Balancing Sustainable Tuna Resource Management and Economic Development: Small Island Developing States Perspectives

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Introduction

In small island developing states (SIDS), sustainable fisheries are the overriding goal of balancing fisheries management for important resources such as tuna and economic development. However, reports over time have shown that fisheries management in general has continued to fail, sometimes spectacularly. Key factors that have hindered the effectiveness of fisheries management in SIDS include the combined effects of small fisheries departments, degradation of supporting ecosystems, heavy exploitation, environmental degradation, uncertainties of scientific information, unpredictable variations in the growth of fish stocks, heightened economic development demands, and error in the implementation of management measures. Determining SIDS’ perspectives on what sustainability entails and ways of balancing tuna resource management and economic development is difficult but necessary, as it determines the long-term sustainable use of fisheries resources such as tuna.

Four species of tuna—albacore (*Thunnus alalunga*), bigeye (*T. obesus*), yellowfin (*T. albacares*), and skipjack (*Katsuwonus pelamis*)—are important to Pacific SIDS due to their value, high abundance, and level of dependence. Tuna caught within national waters of fifteen Pacific SIDS that are members of the Pacific Islands Forum Fisheries Agency (FFA) region contributed approximately 1.5 million metric tonnes (valued at US$2.8 billion) of about

1 Food and Agriculture Organization of the United Nations (FAO), *Code of Conduct for Responsible Fisheries* (Rome: FAO, 1995).
2 R. Mahon and P. McConney, “Managing the Managers: Improving the Structure and Operation of Small Fisheries Departments, especially in SIDS,” *Ocean and Coastal Management* 47, no. 9–10 (2004): 529–535; K. Cochrane, “Fisheries Management,” in *A Fishery Manager’s Guidebook: Management Measures and their Applications*, FAO Fisheries Technical Paper No. 424, ed., K. Cochrane (Rome: FAO, 2002).
3 D.S. Holland, *Management Strategy Evaluation and Management Procedures: Tools for Rebuilding and Sustaining Fisheries*, OECD Food, Agriculture and Fisheries Working Papers No. 25 (Paris: Organisation for Economic Co-operation and Development Publishing, 2010).
2.7 million metric tonnes (valued at ca. US$4.8 billion) of tuna from the Western and Central Pacific Fisheries Commission (WCPFC) region in 2016. Skipjack tuna contributed approximately 58 percent of the total annual catch, followed by yellowfin at 28 percent, bigeye at 8 percent, and albacore at 4 percent. Thus, tuna is the economic development driver in most Pacific SIDS.

Consequently, Pacific SIDS have been working individually, collectively, and collaboratively to forge management systems that reflect their perspectives, respect their rights, and increase income from tuna while simultaneously preserving its sustainability. The collaborative and collective arrangements of Pacific SIDS have been spearheaded by the FFA, established in 1979 to coordinate the regional drive to secure long-term maximum benefits from shared offshore fisheries resources. In 1982, eight of the Pacific SIDS and FFA established a sub-regional agreement known as the Parties to the Nauru Agreement (PNA), to formulate initiatives that maximize direct and indirect economic benefits to the parties. Moreover, the SAMOA Pathway in 2014 reaffirmed SIDS’ perspectives by promoting sustained, inclusive, and equitable economic growth, promoting integrated and sustainable management of natural resources and ecosystems, while facilitating ecosystem conservation, regeneration, restoration, and resilience in the face of new and emerging challenges.

Pacific SIDS’ perspectives are influenced by their rights and responsibilities provided under the United Nations Convention on the Law of the Sea (UNCLOS), Agenda 21 of the United Nations Conference on Environment and Development, and the FAO Code of Conduct for Responsible Fisheries of 1995. These frameworks outlined international standards to protect ecological well-being, sustainability of highly migratory species such as tuna, and the economic development aspirations of SIDS. They also highlighted the importance of using MSY as the basis for setting total allowable catch (TAC) to ensure that living resources in the exclusive economic zone (EEZ) are not overexploited.

