

Chapter 10

Managing Maritime Resources in the Pacific— With a Focus on Tongan EEZ Management¹

Yoichiro Sato

Executive Summary

- Management of key maritime resources in Pacific Island states suffers from the mismatch between their vast resource potentials and the shortfall in their enforcement capabilities.
- Tuna fishery resources in the region have been relatively healthy, but the decline in yellowfin and big eye tuna call for introduction of a new international management scheme and development of national enforcement capacity.
- Lack of financial resources is a major obstacle to fishery patrols, yet interagency and multilateral cooperation have been attempted to achieve efficient and effective enforcement.
- Seabed mining in national and international waters offers attractive revenue potentials for some Pacific Island states. However, Tonga's experience shows that lack of technical and legal expertise, and transparency in governance may greatly reduce this potential.

¹ This chapter draws from two previously published journal articles: Yoichiro Sato, "Protecting Tonga's Maritime Security," *New Zealand International Review*, 37(5), September/October 2012, 17-21; and "Tonga's Risky Seabed Mining Ventures," *New Zealand International Review*, 39(2), March/April 2014, 19-20. I would like to express my gratitude to the Review for granting me permission to use its material.

Introduction

For Pacific Island nations, the sea is an essential source of traditional living. Large-scale commercial fishing of tuna species by long-distance fishing states has presented a rising level of threat to fish stocks on which local lives depend. Expanding the definition of coastal states' rights over the sea by international law has not been accompanied by corresponding growth in island states' capacity to protect their rights through maritime law enforcement. Furthermore, regional fishing management organizations have barely slowed the long-term decline of key tuna species. Additionally, improvements in science and engineering have made seabed resources more accessible for mining, and Pacific Island states have literally become the new Wild West, where a sense of lawlessness provides fraudsters opportunities for exploitation.

This chapter will look closely at Tonga's ocean resource issues in order to illustrate the serious implications of weak governance on effectively managing maritime resources. Such management is made more challenging by expanding scientific knowledge and engineering skills, and current business models and globalization. A governance shortfall exists at both national and international levels, with the former contributing to the latter. This chapter will also briefly discuss associated cooperation activities that assist in Tonga's maritime resource management.

Maritime Resource Security for Pacific Island States

The International Law of the Sea, particularly its granting of 200-nautical mile Exclusive Economic Zones (EEZs) to coastal states, is the basis for Pacific Island nations' claims to vast amounts of maritime resources. Previously limiting themselves to traditional fishing, island states have struggled with the dilemma between the new international legal entitlement to these resources and their own lack of financial, technical and scientific expertise

to commercially exploit them. Pacific Island states, for example, have even been unable to effectively patrol their vast EEZs against poachers.

In the past, depletion of tuna stocks impacted the expensive temperate bluefin tuna in the Atlantic and the Southern Oceans; but it now has reached Pacific Ocean species, including the Pacific bluefin tuna and tropical species, such as big eye and yellowfin tuna. The Western and Central Pacific Tuna Fisheries Commission (WCPTFC) for the first time agreed to set a total catch quota for Pacific bluefin tuna in 2014 and has started more closely monitoring other Pacific species.² Because tuna are highly migratory species, improving international tuna resource management regimes is important to the Pacific Islands as is improving their own EEZ patrol capabilities.

The launching of the WCPTFC in 1996 with inclusion of Pacific Island EEZ states and long-distance fishing nations, such as Japan, Korea, and United States, was a milestone in managing Pacific tuna. The new regime has developed quickly through lessons learned from earlier tuna management protocols. Previous regimes, heavily dependent on national scientists from member states, often suffered from politicization of scientific stock assessment processes.³ Under the new program, the science committee uses external expertise directly answerable to the commission. The WCPTFC mechanism provides the means to overcome island states' lack of scientific expertise, which previously resulted in domination by national scientists from long-distance fishing states. Cooperation between Pacific Island nations and long-distance fishing states has further improved catch certification and trade statistics to narrow the windows for unreported fishing and product distribution. Such cooperation is essential for further refinement of international management regimes.

2 "Consensus reached on Pacific Bluefin Tuna Conservation," *Environment News Service*, December 3, 2014, <http://ens-newswire.com/2014/12/03/consensus-reached-on-pacific-bluefin-tuna-conservation/>

3 Yoichiro Sato, "The Southern Bluefin Tuna Regime: Rebuilding Cooperation," *New Zealand International Review*, July/August 2001, 26(4), 9-13; and "Fishy Business: Two-Level Game Political-Economic Analysis of the Southern Bluefin Tuna Dispute," *Asian Affairs: An American Review*, Winter 2002, 28(4), 217-237.

