

A CASE FOR NATIONAL SECURITY: USING THE MIGHT TUNA
TO FRAME U.S. COAST GUARD'S ROLE IN THE
STRATEGIC SHIFT TO THE PACIFIC

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by

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The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement.)

ABSTRACT

A CASE FOR NATIONAL SECURITY: USING THE MIGHTY TUNA TO FRAME THE U.S. COAST GUARD'S ROLE IN THE STRATEGIC SHIFT TO THE PACIFIC, by LCDR Patrick Thomas Barelli, 148 pages.

Though it is the smallest of all the five military services, the U.S. Coast Guard has a lot to do. It has 11 different statutory missions. Something as mundane as fishery enforcement could easily get overlooked. Most people are unaware how such a matter, if unchecked, can threaten the environment, as well as national security. The U.S. Coast Guard is strategically positioned to provide such essential U.S. presence and leadership. To illustrate, this research draws upon the elusive Pacific Tuna, which as fish are totally unaware of their significance in future geo-political-economic matters that could tip the hull-of-state.

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ACRONYMS

AOR	Area of Responsibility
CCM	Conservation Management Measures
DHS	Department of Homeland Security
DOC	Department of Commerce
DOD	Department of Defense
DOS	Department of State
EEZ	Exclusive Economic Zone
FAO	Food and Agriculture Organization
FFA	Forum Fisheries Agency
FLEC	Fisheries Law Enforcement Command
HMS	Highly Migratory Species
IPOA	International Plan of Action
IUU	Illegal, Unreported, Unregulated
NOAA	National Oceanic and Atmospheric Administration
ODM	Operational Design Methodology
OLE	Other Law Enforcement
PACAREA	Pacific Area
PDD	Presidential Decision Directive
RFMO	Regional Fisheries Management Organizations
UNCLOS	United Nations Convention on the Law of the Sea
UNFSA	United Nations Fish Stocks Agreement
USPACOM	United States Pacific Command
WCPFC	Western Central Pacific Fishery Commission

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CHAPTER 1

INTRODUCTION

Introduction

How does the U.S. strategic realignment toward the Asia-Pacific region affect the U.S. Coast Guard's living marine resource law enforcement missions? This study examines the U.S. Coast Guard's cooperation in international multilateral fisheries agreements, like tuna Regional Fisheries Management Organizations (RFMO), and how it complements the overall National Security Strategy, as well as support and substantiate the U.S. rebalancing strategy to the Asia-Pacific region.

Moreover, as the U.S. national security strategy pivots to the Asia-Pacific region, can the U.S. Coast Guard's current living marine resource law enforcement strategy, *Ocean Guardian: U.S. Coast Guard Fisheries Enforcement Strategic Plan 2004-2014*, meet U.S. interest, given current resources? Recent White House statements appear to communicate a clear message: "the United States, in cooperation with its allies, will lead an international effort to improve monitoring and enforcement capabilities through enhanced cooperation at the bilateral, regional, and global level."¹ This study explores the complex environment and competing demands encountered to implement the U.S. Coast Guard, and the broader U.S. national security strategy.

The U.S. Coast Guard is the lead U.S. government agency in offshore maritime law enforcement. It also supports all U.S. commitments to RFMOs, and the Western and

¹U.S. President, *The National Strategy for Maritime Security*, September 2005, The Naval Postgraduate School Center for Homeland Defense and Security, Homeland Security Digital Library, <http://www.hsdl.org/?abstract&did=456414> (accessed November 6, 2013), 12.

Central Pacific Fisheries Commission (WCPFC) in particular. RFMOs are formed from multilateral treaties to protect the world's fish stocks from overfishing. The wide expanse of ocean in the Asia-Pacific region constitutes 50 percent of the earth's surface. It poses major challenges for everyone, especially for the U.S. Coast Guard.² It is a big role for such a small service.

Pacific Tuna illustrate a complex issue. Tuna are unaware of international borders. Their migrations involve multiple national boundaries. Tuna fishing represents a multi-billion dollar industry. The primary tool for governance and improving law enforcement capacity in the Asia-Pacific region is RFMOs. No one nation can police these vast ocean areas alone. The WCPFC provide a good example of a RFMO with enforcement teeth to combat illegal, unreported, and unregulated (IUU) fishing. Participation in one or more RFMOs can increase a nation's law enforcement capacity. Unfortunately, IUU fishing continues to grow; such lawlessness increases the threat to the ocean biomass.³

The Coast Guard's current fisheries law enforcement strategy, *Ocean Guardian*, was promulgated in 2004. It is time for senior leaders to better understand this strategy; to understand the U.S. Coast Guard's fisheries law enforcement roles, responsibilities, and relationships and to analyze whether improvements are needed in view of the U.S. strategic shift to the Asia-Pacific. This examination will expand understanding of the

²U.S. Pacific Command, "USPACOM Facts: Headquarters, United States Pacific Command," <http://www.pacom.mil/about-uspacom/facts.shtml> (accessed June 4, 2014).

³Biomass is defined as a "mass of organisms in ecosystem: the mass of living organisms within a particular environment, measured in terms of weight per unit of area." Bing Dictionary, "Biomass," <http://www.bing.com> (accessed April 29, 2014).

complex geo-political maritime environment and how overfishing Pacific Tuna could thrust the United States into conflict. Now is the time to consider whether the U.S. Coast Guard is appropriately organized, equipped, manned, and trained to implement its part of the pivot to the Pacific strategy.

Other nations are increasingly competing for resources in the Pacific. China is a growing economic power that is expanding its maritime capability. China's military buildup, its growing monopoly on rare earth minerals, and growing demand for living marine resources could pose a challenge to the United States and its Pacific allies. China is quietly extending its reach well beyond its home waters and could dominate future markets and strategic fishing grounds. In light of this, China's entry into RFMOs must be welcomed with some skepticism.

Background

The Background section of this paper is organized into four focus categories. These categories are Pacific Tuna, WCPFC, the U.S. Coast Guard, and China. This section provides a general summation of these focus categories. Subsequent chapters will explore these categories in depth.

Pacific Tuna

In the 1970s, the U.S. coastline was under siege by large foreign commercial fishing fleets. As a result, previously abundant U.S. fisheries resources were largely depleted. In 1976, Congress passed the Magnuson-Stevens Fisheries Management Act to close foreign access. "The Act established a 200-nautical mile Exclusive Economic Zone [EEZ]; created eight Regional Fishery Management Councils tasked to develop

management plans to protect America’s fish stocks; and placed the primary responsibility for at-sea enforcement of the Nation’s fisheries laws with the Coast Guard.”⁴ Over time, these responsibilities expanded to include international agreements to deter IUU fishing practices. IUU fishing is a global problem that threatens the economy of the U.S. and Asia-Pacific island nations. If IUU fishing goes unchecked, these destructive practices can lead to overfishing and the eventual collapse of a species. History demonstrates a collapse of wild fish may take years to recover, or prove to be irreversible.

There is a finite limit to the living marine resources in the ocean. The race for fish has placed increased pressure on global fish stocks. In 1985, the United Nations (UN) established under auspices of the United Nations Law of the Sea Convention (UNCLOS), a Code of Conduct for Responsible Fisheries to deter and prevent the overexploitation of global fish stocks and other living marine resources. Although the United States has not ratified the UNCLOS treaty, the United States is a leading global partner in deterring and preventing IUU fishing around the world. The U.S. Coast Guard is the only federal agency capable of enforcing U.S. law, throughout the U.S. EEZ and the high seas.⁵ The U.S. Coast Guard is the premier global maritime law enforcement agency committed to the protection of living marine resources and ensuring a sustainable global commercial fishing industry for future generations.

The United States is one the largest importers and exporters of seafood in the world. As a global leader, the United States has a responsibility to protect the industry

⁴U.S. Coast Guard, Coast Guard Publication 1, *U.S. Coast Guard: America’s Maritime Guardian* (Washington, DC: Government Printing Office, May 2009), 52.

⁵U.S. Coast Guard, *United States Coast Guard Protecting America’s Fisheries* (Washington, DC: Government Printing Office, May 1998), 2.

from unsustainable fishing practices, and protecting resources for future generations. Pacific Tuna is a multi-billion dollar global industry. “Highly migratory species [HMS], like tuna, account for about 20 percent of the value of all marine capture fisheries - catches of the most important tuna species are alone worth over \$10 billion annually.”⁶ Not only is this resource important for the U.S. economic interest, it also supports and sustains small Pacific Island economies and provides protein for millions of people around the world. “Tunas and tuna-like species make up the most valuable fishery resource caught in the areas beyond national jurisdiction (ABNJ).”⁷ The areas beyond national jurisdiction, or the high seas, are governed by international agreements. No one nation controls or can limit access to these regions. International agreements provide a code of conduct and establish conservation management measures to protect and conserve Pacific Tuna and other HMS.

Protecting living marine resources like Pacific tuna requires the participation of all stakeholders. In addition to the commercial fishing industry, stakeholders include scientists, fishery resource managers, enforcers (navies/coast guard), international and domestic regulators, Non-Governmental Organizations and Inter-Governmental Organizations, and local communities. All are important stakeholders in protecting the worlds HMS fish stocks like Pacific Tuna.

⁶Food and Agriculture Organization of the United Nations (FAO), “Push to enhance management and conservation in tuna fisheries on the high seas,” November 5, 2013, <http://www.fao.org/news/story/en/item/204028/icode/> (accessed November 7, 2013).

⁷Ibid.

Western and Central Pacific Fisheries Commission

“The Western and Central Pacific Fisheries Commission (WCPFC) is an international fisheries agreement that seeks to ensure, through effective management, the long-term conservation and sustainable use of highly migratory fish stocks (i.e. tunas, billfish, marlin, and key shark species) in the western and central Pacific Ocean.”⁸ The WCPFC consists of 26 member countries, eight participating territories, and 12 cooperating non-members.⁹ Most small Pacific Island economies depend on Pacific Tuna as not only a primary protein food source but also for the viability of their economies. Access to Pacific Tuna is essential for their food, economic, and national security. Pacific Island nations are also strategic locations in the Asia-Pacific region. Pacific Islands comprise a critical line of communication for U.S. maritime forces operating in support of a U.S. forward presence strategy.