Pacific SIDS are struggling to sustainably manage their tuna resources given the uncertainties surrounding the state of bigeye tuna and the full-to-overexploited state of yellowfin and albacore. Many regard MSY as inadequate for maintaining stocks at levels viable to achieve greater financial returns from tuna resources within EEZs. As a result, Pacific SIDS’ perspectives focus on

4 Pacific Islands Forum Fisheries Agency (FFA), “Catch and Catch Values of WCPFC Tuna Fisheries by Waters and Fleet 2016,” last accessed 19 September 2017, https://www.ffa.int/node/425.
5 Nauru Agreement Concerning Cooperation in the Management of Fisheries of Common Stocks (as amended April 2010).
6 “Samoa Pathway—Outcome document,” UN Conference on Small Islands Developing States, Apia, Samoa, 1–4 September 2014, http://www.sids2014.org/index.php?menu=1537.
sustaining increased benefits derived from foreign fishing nations by setting up local tuna processing facilities, domestication of tuna fishing fleets targeting stocks within EEZs, transshipment in ports, and increased percentages of local crews on foreign vessels. Engaging Pacific SIDS in monitoring, compliance, and surveillance (MCS) is also critical given increasing concerns of incompatible national tuna management arrangements and regional tuna conservation and management measures (CMM). Managing highly migratory fish stocks such as tuna requires arrangements that are understood and implemented by all stakeholders at national, regional, and international levels.

This essay uses a Pacific SIDS case study to examine the perspective on what sustainability entails, to explore why Pacific SIDS national tuna management arrangements were not compatible with regional and international CMMs, and to recommend solutions. The focus is on Fiji’s tuna management framework, which is evaluated against national, regional, and international standards to determine the degree of compliance with international benchmarks on balancing sustainable management of tuna resources and economic development.

Tuna Fisheries Management in Fiji

Fiji’s national fisheries management framework includes the Fiji Tuna Management and Development Plan (2014–2018) (hereafter the ‘Tuna Plan’), the Offshore Fisheries Management Decree (2012), the Fisheries Act, Chapter 158, and the Marine Spaces Act, Chapter 158A of the laws of Fiji. The evaluation in this essay begins with conformance of the Tuna Plan to measures in the Offshore Fisheries Management Decree (2012), which defined how the Tuna Plan should be designed. The second level is on the degree of compliance of the Tuna Plan and the Offshore Fisheries Management Decree (2012) to regional and international control measures outlined under WCPFC-CMM 2015–02 and CMM 2016–01, the FAO Code of Conduct for Responsible Fisheries, Article 17 of Agenda 21, and UNCLOS.

Fiji’s perspectives and intention on balancing sustainable management of tuna resources and economic development are reflected under nine goals of the Tuna Plan: (1) maintaining stock sustainability to support economic growth in offshore fisheries; (2) contributing to Fiji’s gross domestic product by promoting development and growth in offshore fisheries; (3) increasing investments and employment opportunities in the economy; (4) managing resilience of offshore fisheries against climate change risks; (5) protecting fisheries investments and ensuring food security; (6) sustaining ecosystem health and
exercising the precautionary approach; (7) managing tuna under rights-based and integrated fisheries management frameworks; (8) strengthening institutions; and (9) promoting capacity to support resource building and knowledge-based management.

The common fisheries management approach of using MSY or MEY for setting allowable catch limits is difficult to achieve in Fiji given its lack of capacity, resources, and differences in perspectives. For example, the country’s TAC of 12,000 metric tonnes per annum set under the Tuna Plan was to allow the attainment of Fiji’s economic development goals specified in the Plan. This TAC exceeded the MEY level of 6,610 metric tonnes recommended by the Secretariat of the Pacific Community (SPC) and the FFA scientists in 2012, which Fiji viewed as inadequate to attain greater financial returns from tuna resources.7

Section 2.3(iv) of the Tuna Plan identified overfishing and overcapacity as the main risks associated with the tuna fishery (albacore, yellowfin, and bigeye) in Fiji. This implied that the Fiji government was aware that the national and regional measures were not effectively controlling overfishing. Nevertheless, Fiji’s domestic fleet continued to expand fishing on the high seas and waters of neighboring states. Tuna caught in international waters by Fiji’s domestic fleet increased from 10 percent of total annual catch in 2001 to 45 percent in 2015.

Fiji’s rights under regional tuna CMMs and international frameworks have influenced its perspective of balancing sustainability of tuna resources and economic development. Prior to the adoption of WCPFC-CMM 2010–05 in 2010, the total number of Fiji-flagged vessels targeting albacore was 92, but this grew to 121 vessels in 2011, 113 vessels in 2012, and 102 vessels in 2015, before vessel numbers dropped to 89 in 2016.8 According to paragraph 1 of WCPFC-CMM 2015–02, “Commission Members, Cooperating Non-Members, and participating Territories (CCMs) shall not increase the number of their fishing vessels actively fishing for South Pacific albacore in the Convention Area south of 20°S above 2005 levels or recent historical (2000–2004) levels.”9 Paragraph 2 states that “the provisions of paragraph 1 shall not prejudice the legitimate rights and obligations under international law for small island developing State and