For Pacific Island nations, seabed mineral resources offer growing potential for boosting economic development; their vast EEZs are host to various mineral resources as yet untapped. Furthermore, the seabed in Pacific international waters is now open to international mining consortiums under management of the International Seabed Authority (ISA) of the UN Law of the Sea Commission. While most participants are from developed countries with large capital reserves and advanced technology, Pacific countries like Nauru and Tonga have partnered with an international investor to join the mining effort. In EEZ mining, national governments hold authority in licensing for area prospecting and actual production. In addition to setting license fees, ensuring that subsequent operations are environmentally sound is an important national government responsibility.

EEZ Fishery Management

Tonga's EEZ hosts a rich tuna resource. Species caught in the area include yellowfin, big eye, albacore and skipjack tuna, as well as several types of swordfish. The main catch during the early 2000s was albacore tuna at a time when more than 20 vessels operated in Tongan waters.⁴ In recent years, longline fishermen have avoided schools of smaller and cheaper albacore tuna; smaller boats operating within territorial waters catch skipjack tuna to be sold along with reef fish in the local fish market. Some big eye and yellowfin tuna, and swordfish are airlifted to Japan, as are occasional catches of more expensive bluefin tuna. Remaining tuna catches go mostly to upscale local restaurants. Only three Tonga-registered boats catch these tuna using longline gear, mostly within the country's EEZ.

Some twenty foreign fishing vessels were licensed to operate in the Tongan EEZ, but the government placed a moratorium on foreign fishing operations in 2004. The Tongan government resumed licensing of foreign vessels

4 "GEF II Project: National Projects Preparation Report Tonga," p. 1, *IW:LEARN.net*, http://iwlearn.net/iw-projects/2131/reports/ofm-assessments-reports/Tonga.pdf/at_download/file.

for EEZ fishing in 2010, and one Taiwanese vessel has been licensed since then. During the moratorium period, some violations were confirmed. In 2008, a New Zealand areal patrol identified a Taiwanese vessel illegally fishing inside the Tongan EEZ (but outside the “Proclamation” area), and in 2010, a Tongan patrol boat identified a Korean fishing vessel in a similar non-enforced part of the EEZ. The extent of actual violations during this period is unknown, however, due to shortage of routine patrol activities.

Two Tongan government agencies assume primary responsibilities for fishery management. The Fishery Ministry is responsible for licensing foreign vessels and monitoring fishing vessels over six meters in length and operating inside the Tongan EEZ. Tonga’s monitoring efforts rely on the Vessel Monitoring System (VMS), managed by the Pacific Island Forum Fishery Agency (FFA), which receives and disseminates data on fishing activities throughout the Pacific Islands region. The Tongan Defense Services (TDS) conducts actual fishery patrols at sea and enforces fishery laws. There is no catch quota on tuna and swordfish in the Tongan EEZ, thus, enforcement targets non-licensed vessels. Other participating agencies include the Customs Office, which certify export contents (including fish); the Police Ministry, which supports enforcement of the Fishery Act; and the Transportation Ministry, which registers marine vessels.

Budget shortfalls generally limit Tonga’s fishery management capabilities, so it remains dependent on external partners for assistance. The need to patrol the large EEZ and the absence of “domestic” tuna fishing industry to match the country’s potentially large fishery resources compound Tonga’s difficulties.

The U.S. Coast Guard has signed a “rider’s agreement” with Tonga to allow the latter’s law enforcement officers on board its patrol boats visiting the area, and the U.S. Navy is considering a similar arrangement. Tongan fishery and other officers can take advantage of such limited, yet low-cost opportunities to increase patrolling frequencies.

In order to maximize the efficiency of surface patrol boats, air surveillance is necessary. No Tongan government agency owns patrol aircraft; thus, the nation relies on infrequent air patrols by New Zealand and France, and occasional flyovers by the United States and Australia. Australia's return to more frequent air patrols is one assistance possibility, as is a multilateral regional approach to replace current bilateral air patrol agreements.

Pacific Patrol Boat Program

To help with Tonga's efforts, Australia provided the TDS with three boats under the Pacific Patrol Boat Program (PPBP) to use for EEZ fishery patrol, or search and rescue operations. Australia pays fuel costs when the boats are used for these specific missions; this amounts to about half the total fuel cost. Tonga may use the boats for other operations, but its domestic law mandates the TDS use them primarily for fishery enforcement and external defense. To encourage boat usage, Australia also applies an AUD\$1,000 subsidy toward the cost of "slipping" (preventive maintenance at a dry dock) for every day the boat is at sea. Australia has also provided life-extension repairs for the three boats, which recently cost AUD\$15 million.