U.S. Coast Guard

The U.S. Coast Guard is one of three maritime branches of the Armed Forces. Not only are they war-fighters, they are also uniquely law enforcers, and regulators. The U.S. Coast Guard is one of the world’s leading maritime law enforcement agencies, responsible for protecting and preserving the ocean’s bounty. “The Coast Guard remains the only agency with the maritime authority and infrastructure to project Federal law enforcement presence over the entire U.S. Exclusive Economic Zone (EEZ), which

⁸Western and Central Pacific Fisheries Commission (WCPFC), “Frequently Asked Questions and Brochures,” March 3, 2010, <http://www.wcpfc.int/frequently-asked-questions-and-brochures> (accessed April 14, 2014).

⁹WCPFC, “About WCPFC,” <http://www.wcpfc.int/about-wcpfc> (accessed April 14, 2014).

covers nearly 3.4 million square miles of ocean.¹⁰ The U.S. Coast Guard represents the United States in international maritime partnerships like RFMOs. RFMOs deter IUU fishing. Destructive human impacts such as IUU fishing continue to threaten global fish stocks. These practices undermine legal commercial fishing operations that play by the rules. “Independent experts have estimated economic losses worldwide from IUU fishing to be between \$10 billion and \$23 billion annually.”¹¹ Although this is a value placed on the entire fishing industry worldwide, not just tuna, it is a staggering number when compared to the \$10 billion for the whole of the tuna commercial fishing industry.

The U.S. Coast Guard fulfills their roles and responsibilities to combat IUU fishing through their implementation of the Coast Guard’s Fisheries Enforcement Strategic Plan, *Ocean Guardian*. “*Ocean Guardian* is the Coast Guard’s ten-year strategy to provide effective enforcement in support of the national goals for fisheries resource management and conservation.”¹² “To improve the fisheries enforcement mission, [*Ocean Guardian*] includes a specific Coast Guard plan for implementation of the U.S. National Plan of Action to Combat Illegal, Unregulated and Unreported (NPOA-IUU) Fishing and the United Nations Fish Stocks Agreement (UNFSA).”¹³

¹⁰U.S. Department of Homeland Security (DHS) and U.S. Coast Guard, *United States Coast Guard Fiscal Year 2009 Performance Report* (Washington, DC: Government Printing Office, 2010), 34.

¹¹NOAA Fisheries, “NOAA to Work with 10 Nations to Address Illegal, Unreported, and Unregulated Fishing and Stem the Bycatch of Protected Species,” January 11, 2013, http://www.nmfs.noaa.gov/ia/slider_stories/2013/01/msra_2013_report.html (accessed January 20, 2014).

¹²U.S. Coast Guard, *Ocean Guardian: U.S. Coast Guard Fisheries Enforcement Strategic Plan 2004-2014* (Washington, DC: Government Printing Office, 2004), 1.

¹³*Ibid.*

In 2001, “under the auspices of the Food and Agriculture Organization of the United Nations (FAO), a concerted effort was undertaken to develop a comprehensive ‘toolbox’ of measures that States could take, both individually and collectively, to address the problems of IUU fishing.”¹⁴ This came to be known as the FAO International Plan of Action to Prevent, Deter, and Eliminate Illegal, Unreported and Unregulated Fishing (IPOA). In 2003, the United States adopted from the IPOA, a National Plan of Action.¹⁵ The U.S. Coast Guard developed its own action plan from the National Plan of Action to Combat IUU. This action or implementation plan resides in *Ocean Guardian*.

In addition to the U.S. Coast Guard-National Plan of Action to Combat IUU implementation plans, *Ocean Guardian* provides a U.S. Coast Guard UNFSA Implementation plan. “Under this agreement, the U.S. may board any UNFSA party vessel on the high seas with a region managed by a fisheries agreement for straddling stocks or highly migratory species that the U.S. is party to, whether or not the flag state of the vessel is a member of the regional fisheries body enacted by the agreement.”¹⁶ The UNFSA gives the Coast Guard “substantial authorities to investigate and prosecute violations on the high seas if there is evidence that the flag state is not taking appropriate enforcement action.”¹⁷ “In order to implement the UNFSA, the U.S. Coast Guard’s strategy is three-fold: (1) Fully use the enforcement authorities provided in the UNFSA; (2) Leverage the UNFSA to implement stronger boarding and inspection procedures

¹⁴U.S. Coast Guard, *Ocean Guardian*, G-1.

¹⁵*Ibid.*

¹⁶*Ibid.*, F-1.

¹⁷*Ibid.*

through Regional Fisheries Management Organizations; and (3) Encourage nations that are not yet party to this Agreement, particularly distant water fishing nations and flag of convenience, to ratify the UNFSA.”¹⁸

In order to fulfill the U.S. international obligations to UNFSA, the U.S. Coast Guard’s Other Law Enforcement (OLE) mission is dedicated to ensuring “compliance with various international agreements and assists coastal nations to combat damaging IUU fishing activity.”¹⁹ “The OLE mission is more accurately described as Foreign Fishing Vessel Law Enforcement and contributes to the Coast Guard’s maritime security and stewardship roles. This mission ensures the integrity of the U.S. maritime border and Exclusive Economic Zone (EEZ), strengthens the deterrence of living marine resource thefts from areas of U.S. jurisdiction, supports the elimination of illegal fishing practices on the high seas, and provides for monitoring compliance with international living marine resource regimes and international agreements to which the U.S. is party.”²⁰

China

Emerging economic powers in the Asia-Pacific region with competing interests shape international relationships. The United States expects to see increased commercial fishing fleet pressure from Asia-Pacific countries, including China, as the global population and demand for viable fish protein resources increases. According to the UN FAO, “China is the top-ranking major fishing country in terms of quantity followed by

¹⁸U.S. Coast Guard, *Ocean Guardian*, F-1.

¹⁹DHS and U.S. Coast Guard, *United States Coast Guard Fiscal Year 2009 Performance Report*, 36.

²⁰*Ibid.*

Indonesia, India, and the United States of America.”²¹ This makes China’s commercial fishing industry a near peer competitor to the United States. In this regard, the United States employs diplomacy with our Asia-Pacific partners to access and protect living marine resources on the high seas. Over the past decade, China has expanded their naval fleet and its capabilities. China’s intent in this expansion however, is difficult to discern. Is China becoming more active in fisheries agreements in order to ensure peaceful competition in the region, or is it to exert greater control over a wider region?

The National Strategy for Maritime Security (2005) states, “in recent years, competition for declining marine resources has resulted in a number of violent confrontations as some of the world’s fishers resort to unlawful activity. These incidents underscore the high stakes for the entire world as diminishing resources, such as fish stocks, put increasing pressure on maritime nations to undertake more aggressive actions.”²² For example, “in the early to mid-twentieth century, Japanese fishing off the coasts of the former Soviet Union, China, and Korea led to conflict with each of these countries. In more recent years, the problem has concerned Chinese fishermen illegally fishing in the waters of its neighbors, and some of these incidents have become violent.”²³

²¹FAO, “Overview: Major Trends and Issues,” 2013, ftp://ftp.fao.org/FI/STAT/summary/YB_Overview.pdf (accessed April 21, 2014).

²²U.S. President, *The National Strategy for Maritime Security*, 6.

²³Tabitha Mallory, “China’s Fisheries Management Policy: An Interview with Tabitha Mallory,” *SAIS Review* 33, no. 2 (Summer-Fall 2013): 90.

Purpose

The purpose of this research is to examine the U.S. Coast Guard's OLE mission in the current Fisheries Enforcement Strategic Plan, *Ocean Guardian*, and in view of the U.S. strategic shift to the Asia-Pacific region, examine the effectiveness and viability of this enforcement strategy. The ultimate goal of this study is to assess if there is a gap in *Ocean Guardian* or the requisite Coast Guard capabilities needed to enact that strategy.

Research Questions

Primary Question

How does the rebalance in the U.S. national security policy and strategy to the Asia-Pacific region affect the U.S. Coast Guard's OLE mission to protect living marine resources in high seas areas outside U.S. national jurisdiction?

Secondary Questions

1. What is the nature of competition for Pacific Tuna resources in the region?
2. What Pacific Tuna agreements are in place, and how are they enforced?
3. What are the U.S. Coast Guard capabilities to implement its OLE mission in the Asia-Pacific Region?
4. What was the U.S. Coast Guard strategy prior to the rebalance to the Asia-Pacific region, and how has it changed?

Assumptions

1. Emphasis on the Pacific will continue for the foreseeable future.
2. If properly managed Pacific Tuna can be an indefinitely sustainable resource.
3. Other nation states share U.S. concern over IUU fishing.

4. The U.S. Coast Guard's OLE mission will continue.
5. China is a Pacific Tuna commercial fishing industry near peer competitor of the U.S. in the Asia-Pacific region.

Relevant Facts

“By 2045, the global population is projected to reach nine billion.”²⁴ To feed the world's population, maritime nations will place enormous pressure on the ocean's living marine resources to support the growing demand for food. U.S. exports of edible fishery products of domestic origin in 2012 were 1,425,591 tons valued at \$5.12 billion.²⁵ This growing population and increasing demand will likely lead to a race for fish and access to lucrative fishing waters. In this competition for ocean resources there is potential for greater conflict. One only has to consider the Cod Wars between the United Kingdom and Iceland, or Canada and Spain to understand the potential volatility caused by denied access to living marine resources.²⁶ Asia-Pacific countries depend on access to rich and diverse living marine resources for their livelihoods, indeed their survival. The United States, through participation in international fisheries agreements, is determined to ensure all stakeholders adopt sustainable fishing practices to protect precious marine resources.

²⁴Robert Kunzig, “Special Series: 7 Billion,” *National Geographic* (January 2011), <http://ngm.nationalgeographic.com/2011/01/seven-billion/kunzig-text> (accessed April 21, 2014).

²⁵NOAA Fisheries, “Current Fishery Statistics No 2012-2, Import and Export of Fishery Products Annual Summary 2012,” <http://www.st.nmfs.noaa.gov/st1/trade/documents/TRADE2012.pdf> (accessed January 30, 2014).

²⁶Elizabeth Nyman, “Ocean of Conflict: Determining Potential Areas of Maritime Disputes,” *S AIS Review* 33, no. 2 (Summer-Fall 2013): 5-14.

Left unchecked, unsustainable fishing practices (IUU fishing) combined with higher demand for fish could lead to overfishing and eventual species collapse.

