countries and regional agencies address these challenges and implement the *Roadmap*.

Investment opportunities



1. Sustaining tuna fisheries

Identifying the spatial structure of stocks

Effective management of tuna fisheries requires a sound understanding of the spatial structure of each species. Where a species has multiple self-replenishing populations, each 'stock' needs to be assessed and managed separately. Tagging programs help provide information on the spatial structure of stocks and need to be continued. However, new genetic tools and collection of samples by observers on purse-seine vessels now create the opportunity to greatly improve our understanding of tuna resources.

The CI Tuna Initiative will help support the collection and analysis of samples needed to map the spatial structure of each tuna species based on population genetics and other biological markers (e.g. otoliths). The new 'resource maps' will provide a better foundation for the stock assessments used to set catch limits for each tuna species. As part of the Pacific Oceanscape, countries are establishing large-scale marine protected areas to achieve a range of conservation goals. The new resource maps will also help in the evaluation of area closures in the management and conservation of tuna resources.

Reducing fishing mortality of bigeye tuna

Bigeye tuna is overfished (the number of spawning fish is now only 16% of the original, unfished level), mainly because large catches of bigeye tuna are taken by purse-seine vessels targeting skipjack tuna around drifting fish

aggregating devices (FADs) (see map). To help overcome the high fishing mortality of bigeye tuna, the CI Tuna Initiative will help develop new fishing methods that enable purse-seine fleets to target skipjack tuna around FADs without catching many bigeye tuna. The focus will be on: 1) innovations to detect the relative abundance of skipjack, yellowfin and bigeye tuna associated with FADs so that captains can make informed decisions about where to fish to avoid catching bigeye tuna; and 2) new FAD-fishing methods that exclude bigeye tuna, e.g., equipping FADs with systems that repel or attract skipjack or bigeye tuna.



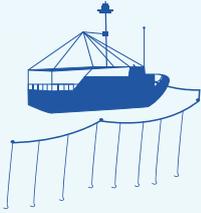
2. Sustaining the ecosystem

Minimising impacts on sharks

Capture of sharks in WCPO tuna fisheries for their valuable fins has severely depleted populations of some shark species. The practice of removing fins and discarding the remainder of the shark is widespread. There is strong opposition to shark finning on the grounds of cruelty and food wastage. In response, effective ways of managing shark bycatch and shark finning have been developed.

Pacific Island countries have agreed to implement such measures but often lack the resources required. The CI Tuna Initiative will help support Pacific Island countries to implement and enforce shark management measures.





3. Monitoring, control and surveillance

IUU fishing is a constant threat to the sustainability of tuna fisheries and erodes economic returns for Pacific Island countries from their tuna fisheries. The CI Tuna Initiative will help support the following activities to improve monitoring, control and surveillance (MCS) of the region's tuna fisheries.

Improve regional surveillance capability

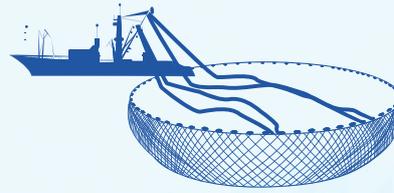
Effective MCS depends on timely collection and analysis of fisheries information. The CI Tuna Initiative will help 1) establish MCS operation centers in Pacific Island countries to enhance the use of fisheries surveillance information; 2) purchase safety and communication devices for fisheries observers; and 3) obtain satellite imagery to strengthen the capacity of Pacific Island countries to identify and intercept illegal fishing vessels.

Develop MCS expertise

A high level of expertise is needed for effective MCS. To assist Pacific Island countries to develop these skills, the CI Tuna Initiative will help support foundation MCS training programs for compliance officers, advanced MCS training courses and a career pathway.

E-monitoring

The effectiveness of management measures to maintain tuna stocks at desired levels needs to be assessed by monitoring catches. The CI Tuna Initiative will help assess the feasibility of transferring new E-monitoring technology to all purse-seine vessels. This technology promises to overcome the biases associated with existing sampling methods and provide regional management agencies with percentage catch composition and size-frequency for all tuna species in real time.



4. Increasing the value of tuna

Investigate value creation opportunities

In March 2015, Conservation International released the report, *Value Creation Opportunities for WCPO Island Nations in the Tuna Industry*. The report identified 10 opportunities for Pacific Island countries to work with companies in the supply chain to increase the value of tuna and economic returns. The CI Tuna Initiative will assist Pacific Island countries to explore specific opportunities to add value to their tuna resources.

Bio-economic modelling

Catch affects the size of tuna stocks and, in turn, the profitability of fisheries. Determining the appropriate allowable catch for each species is important if Pacific Island countries are to maximise economic benefits from tuna fisheries. These important decisions require bio-economic modelling. The CI Tuna Initiative will help support development of new bio-economic models to enable Pacific Island countries to determine optimum catch levels for all tuna fisheries in the WCPO.



5. Improving food security

Installing more nearshore FADs

Nearshore FADs are recognised as an efficient way of increasing access to tuna for Pacific Island communities, and promise to transfer some fishing effort from coral reefs to oceanic fish resources. Nearshore FADs differ from the drifting FADs used by industrial tuna fleets because they are anchored close enough to the coast to be used by small-scale fishers, with minimal bycatch. The CI Tuna Initiative will help identify priority locations for nearshore FADs across the region and assist Pacific Island fisheries agencies to include FADs as part of the national infrastructure for food security.



Increasing access to tuna in urban areas

Rapid urbanization is alienating a growing proportion of Pacific Island people from easy access to fish. Sorting of purse-seine catches to remove bycatch and small tuna during transshipping operations in regional ports provides the opportunity to supply fish to urban populations at low cost. The CI Tuna Initiative will help provide the infrastructure needed for hygienic marketing of small tuna and bycatch offloaded by purse-seine vessels, and assist small businesses to distribute this fish to urban and surrounding areas.

Develop small-scale pole-and-line fishing for tuna

People in the urban areas of Fiji do not have frequent access to tuna and bycatch from purse-seine vessels because little transshipping occurs there. Increasing demand for fresh fish from Fiji's growing population may set the scene for small-scale, pole-and-line fishing around nearshore FADs. The CI Tuna Initiative will help assess the feasibility of establishing enterprises based on a combination of such pole-and-line operations and tuna fishing tourism.

Climate change adaptation

Recent modelling shows that the distributions of the main tuna species in the tropical Pacific are likely to shift progressively to the east. The CI Tuna Initiative will assist Pacific Island countries to be 'climate smart' when implementing the Roadmap. Several of the activities in Investment Opportunities 1, 4 and 5 are win-win adaptations that address present-day challenges and also assist Pacific Island countries to minimise the risks posed by climate change, and maximise the opportunities.

How we will work

Conservation International builds upon a strong foundation of science, partnership and field demonstration to empower societies to responsibly and sustainably care for nature and global biodiversity for the wellbeing of humanity.

The CI Tuna Initiative has been designed in consultation with national fisheries departments, the Forum Fisheries Agency (FFA), the Secretariat of the Pacific Community (SPC), the Western and Central Pacific Fisheries Commission, international organisations (e.g., WorldFish) and non-governmental organisations (e.g., International Sustainable Seafood Foundation and World Wildlife Fund).

In partnership with national and regional agencies, CI will help Pacific Island countries achieve the tuna-related goals in the Pacific Island Forum Leader's *Regional Roadmap for Sustainable Pacific Fisheries* and the *Pacific Oceanscape*. We will help mobilize support for Pacific Island countries to manage and conserve their tuna resources, and the tropical Pacific Ocean ecosystem.



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