TDS can perform first-level maintenance, but no hull repairs under the waterline because there is no dry dock facility anywhere in Tonga. Such repairs must be performed overseas. The TDS' boat maintenance capability relies on the comprehensive training course its engineering officers receive at the Australian Maritime College in Tasmania. The Tongan Maritime School also enrolls a number of TDS officers for more basic engineering training. The Australian Navy stations mechanical and technical officers in Tonga to assist boat maintenance by the TDS.

The boats will reach their lifespan in approximately ten years, and the future of the PPB program is undetermined as of this writing. The change from the Navy to the Custom's Office as Australia's lead agency for coordinating

assistance to Pacific Island countries may result in the emphasis of alternatives.

Vessel Monitoring System

The Vessel Monitoring System (VMS), which locates fishing vessels in the EEZs of Pacific Islands Forum members, tracks signals emitted from vessels' onboard VMS units. It is a powerful surveillance tool; when combined with other surveillance data, such as that from air and surface patrols, it's possible to identify craft operating illegally without a mandatory VMS unit (or without turning it on). The first generation of VMS, tied to the Argos satellite system, has reached its lifespan, so the FFA is shifting to a newer system based on INMARSAT and is providing operating subsidies to member states.

Aging VMS units on Tongan vessels are in disrepair with no local repair capability. This will be a continuing problem, because Tonga's small market doesn't warrant local stationing of the manufacturer's technical staff. Up-front costs of switching to the new system are estimated at US\$50,000 for the first year (\$2,500 for each of 20 domestic snapper boats), which local boat owners would not be able to shoulder. Because only three Tongan boats conduct longline tuna fishing, VMS for all 20 Tongan boats may not be an absolute necessity. However, its potential utility for search and rescue, and other purposes (such as anti-trafficking enforcement) needs to be taken into account.

Fishery Ministry and TDS are working on closer coordination in fishery regulations' enforcement. The Fishery Ministry has to overcome two obstacles in order to fully benefit from the VMS. First, powerful real-time data feeds from the system are not fully utilized due to the ministry's slow internet connection. The ministry does not subscribe to the fastest available service in Tonga due to budget shortfalls. Secondly, the ministry needs training for its staff in analyzing and using historical VMS data more thoroughly.

This was put into action during the region-wide multilateral Operation Kukururu, which targeted illegal fishing in November 2011 and was led by the FFA. Participating FFA members included Australia, New Zealand, France, and the United States.⁵

Seabed Mining

Despite Tonga's "democratic transition" after the Nukualofa riot of 2006, its politics has been dominated by the royal family. The absence of transparent law governing deep sea mining, and the Tongan government's decision to sign international joint exploration and production agreements have set the stage for partial privatization of its national resources without a fair return to the general government coffer. The Tongan government's involvement in seabed mining in international waters exposes it to risk of losses and liabilities, which will have to be shouldered by the taxpayers. With Tonga's poorly developed governance competency, seabed mining simultaneously offers too much economic lure and demands too much supervising responsibility.

Deep-water seabeds within the Tongan EEZ are host to numerous hydrothermal vents known as "black smokers" that produce polymetallic sulphide deposits containing various metals, such as copper, lead, zinc and gold. In March 2008, the Tongan government granted a 15-year exploration license to Nautilus Minerals — a Canada-based firm active in deep sea mining throughout the Pacific — for an 80-square-kilometer area off Nukualofa known as the Lau Basin.⁶ Nautilus organized its first exploration voyage in September 2008.⁷

5 "Illegal Fishing Maritime Surveillance Operation," Pacific.Scoop, November 22, 2011. <http://pacific.scoop.co.nz/2011/11/illegal-fishing-maritime-surveillance-operation/>

6 "Tonga industry: Seabed-mining exploration to begin," Economist Intelligence Unit, Country ViewsWire, March 10, 2008, via Academic OneFile, <http://go.galegroup.com/ps/i.do?id=GALE%7CA179064900&v=2.1&u=colomines&it=r&p=AONE&sw=w>.

7 "Seabed mining firm confident of finds off Tonga," BBC Monitoring International Reports, September 23, 2008, via Academic OneFile, <http://go.galegroup.com/ps/i.do?id=GALE%7CA187557228&v=2.1&u=colomines&it=r&p=AONE&sw=w>.