Other Truths

The United States alone lacks the resources to prevent overfishing of Pacific Tuna. However, through international agreements, the United States has obligated the U.S. Coast Guard to assist RFMOs in patrolling the high seas in the Asia-Pacific region. Sustaining a presence on the high seas to interdict illegal fishing activity is costly. There are many international stakeholders like managers, scientist, and enforcers involved in governing the global tuna commercial fishing industry, and there are many states and participants who want to adhere to international agreements. International agreements provide a means to create a positive, cooperative, and sustainable environment, building trust and extending mutual influence. The United States leads by example, communicates, and cooperates through policy statements evidenced by RFMOs like the WCPFC and other international policy agreements. Global interest, the intellectual resources of the commercial fishing industry, and academia; and the participation of international coast guards, the WCPFC is a critical nexus of effort to assist in protecting and preserving the Pacific Tuna resources for future generations.

Limitations

This study uses the Operational Design Methodology (ODM) to understand, visualize, and describe a complex environment. This research presents a series of questions, and employs a methodology designed to address complex issues. The

researcher deliberately selected four categories (Pacific Tuna, WCPFC, the U.S. Coast Guard, and China) to focus research and analysis of an extremely complex environment.

Issues that will not be discussed in this study are: (1) new monitoring, control, and surveillance mechanisms used to track fishing vessels, and (2) the port state control and market control measures adopted by the United States and the international community to deter IUU fishing. International agreements are slowly requiring universal carriage requirements for vessel monitoring systems. These satellite-based technologies, although not foolproof, provide an added layer of enforcement presence.²⁷

Lastly, there are five tuna-RFMOs around the globe dedicated to the protection and sustainable harvest of tuna species. Two of them, the Inter-American Tropical Tuna Commission, and the WCPFC are responsible for the international conservation and management of tuna and tuna like species in the Pacific Ocean. Although other RFMOs play an important role in protecting tuna species from IUU and other unsustainable fishing practices, this research paper only addresses the WCPFC, as an identifiable, researchable example.

Scope

The U.S. Coast Guard has 11 statutory missions. This project examines one in detail: “Other” Law Enforcement (OLE) or Foreign Fishing Vessel Law Enforcement mission. A related mission, “Living Marine Resource Law Enforcement (LMR),” is

²⁷Port and market regulatory mechanisms encourage countries to adopt sustainable fishery management measures. Compliance with these management measures ensures a level playing field for legitimate fisherman. It also denies countries access to U.S. and European Union markets as a penalty for not taking steps to discourage IUU fishing practices.

focused on the domestic commercial fishing industry.²⁸ The OLE mission is specifically focused on international fishery agreements; to detect and deter IUU fishing practices (e.g. illegal driftnets) outside areas of national jurisdiction. “The Coast Guard monitors compliance with various international agreements and assists coastal nations to combat damaging Illegal, Unreported, Unregulated (IUU) fishing activity. IUU fishing is linked to negative impacts on maritime and economic security in coastal and regional areas worldwide.”²⁹ This paper is focused specifically on the OLE mission. There are four Coast Guard districts with areas of responsibility in the Pacific Ocean. Coast Guard Districts Fourteen (Honolulu, HI) and Seventeen (Juneau, AK) are the areas of responsibility directly linked to the WCPFC area of responsibility. This study only focuses on U.S. Coast Guard District Fourteen; headquartered in Honolulu, HI. District Fourteen’s area of responsibility is over 12.2 million square miles of land and sea and the commercial Pacific Tuna fisheries that coincide with the WCPFC area of responsibility.³⁰

Lastly, although there are other HMS commercial fisheries in the WCPFC area of responsibility, this study focuses only on Pacific Tuna. Pacific Tuna only refers to four tuna species: Bigeye, Yellowfin, Skipjack, and Albacore. Although, the WCPFC has expanded conservation management measures to include other non-tuna highly migratory species like billfish and sharks, this study only focuses on Pacific Tuna.

²⁸“The Coast Guard LMR mission is designed to ensure compliance with fisheries and marine protected species regulations by domestic vessels through education, outreach, patrols of fishing grounds, and directed law enforcement actions.” DHS and U.S. Coast Guard, *United States Coast Guard Fiscal Year 2009 Performance Report*, 34.

²⁹*Ibid.*, 36.

³⁰U.S. Coast Guard, “United States Coast Guard District 14,” October 3, 2010, <http://www.uscg.mil/d14/> (accessed January 16, 2014).

Significance of the Study

Improving Military Practice

It has been 10 years since the U.S. Coast Guard released their fisheries law enforcement strategy, *Ocean Guardian*. As the United States pivots the focus of its strategy to the Asia-Pacific region, it is ideally positioned to use maritime power, including the U.S. Coast Guard fisheries law enforcement missions, to confront foreign competitors' increasingly assertive maritime strategies. Pacific Tuna agreements are one of many examples in which the United States partners with Asia-Pacific countries to protect valuable living marine resource and ensure sustainability for future generations. The United States is stronger when it acts in concert with other nations than when it acts on its own. U.S. national security strategies encourage U.S. leadership in RFMOs like the WCPFC.

Identifying Strategic Tension

China's push to exert greater influence in the Pacific makes this a timely discussion. China is a global power in commercial fisheries. China is increasingly exerting strategic influence through RFMOs. By participating in RFMOs, they are establishing legitimacy, setting precedence, and most importantly gaining economic access. As China continues to exert influence in the Asia-Pacific region, the key question is, are they poised to take on a leading stewardship role to protect Pacific Tuna?

Solving Problems

This research identifies the need for Department of Homeland Security (DHS) and U.S. Coast Guard to assess and update the current fisheries law enforcement strategy.

This research paper leverages the utility of ODM, an adjunct to the Joint Operational Planning Process, to understand a complex, unstructured strategic issue and help shape strategic planning decisions. It also demonstrates how the U.S. Coast Guard might be able to use this methodology to improve and revalidate their fisheries law enforcement strategy as the United States pivots to the Pacific.

Summary and Conclusions

Fisheries law enforcement is an important mission with strategic relevance. The United States engages in international fisheries agreements like the WCPFC to build trust, extend influence, and lead by example. As China and other Asia-Pacific countries expand their coast guards the key strategic question is, will they, like the United States, commit their resources to protect living marine resources, such as Pacific Tuna? In this regard, the U.S. Coast Guard is in an ideal strategic position to lead international maritime security initiatives, share experience and expertise, and develop our international partners to accomplish the same ends.

Organization of the Remainder of the Study

The remainder of this study is organized into four chapters. Chapter 2, the literature review, presents the literature related to this research problem. Chapter 3 describes the selected research methodology to answer the primary and secondary research questions. Chapter 4 uses the ODM described in chapter 3 to address the

research questions. Lastly, chapter 5 provides a summary of conclusions drawn from chapter 4 and presents recommendations for future research.³¹

³¹Mark H. Rossman, *Negotiating Graduate School: A Guide for Graduate Students*, 2nd ed. (Thousand Oaks, CA: Sage Publications, 2002), 90.

CHAPTER 2

LITERATURE REVIEW

Introduction

As will become evident, four key points emerge from this research project and this literature review in particular. First, there is a complex interplay between the environment, policies, and fisheries. Second, the academic dialogue is focused on security. Third, there are multiple stakeholders, including governments, industry, science, non-governmental organizations, inter-governmental organizations, and militaries. Fourth, there is an absence of a clear understanding on how the U.S. strategic pivot to the Asia-Pacific region will impact the U.S. Coast Guard's fishery law enforcement missions. This presents some interesting conundrums for the U.S. Coast Guard and its 11 statutory missions. What is missing is a full understanding of economic security and its relation to the U.S. pivot to the Pacific. This chapter explores the academic landscape with respect to U.S. and Chinese fisheries law enforcement and the importance of the WCPFC to U.S. policy effort, as well as the Pacific Tuna.

Purpose

The purpose of this research is to examine the U.S. Coast Guard's OLE mission in the current Fisheries Enforcement Strategic Plan, *Ocean Guardian*, and in view of the U.S. strategic shift to the Asia-Pacific region, examine the effectiveness and viability of this enforcement strategy. The ultimate goal of this study is to assess if there is a gap in *Ocean Guardian* or the requisite Coast Guard capabilities needed to enact that strategy.

Research Questions

Primary Question

How does the rebalance in the U.S. national security policy and strategy to the Asia-Pacific region affect the U.S. Coast Guard's OLE mission to protect living marine resources in high seas areas outside U.S. national jurisdiction?

Secondary Questions

1. What is the nature of competition for Pacific Tuna resources in the region?
2. What Pacific Tuna agreements are in place, and how are they enforced?
3. What are the U.S. Coast Guard capabilities to implement its OLE mission in the Asia-Pacific Region?
4. What was the U.S. Coast Guard strategy prior to the rebalance to the Asia-Pacific region, and how has it changed?

Organization of Chapter 2

Chapter 2 is organized by four focus categories: Pacific Tuna, WCPFC, U.S. Coast Guard, and China. In chapter 4, these four focus categories are further sub-organized by five considerations (physical, economic, stakeholder, security, and legal).

Pacific Tuna

Pacific Tuna is the first of four focus categories. The following references reveal the vital importance of fisheries law enforcement and the protection of living marine resources like Pacific Tuna. Elizabeth Nyman asks the question, "What factors drive maritime conflict and what makes these conflicts unique?"³² Nyman proposes

³²Nyman, 5.

international maritime conflicts in the future are most likely to result from one of five areas: the pursuit of living resources like (Pacific Tuna); the pursuit of offshore nonliving resources like oil; increasing pollution; alterations in ocean usage due to climate change; and uncertainty about sovereignty over uninhabited islands or rocks.³³ Nyman suggests that conflict over living marine resources does not always show itself in the same ways. For example, Nyman juxtaposes Spain's peaceful endeavor to preserve fishing rights in Gibraltar next to China and Japan's forceful efforts to assert ownership of the Diaoyu/Senkaku Islands.³⁴ Nyman also uses historic examples such as the 1950s and 1970s Cod Wars between Iceland and the United Kingdom to illustrate how fishing disputes lead to maritime conflict.³⁵ Nyman suggests, "Fishing conflicts recur primarily because fish stocks are continually depleting."³⁶ This is primarily due to overfishing.³⁷ Nyman also offers there are economic demands that place pressure on fishing countries. For example as China and other nations becomes wealthier, Pacific Tuna will most likely be a more desired protein source. This growing demand and international interest in Pacific Tuna leads to greater effort from international fishing fleets seeking market access. "The combination of high demand and low supply is likely to lead states to jealously hoard what fish they have. It may also encourage states to attempt to expand

³³Nyman, 5.