7 Fiji Fisheries Department, Fiji Tuna Management and Development Plan (2012–2016) (Suva: Fisheries Department, 2012).
8 Western and Central Pacific Fisheries Commission (WCPFC), “Fiji,” Annual Report to the Commission. Part 1: Information on Fisheries, Research and Statistics, Scientific Committee Thirteenth Regular Session, Rarotonga, Cook Islands, 9–17 August 2017, WCPFC-SC13-AR/CCM-07, Table 3.
9 WCPFC, “Conservation and Management Measure for South Pacific Albacore,” Conservation and Management Measure (CCM) 2015–02, Commission Twelfth Regular Session, Bali, Indonesia, 3–8 December 2015.
Territory CCMS in the Convention Area for whom South Pacific albacore is an important component of the domestic tuna fishery."

Paragraph 41 of WCPFC-CMM 2014–01 and CMM 2016–01 also encouraged Fiji to overfish resident bigeye tuna stocks within national waters to a maximum of 2,000 metric tonnes. Prior to 2014, bigeye landings by Fiji’s domestic tuna longline fleet averaged only 740 metric tonnes per year. The catch grew to 1,586 metric tonnes in 2014, 1,169 tonnes in 2015, and approximately 1,190 metric tonnes in 2016.10 Similarly, after implementation of WCPFC-CMM 2014–01 and CMM 2016–01, annual catch levels of yellowfin increased from 1,292 to 2,748 metric tonnes during 2005–2013, to 3,594 metric tonnes in 2014, 3,647 tonnes in 2015, and 3,928 tonnes in 2016.11 The regional tuna CCMS encouraged overfishing of resident stocks of targeted tuna species within SIDS’ EEZs and failed to protect the sustainability of targeted tuna stocks for future generations.

To address the paradox between sustainability of tuna and greater financial returns from tuna, we must balance sustainability of tuna stocks and SIDS’ income over the long term. The way forward may be possible not only by developing an alternative source of income, but mostly by containing the growth spirals of economies and the depletion of tuna resources. There is a need to develop a new management approach beyond MSY and MEY that (a) recognizes SIDS’ dependence on tuna resources, (b) reduces longline fishing competition between SIDS and distant water fishing nations (DWFNs), (c) promotes invention of appropriate technology and new sources of energy to reduce costs of SIDS’ domestic fleet, (d) increases fair sharing of benefits through increased onshore activities of foreign fishing nations, (e) enhances accountability of tuna fisheries managers and fishers, and (f) encourages sustainability. SIDS’ economic benefits from tuna longline fishing has increased steadily in the last twenty years, but their involvement in the purse seine fishery is limited to crewing vessels. Our case study showed that 45 percent of Fiji’s domestic tuna longline fleet's annual catch is from international waters adjacent to its EEZ. Reducing DWFNs’ longlining activities will balance SIDS’ growing demands of expanding their fishing activities into adjacent high seas areas. At the moment SIDS cannot compete with DWFNs in purse seining, and see longline fishing as an important way forward for balancing sustainable tuna resource management and economic development.

10 WCPFC, “Fiji,” supra note 8, Table 1.
11 WCPFC, “Conservation and Management Measure for Bigeye, Yellowfin and Skipjack Tuna,” CMM 2013–01, Commission Tenth Regular Session, Cairns, Australia, 2–6 December 2013.
Conclusion

This essay has focused on the SIDS’ perspective of balancing the sustainability of tuna resources and economic development. This refers to the sustainable increase in the sharing of benefits between SIDS and foreign fishing nations through the establishment of local tuna processing facilities, domestication of tuna fishing fleet’s targeting stocks within EEZs, transshipment in ports, and increased percentages of local crews on foreign vessels. McCoy supported this statement that transshipment undertaken in ports has enhanced catch verification efforts and has also been a source of direct financial benefit to some FFA member countries. Our case study shows that Fiji has been profiting from its domestic longline fleet fishing beyond Fiji’s EEZ.

The common fisheries management approach of balancing sustainable tuna resource management and economic development using MSY and MEY is difficult for SIDS, which sees these management arrangements as impediments of their rights specified under UNCLOS and WCPFC-CMMS. It is important to develop a management system capable of better balancing tuna resource sustainability and long-term financial sustainability of tuna developments in SIDS.

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12 M.A. McCoy, A Survey of Tuna Transshipment in Pacific Island Countries: Opportunities for Increasing Benefits and Improving Monitoring (Honiara: FFA, July 2012).