Tonga's government also awarded the Korean government a similar exploration license in March 2008; the Koreans completed three exploration voyages within the following month. The project attracted US\$13.8 million in investment from five "local" companies.⁸

The Tongan government is also involved in Nautilus' deep sea mining outside the Tongan EEZ. The government, in 2008, sponsored the application by Tonga Offshore Mining — a sole subsidiary of Nautilus Minerals — to explore the Clarion Clipperton Zone in the Central Pacific. The area is located midway between Hawaii and Mexico, and governed by the International Seabed Authority (ISA).⁹ The government asked to postpone the application process in 2009 over the question of responsibility and liability of sponsoring states,¹⁰ but was persuaded to proceed. The exploration right was granted by ISA in July 2011, and the agreement between the ISA and Tonga Offshore Mining was signed in January 2012.¹¹ The Tongan government signed an agreement with Tonga Offshore Mining to receive royalties for the initial 15 years at "US\$1.25 per dry ton for the first 3 million dry tons of nodules mined per year, and US\$0.75 per dry ton for all subsequent tons mined thereafter in that same year."¹² Nautilus has signed a similar agreement with Nauru Ocean Resources Inc., with Nauru government's sponsor-

8 "South Korea launches deep-sea mining in South Pacific," BBC Monitoring International Reports, April 8, 2011, Apr. 2011, via Academic OneFile, <http://go.galegroup.com/ps/i.do?id=GALE%7CA253617582&v=2.1&u=colomines&it=r&p=AONE&sw=w>

9 "Deep Seabed Minerals Contractors," International Seabed Authority, <http://www.isa.org.jm/deep-seabed-minerals-contractors/overview>.

10 Kogan is critical of the ISA legal opinion that places too much responsibility and liability based on the precautionary principle. Lawrence Kogan, "Revised U.S. Deep Seabed Mining Policy Reflects UNCLOS and Other International Environmental Law Obligations," LexisNexis® Emerging Issues Analysis, January 2013, no. 6896, http://www.koganlawgroup.com/uploads/Revised_U.S._Deep_Seabed_Mining_Policy_Reflects UNCLOS_and_Other_Environmental_Law_Obligations_2-1-13_.pdf. The U.S. model of government constraining exploratory activities of U.S. firms is not applicable to the Tongan case. In Tonga, the sponsoring government lacks enforcement capabilities to fulfill its supervisory and regulatory responsibilities in a remote area.

11 Fax-Davies Capital Newsflash, January 12, 2012, <http://www.proactiveinvestors.co.uk/columns/fox-davies-capital/7968/cluff-gold-orosur-mining-patagonia-gold-providence-resources-plus-others-feature-in-todays-fox-davies-capital-newsflash-7968.html>.

12 "Nautilus Minerals Defines 410 million tonne Inferred Mineral Resource." ENP News-wire, September 29, 2012, accessed via Academic OneFile, <http://go.galegroup.com/ps/i.do?id=GALE%7CA302806162&v=2.1&u=colomines&it=r&p=AONE&sw=w>.

ship, to explore seabed mineral resources in separate ISA-governed blocs. While the Tongan-sponsored bloc has announced good resource prospects, Nauru-sponsored blocs have not. Meanwhile, Nautilus has tied the Tongan project to Nauru's through a swapping of interests in the two subsidiaries. The company now controls 100 percent of the Tongan project and let Tonga hold 50 percent of the Nauru project.¹³

While seabed mining in the Tongan EEZ seems promising, the lure of a quick profit in the poorly governed regulatory environment invites shady figures. An investor group, comprised of mysterious firms allegedly based in Denver and London, and centered on a Russian individual, signed agreements with the Tongan government for hydrocarbons exploration and mining, and established three Tonga-registered subsidiaries. Princess Royal Pilelevu Tuita owns 20 percent shares in each of the three subsidiary firms.¹⁴ The three firms received exploration rights for 11 years and 35 years of production rights if resources are found in the "37,000 square kilometers of marine scheduled lands."¹⁵ The area amounts to 5.5 percent of the Tongan EEZ,¹⁶ and an international investment of US\$20 to \$40 million was sought for the initial exploration set to start in 2014.¹⁷ "Not one public notice released by the advisory committee based in the Tongan prime minister's office or from the company itself gestured to a start date."¹⁸ Tonga's "new business models and practices" to bring international capital to a risky emerging market¹⁹ have effectively privatized a part of the Tongan EEZ sea

13 "Nautilus Minerals Defines 410 million tonne Inferred Mineral Resource," *ENP Newswire*, September 20, 2012, accessed via Academic OneFile, <http://go.galegroup.com/ps/i.do?id=GALE%7CA302806162&v=2.1&u=colomines&it=r&p=AONE&sw=w>.