³⁴Ibid., 8.

³⁵Ibid.

³⁶Ibid.

³⁷Ibid.

their EEZ waters in the hopes of encompassing and protecting fish.”³⁸ Greater effort both legally and illegally if not carefully managed can collapse Pacific Tuna fish stocks.

Nyman’s summation is, “Ocean conflict, like all international conflict, is a rare event.”³⁹ As a solution, Nyman suggests, “better international management of issues like overfishing and pollution may assist in mitigating some of these problems.”⁴⁰ Nyman asks the question, “Can international organizations and laws encourage international cooperation, or will the desire for an increasing share of declining or finite resources lead states to greater international maritime conflict? Right now, the future of the oceans, from an environmental, economic, international, and domestic perspective, remains for a large part unknown.”⁴¹

In a response to Elizabeth Nyman’s position, Meghan Kleinsteiber “argues that the fundamental drivers behind disputes in the East and South China Seas are not potential or claimed natural resources, but rather domestic politics, rising nationalism, and irredentism.”⁴² Kleinsteiber contends that conflicts over sovereignty and available resources are counterproductive.⁴³ Kleinsteiber identifies and provides evidence to suggest “domestic politics, nationalism, and irredentism” are the root cause of maritime

³⁸Nyman, 8.

³⁹Ibid., 12.

⁴⁰Ibid.

⁴¹Ibid., 13.

⁴²Meghan Kleinsteiber, “Nationalism and Domestic Politics as Drivers of Maritime Conflict,” *SAIS Review* 33, no. 2 (Summer-Fall 2013): 15.

⁴³Ibid., 16.

disputes.⁴⁴ Kleinsteiber concludes, that these root causes in addition to resource claims “create an unstable and unpredictable environment that can easily lead to increased aggressiveness and more violent maritime conflicts around these territorial disputes.”⁴⁵

Andrew Norris presents another perspective. Norris presents how depleting fish stocks threaten U.S. security. The western and central Pacific Ocean is home to one of the most profitable tuna fisheries in the world. International fishing fleets has seized an opportunity to take advantage of the Pacific island nations’ weak law enforcement capacity. Norris suggests, “If the trend continues, the region’s tuna fishery will collapse.”⁴⁶ Norris contends a collapse in the tuna fishery would be detrimental and threaten the region’s economy and security. “The resulting instability would include increased poverty, both at the individual and governmental levels; the pursuit of alternate sources of income, both legal and illegal; and a possible lapse into lawlessness and anarchy, which could lead to governmental collapse. Such a situation invites maritime terrorists, weapons and narcotics traffickers, illegal fishers, and human smugglers, as well suited to exploit unstable environments.”⁴⁷ In addition to these threats, “China and North Korea are actively expanding their military capabilities in the region, China primarily through investments in national infrastructure projects.”⁴⁸ Norris emphasizes, “The U.S.

⁴⁴Kleinsteiber, 15.

⁴⁵Ibid., 18.

⁴⁶Andrew Norris, “The Fight for Fish,” *Proceedings* 136, no. 8 (August 2010), <http://search.proquest.com.lumen.cgsccarl.com/docview/744718099/946EE8FF886C4E7APQ/1?accountid=28992> (accessed April 24, 2014).

⁴⁷Ibid.

⁴⁸Norris.

has an interest in maintaining stability and influence in the region, which can only occur if its principle natural resource and source of revenue, the tuna fishery, is sustained.”⁴⁹

Norris recommends the United States “develop and promote a framework to ensure that the mutually supporting goals of food supply security and regional stability are met.”⁵⁰ In order to accomplish this goal, he suggests the United States should adopt a long-term strategy that enhances both U.S. and international law enforcement programs to “increase presence and improve maritime situational awareness to counter-threats to national sovereignty; and a multilateral approach to improve Pacific island nations’ capacity to promote stability and prosperity.”⁵¹ Improving law enforcement capacity with Pacific island nations not only accomplishes the U.S. strategic goals to protect Pacific Tuna but it ensures regional stability.

WCPFC

The second focus category for this research addresses the relevance of the WCPFC and other international agreements. Don Walsh focuses on the need of international organizations like the UN FAO to establish a system of international governance to protect global fish stocks and a multi-billion dollar industry. Walsh emphasizes, “Governments have the primary role in regulating fisheries.”⁵² Specifically,

⁴⁹Ibid.

⁵⁰Ibid.

⁵¹Ibid.

⁵²Don Walsh, “Decline of the world’s fisheries: The last supper?” *Proceedings* 127, no 4 (April 2001): 104, http://search.proquest.com.lumen.cgscarl.com/cv_746996/docview/205998564/5E7FBD03F8448B9PQ/1?accountid=28992 (accessed November 19, 2013).

“Through national legislation and international agreements, all backed by the best scientific knowledge, regulation can provide the means to ensure sustainable yields from the global resource.” Living marine resource protection extends beyond national jurisdictional boundaries like the EEZ into the high seas. Walsh presents the need for the United States to develop national legislation and international agreements to protect our living marine resources. The protection of living marine resources hinges on the government’s capacity to manage, regulate, and enforce national and international laws.⁵³

Christian Le Miere analyzed ungoverned maritime spaces and concluded:

“Ungoverned maritime space is also an area of concern as it allows for illegal activity at sea and provides a conduit to support non-state groups through trafficking in arms, contraband, drugs, and people.”⁵⁴ Le Miere identified several challenges for small Pacific island states. Specifically, “the Pacific island states lack capacity to exert full control over their large marine areas.”⁵⁵ These challenges or vulnerabilities to illegal activity are due to vast coastlines, weak governments, and underfunded or limited enforcement resources. One way to overcome these challenges is to participate in international partnerships to improve monitoring, control, and surveillance capabilities. “International collaboration, particularly intelligence sharing, adds much needed capability to regional states’ knowledge and builds greater interaction among relevant agencies.”⁵⁶ Le Miere

⁵³Ibid. 104.

⁵⁴Christian Le Miere, “All at sea—illicit activity thrives in ungoverned maritime areas,” October 8, 2013, *HIS Jane’s* 360, <http://www.janes.com/article/28092/all-at-sea-illicit-activity-thrives-in-ungoverned-maritime-areas> (accessed April 24, 2014), 30.

⁵⁵Ibid., 33.

⁵⁶Le Miere, 35.

concludes that strengthening international partnerships and improving intelligence sharing to reach the high seas does not necessarily deter all illicit activities. However, it is a step in the right direction and allows coastal states with limited capacity to strengthen governance in their own waters.⁵⁷

Kevin W. Riddle provides an analysis on illegal, unreported, and unregulated fishing and whether or not “international cooperation is contagious.”⁵⁸ Riddle “analyzes the issues involved with IUU fishing, examines the recommendations in the Food and Agriculture Organization of the United Nations, International Plan of Action to Deter, Prevent and Eliminate IUU Fishing (IPOA-IUU), and considers examples of successful management and enforcement measures in use by states and Regional Fisheries Management Organizations (RFMO).”⁵⁹ Riddle also uses China as a recent example of how international cooperation is contagious.⁶⁰ Riddle suggests, “A major impediment to conserving fish stocks on the high seas lies with states and or fishing vessels that operate outside the scope of the RFMOs or in total disregard to the need of sustainable fishing practices.”⁶¹ Riddle focuses his research on the five themes of the IPOA-IUU.⁶² These themes are: (1) National legislation and plans of action; (2) Cooperation among states;

⁵⁷Ibid.

⁵⁸Kevin W. Riddle, “Illegal, Unreported, and Unregulated Fishing: Is International Cooperation Contagious?” *Ocean Development & International Law* 37, no. 3/4 (2006): 265-297.

⁵⁹Ibid., 265.

⁶⁰Ibid.

⁶¹Ibid., 266.

⁶²Ibid.

(3) Coastal state measures; (4) Port state measures; and (5) Internationally agreed market related measures.⁶³ For the purposes of this study, the researcher focuses on Riddle's second and third themes, cooperation among states and coastal state measures, and his example of China and their cooperation to stop high seas driftnet fishing in the North Pacific Ocean.⁶⁴

Riddle's analysis of the second theme of the IPOA-IUU suggests, "cooperation among states, provides some of the most interesting and optimistic developments in the international community."⁶⁵ This can be accomplished either bilaterally or through an RFMO.⁶⁶ "The IPOA recommends that states: cooperate in transferring expertise and technology; develop cooperative mechanisms allowing rapid responses; cooperate in monitoring, control and surveillance; nominate and publicize initial formal contact points; and enter into agreements with other States and cooperate for the enforcement of laws and management measures adopted at a national, regional or global level."⁶⁷ Riddle uses the North Pacific Anadromous Fish Commission and their activities to stop illegal high seas driftnet fishing in the North Pacific as a successful example to support the IPOA cooperation among states.⁶⁸

⁶³Ibid., 269.

⁶⁴Ibid.

⁶⁵Ibid.

⁶⁶Ibid., 274.

⁶⁷Ibid.; FAO, "International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing," 2001, <http://www.fao.org/docrep/003/y1224e/y1224e00.htm#REPORTING> (accessed May 26, 2014), supra note 3, para. 51.

⁶⁸Riddle, 275-276.

In support of the IPOA's Theme 3: Coastal State Measures, Riddle explains how coastal states have the rights and responsibilities to "conserve and manage living marine resources within their EEZs."⁶⁹ According to the IPOA-IUU, coastal states are encouraged to take steps to prevent, deter, and eliminate IUU fishing within their EEZs.⁷⁰ More specifically, the IPOA states coastal states should "monitor, control and undertake surveillance of the EEZ; cooperate and exchange information with other States, coastal States and RFMOs; ensure no vessel fishes in the EEZ without authorization; and avoid licensing vessels to fish in the EEZ, if the vessel has a history of IUU fishing."⁷¹ Riddle uses the South Pacific Forum Fisheries Agency (FFA) as an example of coastal state measures that can be used against IUU fishing.⁷² "The FFA has no regulatory role, but is responsible for advising and assisting member countries in managing the resources of their EEZs."⁷³

Lastly, Riddle explains how China over the past decade has taken steps in the North Pacific to prevent illegal high seas driftnet fishing.⁷⁴ Riddle suggests, "based on the actions it has taken in the North Pacific, critics should now be optimistic that China is

⁶⁹Ibid., 280.

⁷⁰Ibid..

⁷¹Ibid., 280; NOAA Fisheries, "U.S. National Plan of Action," <http://www.nmfs.noaa.gov/sfa/international/NPOA-IUU.htm> (accessed May 26, 2014), supra note 36, at 7.

⁷²Riddle, 280.

⁷³Ibid., 281.

⁷⁴Ibid., 287.

working to comply with the intent of these international instruments.”⁷⁵ Riddle concludes, China has and continues to cooperate with the United States to enforce the UN moratorium on high seas driftnets. The U.S. Coast Guard’s fisheries enforcement partnership with China is beneficial.⁷⁶ All of these experts identified the challenges of governing the high seas and areas outside national jurisdictions. They appear to agree: strengthening international agreements and cooperation is an essential component to deter illegal and illicit activity.

U.S. Coast Guard

The third category examined in this study is the U.S. Coast Guard. This section of the literature review examines the U.S. Coast Guard’s roles and relationships in the Asia-Pacific with emphasis placed on the U.S. interaction with China. Several authors provide different perspectives of the current relationships between the United States and China. One perspective is through a conservation lens, through a fisheries law enforcement perspective. The other is through a security lens, through the Department of Defense (DOD) and the U.S. Navy through a realist; balance of power perspective. Both provide insights on how the United States can strategically improve its position in the Asia-Pacific region.

Lyle Goldstein recognizes the significance of the U.S. Coast Guard cooperative relationship with China. He suggests, “In contrast to the volatile military-to-military relationship, the U.S. Coast Guard’s civil maritime engagement with China has been

⁷⁵Ibid.

⁷⁶Ibid., 291.

sustained and successful.”⁷⁷ In this regard, the United States and China have found common ground on non-military issues. “The U.S. and China want safe, clean oceans, sustainable and fair extraction of resources, and security from seaborne asymmetric threats.”⁷⁸ The U.S. Coast Guard coordinates with the People’s Republic of China Fisheries Law Enforcement Command (FLEC) to host shiprider exchanges and conduct anti-high seas drift net operations in the North Pacific Ocean. FLEC ship riders embark on U.S. Coast Guard cutters in the North Pacific Ocean to take enforcement action against Chinese fishing boats engaged in IUU driftnet fishing. This multi-lateral exchange has benefitted China in three ways. First, the Coast Guard provides the knowledge and expertise to develop FLEC’s organic fisheries law enforcement program. Second, U.S. Coast Guard cutters currently provide the transportation means and capacity for FLEC officers to project their authority over remote areas on the high seas where their fishing vessels are operating illegally. Third, China demonstrates their stewardship commitment to protecting the environment and living marine resources. China is sensitive to how the world perceives them with regard to sustainable fishing practices. The high seas are considered a global commons that due to the enormous expanse of ocean space require a multi-lateral international approach to governance. Without the support and participation of Asia-Pacific countries like China, it would be impossible to prevent IUU fishing. Goldstein contends, “coast guard missions form an area where

⁷⁷Lyle J. Goldstein, “China: A New Maritime Partner?” *Proceedings* 133, no. 2 (August 2007), <http://search.proquest.com.lumen.cgscarl.com/docview/205985899/fulltext/505F643B461646DDPQ/1?accountid=28992> (accessed April 24, 2014).

⁷⁸*Ibid.*

China looks forward to learning from U.S. experience.”⁷⁹ The U.S. Coast Guard continues to nurture this relationship and shape a broader maritime security relationship that over time could include naval cooperation initiatives.

Lyle J. Goldstein provides another perspective on how the United States can engage with China. Goldstein suggests, “ensuring peace in the 21st century, the U.S. and China must reach a new *modus vivendi* on the high seas.”⁸⁰ To accomplish this goal, Goldstein recommends, “accelerating Coast Guard engagement with China . . . to encourage the integration of China into a community of maritime stakeholders.”⁸¹ Advancing this vision may be difficult. Goldstein identifies “some notable differences in priorities as the Coast Guard is more than ever focused on the terrorist threat, while Chinese authorities are currently focused on trade, safety, and of late, environmental issues.”⁸² Goldstein concludes that focusing on safety and security issues is a step in the right direction with the U.S. engagement with China. “Over time, this process could lead to a strong partnership between equal and responsible maritime stakeholders, preserving peace in the vital Pacific region for the 21st century and beyond.”⁸³

W.S.G. Bateman discusses expanding regional coast guards. The 1982 UNCLOS created new maritime areas and extended maritime jurisdiction. This expansion of maritime jurisdiction necessitates additional maritime security (coast guard) forces to

⁷⁹Goldstein.

⁸⁰Ibid.

⁸¹Ibid.

⁸²Ibid.

⁸³Ibid.

secure “the protection of offshore areas and resources is a central element of national security for most regional countries and an important consideration in nation building and governance.”⁸⁴ Bateman suggest, “Coast Guards are emerging as important national institutions in Asia and the Pacific with the potential to make a major contribution to regional order and security.”⁸⁵ Bateman key point is that strengthening Coast Guard capacity is one approach to improve regional maritime cooperation in the Asia-Pacific.⁸⁶

In addition to a conservation perspective, this research also examined a security perspective. Robert Rubel offers the first security perspective. He contends, the Navy needs to recapitalize but is not certain in what direction to move.⁸⁷ He looks to political scientist Samuel P. Huntington’s 1954 article entitled “National Policy and Transoceanic Navy” to link the geopolitical conditions of the time with the functions of the U.S. Navy.⁸⁸ Huntington stated, “if a service does not possess a well-defined strategic concept, the public and the political leaders will be confused as to the role of the service, uncertain as to the necessity of its existence, and apathetic or hostile to the claims made by the

⁸⁴W. S. G. Bateman, “Coast guards: new forces for regional order and security ” *Honolulu: East-West Center, AsiaPacific Issues*, no. 65 (January 2003): 1-8, under “Scholar Space,” <http://scholarspace.manoa.hawaii.edu/handle/10125/3822> (accessed December 11, 2013).

⁸⁵Ibid.

⁸⁶Ibid.

⁸⁷Robert C. Rubel, “National Policy and the Post-Systemic Navy,” *Naval War College Review* 66, no. 4 (Autumn 2013): 12, <http://www.usnwc.edu/getattachment/529c6303-057a-4eaf-8cfa-8a5c663ead62/National-Policy-and-the-Post-systemic-Navy.aspx> (accessed April 17, 2014).

⁸⁸Ibid., 11.

service upon the resources of society.”⁸⁹ Rubel suggests, “Huntington felt impelled to write because the Navy of 1954 was facing a quandary arising from its own success in World War II.”⁹⁰ These are the same challenges the United States experienced after Vietnam, the Cold War, and Afghanistan and Iraq.⁹¹

Rubel asserts the Navy is once again poised to redefine its mission and adopt a new concept. Rubel expands upon Huntington’s “historical analysis of the geopolitical phases of American history, based on successive geographic foci of U.S. grand strategy.”⁹² He suggests the best way meet future U.S. strategic needs is to examine “how the Navy has provided for American voice and influence overseas.”⁹³ Ruble seeks to answer this strategic communication question by comparing and contrasting what he has defined as the Hamiltonian, Mahanian, Huntington, and Systemic eras. He suggests the Post-Systemic era-our present era, will require a strategy adaptive to a post-globalized world. According to Rubel, since the United States has benefited from this global system “it will no doubt do what it can to maintain that international political and economic order.”⁹⁴ Important to this research is Rubels assertion that rising powers like China should be encouraged to take on more international leadership roles and responsibilities.

⁸⁹Samuel Huntington, “National Policy and Transoceanic Navy,” *Proceedings* 80, no. 5 (May 1954): 483, <http://blog.usni.org/2009/03/09/from-our-archive-national-policy-and-the-transoceanic-navy-by-samuel-p-huntington> (accessed April 26, 2014).

⁹⁰Rubel, 11.

⁹¹Ibid.

⁹²Ibid., 14.

⁹³Ibid.

⁹⁴Ibid., 20.

⁹⁵ Rubel asks, “how maritime elements of national power can support this purpose,”⁹⁶ and concludes they can do this through “forward partnering”.⁹⁷ In other words, the U.S. Navy should “engage as extensively and intensively and with as many nations as possible, to enlarge and perpetuate a global maritime partnership aimed at securing the seas against terrorists and criminals and to form a political consensus based on habitual cooperation.”⁹⁸ The overall goal is to “enable” partners to help the United States maintain global stability.⁹⁹ If this approach can work for the Navy then why can it not work for the U.S. Coast Guard fisheries law enforcement strategy?

Rubel’s article describes the need for clear strategic communications to shape U.S. maritime forces and prepare them for future challenges. Although this is a Navy and Marine Corps centric article, this is also a relevant discussion for the U.S. Coast Guard’s strategic planning. Similar to the other maritime services, the U.S. Coast Guard will have to be adaptive and ready to patrol in unstable areas. The U.S. Coast Guard will have to continue to rely on its interagency, joint defense, and multi-national agreements to meet the strategic and operational demands of what Rubel referred to as the Post Systemic era.

⁹⁵Ibid.

⁹⁶Ibid.

⁹⁷Frank G. Hoffman, “The Case for Forward Partnership,” *Proceedings* 139, no. 1 (January 2013) <http://www.usni.org/magazines/proceedings/2013-01/case-forward-partnership> (accessed April 26, 2014).

⁹⁸Rubel, 20.

⁹⁹Hans Binnendijk, “Rethinking United States Security Strategy,” *New York Times* March 24, 2013, under “The Opinion Pages,” http://www.nytimes.com/2013/03/25/opinion/global/rethinking-us-security-strategy.html?_r=0 (accessed April 17, 2014).

Michael E. Smith provides insight into the U.S. Navy's planning and programming direction for the Asia-Pacific region. He states, "the Navy needs to take a long view in delineating the ends, ways, and means of its shift to the Pacific."¹⁰⁰ The Navy strategy requires a "detailed roadmap covering a 10 to 20 year time-phased approach."¹⁰¹ This time-phased approach also includes identifying initial actions the U.S. Navy must take in the near future to ensure they meet their long-term objectives. The article also provides further clarity on the suggested ends, ways, and means of strategy. The ends for the Asia-Pacific Region is to "maintain peace, stability, the free flow of commerce, and U.S. influence in the Asia-Pacific region; maintain regional access and the ability to operate freely; and build a healthy, transparent, and sustainable U.S.-China defense relationship that also supports a broader U.S. China relationship."¹⁰² The Ways to achieve this desired end state are to "strengthen alliances, deepen partnerships, empower regional institutions, build a stable, productive, and constructive relationship with China, and build a regional economic architecture that can sustain shared prosperity."¹⁰³

¹⁰⁰Michael E. Smith, "Roadmap to the Rebalance," *Proceedings* 139, no. 8 (August 2013), <http://search.proquest.com.lumen.cgscarl.com/docview/1437977221/fulltext/EFF551E56A28439FPQ/1?accountid=28992> (accessed April 24, 2014).