14 Michael Field, "New Scam in Tonga: This Time Russian Oil Deal?," February 13, 2011, <http://www.tnews.co.nz/forum/showthread.php?tid=4072>.

15 "Denver firm optimistic on Tonga offshore oil prospects." *BBC Monitoring International Reports*, January 31, 2011, accessed via Academic OneFile, <http://go.galegroup.com/ps/i.do?id=GALE%7CA248090089&v=2.1&u=colomines&it=r&p=AONE&sw=w>.

16 Field, "New Scam in Tonga?"

17 "Denver firm optimistic."

18 Teena Brown Pulu, "Off the Deep End: Tonga's Continental Shelf Politics," *Te Kaharoa*, no. 7, (2014), 205. www.tekaharoa.com/index.php/tekaharoa/article/download/171/129

19 *Ibid.*

bed, despite no major international oil and gas firms having shown interest in the prospect of hydrocarbons there.

Tonga's inexperience with international negotiations and lack of legal training concerning deep sea mining have been addressed by a collaboration of international and regional organizations, such as the European Union and the Applied Geoscience and Technology Division of Secretariat of the Pacific Community (SOPAC).²⁰ Critics are skeptical, however, about acculturation of the Tongan elite through associated workshops.²¹ Tonga's "Strategic Development Framework, 2011-2014," states:

The opportunities for oil exploration and seabed mining remain in the future, however, government recognizes the potential contribution these could make to the future development of the Kingdom. Government also recognizes that there are many lessons to be learned from other countries where oil and mineral wealth has greatly disrupted political reform and social solidarity.

*Government will review the need for new legislation to ensure that exploration and any future mining or extraction of resources will generate a significant benefit to the Kingdom. This legislation will include measures to ensure royalties and other charges are received by Government and to protect the economy and political system from any possible economic disruption and potential corruption that might eventuate from a failure to effectively manage mineral wealth.*²²

20 "Tonga to Host Regional Workshop on Law and Contract Negotiations for Deep Sea Minerals in the Pacific," *Islands Business*, March 5, 2013, <http://www.islandsbusiness.com/news/tonga/509/tonga-to-host-regional-workshop-on-law-and-contrac/>.

21 Teena Brown Pulu, "Deep Sea Tension: The Kingdom of Tonga and Deep Sea Minerals," *Te Kaha-roa*, no. 6, (2013), 50-76.

22 Kingdom of Tonga, Ministry of Finance and National Planning, "Tonga Strategic Development Framework, 2011-2014," 2011, 15; and <http://www.adb.org/sites/default/files/linked-documents/cobp-ton-2014-2016-oth-02.pdf>.

Tonga issued three exploration licenses in its EEZ in 2008 without a national law on seabed minerals mining. Legislation was scheduled for August 2013, but was delayed until a year later. The European Union and the Secretariat of the Pacific Islands community assisted the preparation of the Seabed Minerals Act of 2014, which spelled out a “vetting process” and “public consultation” for deep-sea and seabed mining and legally empowered the government to enforce “environmental impact assessment” and “monitoring.”²³

Conclusion

Despite the vast potential for EEZ resources, Tonga’s development of its state capacity to manage these resources has lagged behind. The Tongan case illustrates a danger of weak governance leading to ineffective development and utilization of its available maritime resources. While developing its own national scientific, business, and legal talents, which takes time, it seems an urgent and necessary task for Tonga to better exploit sources of external expertise in these areas through cooperation with government and non-government organizations. Furthermore, political pluralization, which enables a freer flow of such knowledge, is lacking in Tonga’s transitional polity. The government would ultimately benefit from a political process that encourages open dialogue between national leaders and the citizens, particularly those impacted most heavily by the nation’s maritime policies.

Governance capability in Tonga has made positive progresses in sync with its political opening. Active debates over seabed mining issues involving the vocal expat communities have played a key role in steering the government policy into the right direction. While it is premature to judge Tonga’s performance in enforcing the newly legislated processes, other Pacific Island states are well-advised to emulate Tonga’s shift towards increased transparency and comprehensive governance of seabed resources.

23 “Tonga Enacts Region’s First Seabed Mining Law” (a report based on *Radio New Zealand International*, September 2, 2014), *Pacific Islands Report*, September 3, 2014, Pacific Islands Development Program, East-West Center., <http://pidp.eastwestcenter.org/pireport/2014/September/09-03-06.htm>.