¹⁰¹Ibid.

¹⁰²Ashton Carter, Deputy Secretary of Defense, "Sustaining U.S. Global Leadership," Remarks at Woodrow Wilson Center, Washington, DC, October 3, 2012, in Smith.

¹⁰³Thomas Donilon, "The United States and the Asia-Pacific in 2013," Complete Transcript: Thomas Donilon at the Asia Society New York, March 11, 2013, Asia Society, <http://www.asiasociety.org/new-york/complete-transcript-thomas-donilon-asia-society-new-york> (accessed June 8, 2014).

Smith also focuses on the large strategic alliances in the Asia-Pacific region with countries like Japan, the Republic of Korea, and Singapore. However, the economies of many small nations in the Asia-Pacific region are dependent on access to natural resources. Indeed, it is a matter of national survival for many small island nations. In this case, RFMOs like the WCPFC are essential to build mutual trust and promote rules-based international order. Smith's article concludes with the rebalance challenges for the United States. The United States is in a fiscally constrained environment with a growing demand for naval forces around the world. Like most post-war periods, it is a time for the United States to refocus its strategy in the Asia-Pacific region, including its use of the U.S. Coast Guard.

All these authors' suggest there are opportunities for the United States to enhance its strategy in the Pacific. Both the DHS and the DOD are in a position to leverage each other's capabilities in support of international fisheries agreements like the WCPFC while maintaining a forward security presence in the Asia-Pacific region.

China

The fourth and final focus category is China. This section provides a glimpse of China's strategic footprint in the Asia-Pacific region. As discussed previously China is a major power in the Pacific. They are the number one fishing nation in the world. Captain John Thomas, U.S. Navy, discusses the importance of devoting our strategic attention to the small island nations of Oceania. Oceania is a geo-political term used to describe the Pacific region. China, by comparison, has devoted more diplomatic and economic effort to Oceania than the United States. Thomas stresses the need for the United States to pay more attention to this region. He provides three reasons why U.S. interest should include

Oceania. First, living marine resources in Oceania are not overfished. Second, Oceania represents a large diplomatic coalition capable of supporting U.S. interest. Third, Oceania is strategically significant to maritime routes between the United States and the rest of the western and central Pacific region.¹⁰⁴ Thomas presents a compelling argument as to why Pacific Tuna is a natural starting point in visualizing, describing, and understanding the current and desired environments in the Asia Pacific.¹⁰⁵

Thomas offers two strategic reasons for China's interest in the Asia-Pacific region. First, China's principle interests in the region are political and economic, with Taiwan a major friction point both internally and externally. Thomas presents some interesting facts on how important Taiwan is to China. "Only twenty-three states worldwide recognize the government of Taipei, and six of them are in Oceania—Kiribati, the Marshall Islands, Nauru, Palau, the Solomon Islands, and Tuvalu. This grouping represents the world's second-largest cluster of diplomatic recognition for Taiwan, and Beijing is intent upon chipping away at this support for what it considers a breakaway province."¹⁰⁶

China's second interest is the Asia-Pacific region is access to natural resources like Pacific Tuna. China is the world's largest importer and exporter of fish in the

¹⁰⁴John Thomas, "Engaging Oceania," *Naval War College Review* 63, no. 1 (2010): 97-106, http://nwcr_winter2010_john-thomas.pdf (accessed April 24, 2014).

¹⁰⁵Headquarters, Department of the Army, Army Doctrine Reference Publication 5-0, *The Operations Process*, Doctrine and Training Publications, May 17, 2012, http://armypubs.army.mil/doctrine/ADRP_1.html (accessed April 24, 2014).

¹⁰⁶Thomas, 105; Anthony Van Fossen, "The Struggle for Recognition: Diplomatic Competition between China and Taiwan in Oceania," *Journal of Chinese Political Science* 12, no. 2 (2007): 125.

world.¹⁰⁷ Thomas provides some interesting facts supporting China’s fishing interest and access to Oceania. “China has fishing fleets permanently based in the Federated States of Micronesia (FSM) and Fiji, and it guarantees continued access by funding multiple large-scale industry-related projects. (Examples are fish-processing plants in Vanuatu, the Cook Islands, and Papua New Guinea [PNG], and the construction of the regional Western and Central Pacific Fisheries Commission headquarters in the FSM).”¹⁰⁸

Although China’s influence in Oceania is on the rise, Thomas offers several solutions “to hedge against rising Chinese influence.”¹⁰⁹ He suggests, “USPACOM [U.S. Pacific Command] is best poised to strengthen American ties by augmenting current theater security cooperation.”¹¹⁰ Thomas specifically identifies the U.S. Coast Guard and its fisheries law enforcement mission as a way in which USPACOM could “reshape its military exchange program for regional security officers.”¹¹¹ Offering Oceania’s police and naval personnel U.S. Coast Guard law enforcement training could enhance this exchange program.¹¹² Also “due to limited opportunities and platforms available among Pacific-island defense forces, a robust training program placing Oceania’s security personnel on Coast Guard vessels could be highly effective.”¹¹³

¹⁰⁷Thomas, 101.

¹⁰⁸Ibid.

¹⁰⁹Ibid., 102.

¹¹⁰Ibid.

¹¹¹Ibid., 103.

¹¹²Ibid.

¹¹³Ibid., 104.

Tabitha Mallory's interview provides a perspective on China's current fisheries management policy. "China's new emphasis on sustainable development is reflected in current domestic laws and regulations governing domestic fisheries. However, the state's economic goals have predominantly eclipsed sustainability targets when it comes to enforcement."¹¹⁴ Mallory suggests that China is falling short and needs to improve their fishery management and enforcement agencies.¹¹⁵ To overcome these shortfalls, China is participating in RFMOs like the WCPFC. "China has joined a number of regional fisheries management organizations [like the Western and Central Pacific Fisheries Commission] . . . and follows many of the requirements of these organizations, though there are some quality and accuracy problems with logbook and data reporting."¹¹⁶ Mallory suggests China has "enormous challenges with illegal fishing, both regionally and globally, which negatively affects China's relationships with other countries."¹¹⁷

Mallory's interview also illustrates China's "geo-political motivations for wanting a global fishing presence. China's strength as a fishing nation contributes to China's global sea power, which gives China more influence in the international system vis-à-vis other nations."¹¹⁸ Mallory suggests that this "doesn't predict disaster for the world's fish."¹¹⁹ There is an opportunity for China to contribute. "China's role in global ocean

¹¹⁴Mallory, 85.

¹¹⁵Ibid., 86.

¹¹⁶Ibid.

¹¹⁷Ibid.

¹¹⁸Ibid., 87.

¹¹⁹Ibid.

governance could be enhanced by its contribution to monitoring, control, and surveillance of fisheries, for example through coast guard partnerships.”¹²⁰ Moreover, China can increase its participation in regional fisheries management bodies.¹²¹ International reputation is a motivator for Chinese participation.¹²²

Mallory addresses another key point, how “competition over ocean resources has the potential to lead to interstate conflict.”¹²³ Mallory provides several examples “like the Cod War between Iceland and the United Kingdom in the 1970s, which turned violent . . . and the Turbot War in the 1990s between Canada and Spain [which] caused mobilization of both countries naval forces before it was resolved.” Mallory also provides a more recent example in the Asia-Pacific where “Japanese fishing off the coasts of the former Soviet Union, China, and Korea led to conflict.”¹²⁴ Mallory suggests, “Fishing incidents in East Asia could escalate to the level of interstate warfare because of the complications relating to maritime territorial disputes and nationalism . . . Resource depletion is at the root of these problems because fisherman venture farther to fish, they risk entering off-limit or disputed waters.”¹²⁵ Mallory concludes, “Cooperation on fisheries management potentially contributes to the resolution of some of the other disputes over territory and

¹²⁰Mallory, 87.

¹²¹Ibid.

¹²²Ibid.

¹²³Ibid., 90.

¹²⁴Ibid.

¹²⁵Ibid.

hydrocarbon resources, because such cooperation could foster trust and goodwill between countries.”¹²⁶

U.S. Strategy Documents

This section analyzes eight U.S. strategy documents and explains these relationships as viewed by each U.S. department. The following documents will be discussed: the 2010 *National Security Strategy*, the 2014 *Quadrennial Defense Review Report*, the 2014 *Quadrennial Homeland Security Review Report*, *The U.S. Coast Guard Strategy for Maritime Safety, Security, and Stewardship* (2007), *The National Strategy for Maritime Security* (2005), 2012 *Department of Homeland Security Strategic Plan Fiscal Years 2012 to 2016*, *The U.S. Coast Guard Strategy for Maritime Safety, Security, and Stewardship* (2007), and 2004 *Ocean Guardian: U.S. Coast Guard Fisheries Enforcement Strategic Plan 2004-2014*.

National Security Strategy (2010)

The 2010 *National Security Strategy* proposed three end states. The first desired endstate is to “build our foundation focuses on the necessity of rebuilding our economy and leading the world.”¹²⁷ The second is to “pursue comprehensive engagement through active participation and strengthening our relationships beyond our borders.”¹²⁸ The third is to “promote a just and sustainable international order by strengthening enforcement of

¹²⁶Ibid.

¹²⁷U.S. President, *National Security Strategy*, May 2010, The White House, http://www.whitehouse.gov/sites/default/files/rss_viewer/national_security_strategy.pdf (accessed April 22, 2014), 9-16.

¹²⁸Ibid.

international law and our commitment to engage and modernize international frameworks and institutions.”¹²⁹ The National Security Strategy is the highest level strategy from which the others strategies are nested.¹³⁰

Quadrennial Defense Review Report (2014)

The 2014 *Quadrennial Defense Review Report* provides a glimpse at the desired environment of the U.S. defense strategy. First, it is built on three pillars:

protect the homeland, build security globally, and project power and win decisively. In order to achieve these objectives, the United States supports four core national interests: 1) The security of the U.S., its citizens, and U.S. allies and partners; 2) A strong, innovative, and growing U.S. economy in an open international economic system that promotes opportunity and prosperity; 3) Respect for universal values at home and around the world; and 4) An international order advanced by U.S. leadership that promotes peace, security, and opportunity through stronger cooperation to meet global challenges.¹³¹

These goals from the 2014 *Quadrennial Defense Review Report* demonstrate the importance of an open international economic system and an international order advanced by U.S. leadership. The United States and China are two of the world’s leading economies. Both are going to continue to promote their economic and strategic interest in the Asia-Pacific region to secure their sovereignty.

Department of Homeland Security Strategic Plan (2012)

Since the U.S. Coast Guard is under the DHS, it would be appropriate to discuss two key strategic documents shaping the desired environment. The first is the 2012

¹²⁹Ibid.

¹³⁰Terms like endstates, objectives, goals or missions were used interchangeably.

¹³¹Secretary of Defense, *Quadrennial Defense Review Report*, 2010, <http://www.defense.gov/qdr/QDR%20as%20of%2029JAN10%201600.pdf> (accessed April 22, 2014), 11, 12.

Department of Homeland Security Strategic Plan and the 2010 *Quadrennial Homeland Security Review Report*. This section addresses the 2012 *Department of Homeland Security Strategic Plan*.

The 2012 *Department of Homeland Security Strategic Plan* goal is to “prevent terrorism and enhance security, secure and manage our borders, enforce and administer our immigration laws, safeguard and secure cyberspace, ensure resilience to disasters, and provide essential support to national and economic security.”¹³² The relationship to this research topic is highlighted in two of these goals. The first goal “prevent terrorism and enhance security” aligns with the U.S. fisheries law enforcement mission. Combating IUU fishing is a way to enhance U.S. security. The second related goal is “providing essential support to national and economic security.” As described throughout this research, protecting Pacific Tuna by participating in the WCPFC is in the U.S. interest for not only economic security but also food and environmental security. These contribute overall to the U.S. national security.

Quadrennial Homeland Security Review Report (2010)

The second key strategic planning document is the 2010 *Quadrennial Homeland Security Review Report*. This document identifies five key homeland security missions: preventing terrorism and enhancing security, securing and managing our borders, enforcing and administering our immigration laws, safeguarding and securing

¹³²DHS, *Department of Homeland Security Strategic Plan Fiscal Years 2012 to 2016* (Washington, DC: Government Printing Office, February 2012), 3-22.

cyberspace, and ensuring resilience to disasters.¹³³ So where does fisheries law enforcement come into this strategic equation? The language of this document made it difficult for the researcher to interpolate where the U.S. Coast Guard’s fisheries law enforcement mission aligned with the 2010 *Quadrennial Homeland Security Review Report*. The researcher assumed that U.S. Coast Guard fishery law enforcement mission most directly aligned with “securing and managing our borders.”¹³⁴ There are three goals for this mission: (1) Effectively control U.S. air, land, and sea borders, (2) Safeguard lawful trade and travel, and (3) disrupt and dismantle transnational criminal organizations.¹³⁵ Within these goals, the DHS identifies several objectives. One of the goals is to “effectively control U.S. air, land, and sea borders.”¹³⁶ The first objective is to “prevent illegal entry.”¹³⁷ This does not mean people it also applies to contraband. Contraband for the sake of this discussion is illegally caught fish. The report states, the objective is to “prevent . . . contraband [illegally caught fish], and protect against cross-border threats [U.S. maritime borders to include EEZ and high seas] to health, food, and environment . . . while facilitating the safe flow of . . . commerce.”¹³⁸ This implies that fisheries enforcement is nested in the DHS strategy.

¹³³DHS, *Quadrennial Homeland Security Review Report*, February 2010, http://www.dhs.gov/xlibrary/assets/qhsr_report.pdf (accessed May 14, 2014), x.

¹³⁴*Ibid.*

¹³⁵*Ibid.*

¹³⁶*Ibid.*, 26.

¹³⁷*Ibid.*

¹³⁸*Ibid.*

The U.S. Coast Guard Strategy for Maritime Safety, Security, and Stewardship (2007)

The 2007 *The U.S. Coast Guard Strategy for Maritime Safety, Security, and Stewardship* takes the three Coast Guard Roles (Safety, Security, Stewardship) and emphasizes six priorities: “1) strengthen regimes for the U.S. domain; 2) achieve awareness in the maritime domain; 3) enhance unity of effort in maritime planning and operations; 4) integrate Coast Guard capabilities for national defense; 5) develop a national capacity for Marine Transportation System recovery; and 6) focus international engagement on improving maritime governance.”¹³⁹ Although all of these priorities are linked either directly or indirectly, the sixth priority focus on international engagement captures the desired environment relationship between the U.S. Coast Guard and WCPFC. The United States uses their experience and leadership to shape the international environment and protect our security interest. The U.S. Coast Guard allows the United States to effectively implement our national maritime strategy in the Asia-Pacific region.

Department of State *Strategic Plan FY 2014-2017* (2014)

The Department of State (DOS) has a very important role and perspective in shaping the strategic environment. The Department of State *Strategic Plan FY 2014-2017*, states the mission of the DOS is to “shape and sustain a peaceful, prosperous, just, and democratic world, and foster conditions for stability and progress for the benefit of

¹³⁹U.S. Coast Guard, *The U.S. Coast Guard Strategy for Maritime Safety, Security, and Stewardship* (Washington, DC: Government Printing Office, January 19, 2007), 6.

the American people and people everywhere.”¹⁴⁰ The strategic plan articulates five strategic goals: “1) Strengthen America’s economic reach and positive economic impact; 2) Strengthen America’s foreign policy impact on our strategic challenges; 3) Promote the transition to a low emission, climate-resilient world while expanding global access to sustainable energy; 4) Protect core U.S. interest by advancing democracy and human rights and strengthening civil society; and 5) Modernize the way the U.S. does diplomacy and development.”¹⁴¹ Goal one is of particular interest to this study because it has two strategic objectives that support this research. These objectives are to “expand access to future markets, investment, and trade” and “promote inclusive economic growth reduce extreme poverty, and improve food security.”¹⁴² Continued participation in the WCPFC to conserve and manage Pacific Tuna is directly in alignment with DOS strategic objectives to “expand access” and “improve food security.”

The DOS strategic and performance goals focus on two major objectives: “regional stability and social and environmental partnerships.”¹⁴³ These objectives encourage building stronger ties with international partners in the WCPFC. They also encourage the partnerships to implement international treaties and agreements that protect the environment and promote sustainable living resource management.¹⁴⁴ This

¹⁴⁰U.S. Department of State, *Strategic Plan FY 2014-2017*, <http://www.state.gov/documents/organization/223997.pdf> (accessed April 5, 2014), 6.

¹⁴¹Ibid., 2.

¹⁴²Ibid., 8.

¹⁴³U.S. Coast Guard, *Ocean Guardian*, 3.

¹⁴⁴Ibid.

demonstrates that the U.S. Coast Guard and DOS are in alignment in protecting and preserving Pacific-Tuna.

*New Priorities for the 21st Century: National Marine
Fisheries Service Strategic Plan (2005)*

Another strategic perspective that shapes the environment is from the Department of Commerce (DOC), National Oceanic and Atmospheric Administration (NOAA). The researcher analyzed NOAA Fisheries 2005 Strategic Plan, *New Priorities for the 21st Century*. This strategy presents the NOAA Fisheries Mission as the “stewardship of living marine resources through science-based conservation and management and the promotion of healthy ecosystems.”¹⁴⁵ NOAA Fisheries goal is to “protect, restore, and manage the use of costal and oceanic resources through ecosystem-based management.”¹⁴⁶ There are three enforcement goals. Two of these goals have a direct relationship to combating illegal fishing. The first goal is to “target major marine resource offenders.”¹⁴⁷ In this case, the offenders are fishers who engage in IUU fishing. The second goal is to “improve compliance through advanced technologies” like vessel monitoring systems which provide location information of registered commercial fishing vessels.¹⁴⁸ These goals are in alignment with U.S. Coast Guard’s enforcement mission and objectives in policing against IUU fishing in the Western Central Pacific. Both the

¹⁴⁵NOAA Fisheries, *New Priorities for the 21st Century: National Marine Fisheries Service Strategic Plan, Updated for FY 2005 – FY 2010*, <http://www.nmfs.noaa.gov/mb/strategic/NMFSstrategicplan200510.pdf> (accessed May 7, 2014), 4.

¹⁴⁶Ibid.

¹⁴⁷U.S. Coast Guard, *Ocean Guardian*, 3.

¹⁴⁸Ibid., 6.

U.S. Coast Guard and NOAA Fisheries continue to cooperate and are committed to ensuring compliance with international agreements like WCPFC.

Summary and Conclusions

A review of selected literature identifies the strategic complexity in the Pacific as viewed through the four focus categories. Chapters 3 and 4 will provide a methodology and analysis using the four focus categories to examine the rebalance of the U.S. national security policy and strategy to the Asia-Pacific region and the alignment of the U.S. Coast Guard to protect living marine resources in areas outside its national jurisdiction. This research identifies the complex foundational linkages and opinions of living marine resource experts, policy makers, and strategists.

CHAPTER 3

RESEARCH METHODOLOGY

Introduction

In chapter 3, the researcher introduces the ODM to address the primary and secondary research questions. The four focus categories (Pacific Tuna, WCPFC, U.S. Coast Guard, and China) identified in chapter 2 are incorporated into the framework.

Purpose

The purpose of this research is to examine the U.S. Coast Guard's OLE mission in the current Fisheries Enforcement Strategic Plan, *Ocean Guardian*, and in view of the U.S. strategic shift to the Asia-Pacific region, examine the effectiveness and viability of this enforcement strategy. The ultimate goal of this study is to assess if there is a gap in *Ocean Guardian* or the requisite Coast Guard capabilities needed to enact that strategy.

Research Questions

Primary Question

How does the rebalance in the U.S. national security policy and strategy to the Asia-Pacific region affect the U.S. Coast Guard's OLE mission to protect living marine resources in high seas areas outside U.S. national jurisdiction?

Secondary Questions

1. What is the nature of competition for Pacific Tuna resources in the region?
2. What Pacific Tuna agreements are in place, and how are they enforced?
3. What are the U.S. Coast Guard capabilities to implement its OLE mission in the Asia-Pacific Region?

4. What was the U.S. Coast Guard strategy prior to the rebalance to the Asia-Pacific region, and how has it changed?

Organization of Chapter 3

Chapter 3 is organized into five sections. The first section, Steps Taken, discusses the research steps taken to address the primary and secondary questions. The second section, Research Design, explains the criteria the researcher developed to answer the primary and secondary questions. The third section, Data Collection, provides a discussion on the data collection procedures and techniques used in this study. The fourth section, Data Analysis, is a plan for analyzing the data using the ODM framework. The last section, Summary and Conclusion, provides a summary and conclusion to lead into chapter 4: Analysis.

Steps Taken

This section addresses the steps taken to address the primary and secondary questions. The primary research question for this study is: How does the rebalance in the U.S. national security policy and strategy to the Asia-Pacific region affect the U.S. Coast Guard's OLE mission to protect living marine resources in high seas areas outside U.S. national jurisdiction? In order to address this question, the researcher identified four secondary questions:

1. What is the nature of competition for Pacific Tuna resources in the region?
2. What agreements are in place, and how are they enforced? Similar to Secondary Question 1, this question examines the complex relationships and explains

how RFMOs like the WCPFC provide the tools to project governance to protect Pacific Tuna into areas beyond national jurisdictions.

3. What are the U.S. Coast Guard capabilities to implement its OLE strategy in the Asia-Pacific Region? To answer this question, the study specifically focuses on Coast Guard District Fourteen in Honolulu, HI. This question provides key insight into the current operational picture of the U.S. Coast Guard's OLE mission.

4. What was the U.S. Coast Guard strategy prior to the rebalance to the Asia-Pacific region and how has it changed? This question specifically examines *Ocean Guardian* and the other U.S. national strategy documents to determine if there is a gap in *Ocean Guardian* or the requisite Coast Guard capabilities needed to enact that strategy.

Research Design

This is a qualitative research study. The research methodology for this study is adapted from the Joint Chiefs of Staff, Joint Publication 5-0, *Joint Operational Planning* dated December 11, 2011. Joint Publication 5-0, is the “current doctrine for conducting joint, interagency, and multinational planning activities across the full range of military operations.”¹⁴⁹ The Joint Operational Planning Process described in Joint Publication 5-0 provides senior leaders and staffs with a common structure or methodology for addressing complex problems. More specifically, this research will use the ODM, a methodology that is adjunct to and consonant with the Joint Operational Planning

¹⁴⁹Joint Chiefs of Staff, Joint Publication 5-0, *Joint Operational Planning*, Joint Electronic Library, August 11, 2011, http://www.dtic.mil/doctrine/new_pubs/jp5_0.pdf (accessed April 25, 2014), forward by ADM Mullens.

Process, to conduct a qualitative analysis of U.S. national level policy and service strategy relevant to U.S. Coast Guard fisheries law enforcement.

The ODM consists of four aspects or activities. These aspects are to: (1) understand the current strategic state or environment; based on this and an understanding of extant strategic directives and guidance; (2) create a concept for the desired (future) state or environment; (3) describe the difference between these two states; in other words, conceptualize or define a problem that is impeding the transformation from the current state to the desired state or environment;¹⁵⁰ and (4) take into consideration the combinations of actors, desired conditions, estimate of resources, and acceptable level of risk to “address the problem and transform the existing system conditions into desired system conditions in order to achieve strategic end state objectives.”¹⁵¹ The ultimate goal of this study is to assess if there is a gap in the U.S. Coast Guard fisheries law enforcement strategy or in the requisite capabilities as the overall U.S. strategy rebalances to the Asia-Pacific region. This analytical framework will be used to answer the secondary research questions, and ultimately the primary research question.

The research methodology applies background understanding developed through the operational design inquiry of the environment and the literature review in chapter 2 to facilitate both an assessment of U.S. national level strategy in relation to its pivot to the Asia Pacific region, to its linkage to the U.S. Coast Guard’s Fisheries Enforcement

¹⁵⁰Joint Chiefs of Staff, Joint Publication 5-0, xx-xxi.

¹⁵¹Joint Chiefs of Staff, *Planner’s Handbook for Operational Design*, Joint Electronic Library, October 7, 2011, http://www.dtic.mil/doctrine/doctrine/jwfc/opdesign_hbk.pdf (accessed April 26, 2014), VI-1.

Strategic Plan, *Ocean Guardian*. This research also explores if the Strategic Plan is adequate as the nation and the Coast Guard rebalance to the Asia-Pacific region.

Data Collection

The ODM provided a framework for data collection and analysis. Joint operational design is a method intended to assist commanders and staffs to understand and visualize the current and future strategic environment. Commanders and staffs ask four fundamental design questions corresponding to the four aspects of operational design explained earlier. These questions are: (1) What is going on in the environment? (2) What do we want the environment to look like? (3) What are the obstacles impeding progress toward the desired end state? and (4) What broad general actions will resolve the problem?¹⁵² These questions form the basic doctrinal framework for analyzing the current and desired environments, discovering the associated problem, and developing an operational approach intended to achieve the desired environment or end state conditions. In the case of this research, the fourth and final question yields recommendations for action. These recommendations are the essential outcome of this research. The comparison of recommendations to the current actions by the U.S. Coast Guard associated with its OLE mission strategy provide an answer to this study's primary research question.

¹⁵²Headquarters, Department of the Army, Army Doctrine Reference Publication 5-0, fig. 2-2, 2-6.

Data Analysis

Using the ODM framework, the research will address the following questions: (1) What is the current environment? (2) What is the desired environment? (3) What is the problem? and (4) What is the operational approach? Before addressing these questions, the researcher focuses the study around the relationships between the four focus categories: Pacific tuna, WCPFC, U.S. Coast Guard, and China. During the course of this study, the researcher identified many more focus categories. However, due to the scope and time limitations for this research project, this study does not expand beyond these four principle categories.

The following four sub-sections provide a general overview of the four aspects of the ODM concerning the study's objective to define, interpret, analyze, and understand the implications of a realignment of U.S. strategic emphasis to the Pacific and its impact on the U.S. Coast Guard OLE mission. Considerations associated with each focus category vary, but will include physical, economic, stakeholders, security, and legal considerations. Chapter 4 will be an execution of the methodology described in the following paragraphs.

What is the Current Environment?

The current environment analysis is an examination of the four focus categories (Pacific Tuna, WCPFC, U.S. Coast Guard, and China) from the perspective of the current environment. These four focus categories are further organized and analyzed according to five considerations (physical, economic, stakeholder, security, and legal). These five considerations define and conceptualize the current environment. Not every consideration applies to each category. However, each consideration provides one way to “visualize,

understand, and depict” the current environment.¹⁵³ This step will provide a “baseline” from which all subsequent analysis will follow.

What is the Desired Environment?

Examination of the Desired Environment is quite similar to the examination of the current environment step, but from a different temporal perspective. It represents and describes a desired future environment based on strategic vision; a concept of an altered environment manifested in strategic guidance documents and statements by senior leaders. This aspect examines the ends states specified in eight strategy documents, including the U.S. Coast Guard fisheries law enforcement strategy *Ocean Guardian*. This aspect will provide the content allowing comparison with the baseline environment described previously. This comparison allows the identification of the gaps between the current and desired end state. Those gaps will be addressed by the third ODM question: What are the obstacles impeding progress toward the desired end state?

The Problem Frame

The next step in this analysis will seek to identify areas of tension(s) preventing or impeding achievement of the desired environment in relation to the four focus categories: Pacific Tuna, WCPFC, U.S. Coast Guard, and China. This provides an opportunity to determine whether these tensions are positive, negative, or neutral. This section will consider the question: “Where conceptually in the environment should we act to achieve

¹⁵³Joint Chiefs of Staff, *Planner’s Handbook for Operational Design*, IV-1.

our desired end state?”¹⁵⁴ This provides leaders with a product to “select boundaries for action, make choices for intervention, identify areas for exploitation, identify creative tensions, and set limits of tolerance.”¹⁵⁵ Reflecting on the current and desired end states, and the identified gaps, the researcher will address, in the final analysis step, where and how the U.S. Coast Guard could act or intervene in the current environment to achieve a more desirable state.

Operational Approach

The final aspect in the OMD is a recommended method or an operational approach to transform the current environment into the desired environment. This section of the research takes into account the information identified in the current and desired environments and the problem frame and answers a series of final questions: (1) “How should the U.S. speak and act to get from the current state to the desired state?”¹⁵⁶ and (2) What is the U.S. Coast Guard role in enabling achievement of those objectives? Answers to these questions ultimately lead to answers of the secondary research questions, allowing leaders to consider risks, resources, relationships, and strategies to achieve desired objectives.

¹⁵⁴Kenneth Szmed, “Operational Design Overview,” Department of Joint, Interagency and Multinational Operations, U.S. Army Command and General Staff College, Fort Leavenworth, KS, 2014, 9.

¹⁵⁵Ibid., fig. 3-5, 9.

¹⁵⁶Ibid., fig. 3-6, 10.

Summary and Conclusion

The ODM used in this research offers an analytical framework to visualize, understand, and describe a complex strategic and operational environment. ODM facilitates critical analysis of the linkages between the various categories and actors in the Asia-Pacific region. Results of this analysis in chapter 4 will be used to synthesize conclusions presented in chapter 5, and consider options that may lend themselves to addressing identified “gaps.”

CHAPTER 4

ANALYSIS

Introduction

The purpose of chapter 4 is to present accumulated data and provide an analysis of that data. ODM facilitates critical analysis of the linkages between the four focus categories identified by the researcher. Results of this analysis will be used to synthesize conclusions presented in chapter 5, and consider options that may lend themselves to addressing identified gaps.

Purpose

The purpose of this research is to examine the U.S. Coast Guard's OLE mission in the current Fisheries Enforcement Strategic Plan, *Ocean Guardian*, and in view of the U.S. strategic shift to the Asia-Pacific region, examine the effectiveness and viability of this enforcement strategy. The ultimate goal of this study is to assess if there is a gap in *Ocean Guardian* or the requisite Coast Guard capabilities needed to enact that strategy.

Research Questions

Primary Question

How does the rebalance in the U.S. national security policy and strategy to the Asia-Pacific region affect the U.S. Coast Guard's OLE mission to protect living marine resources in high seas areas outside U.S. national jurisdiction?

Secondary Questions

1. What is the nature of competition for Pacific Tuna resources in the region?
2. What Pacific Tuna agreements are in place, and how are they enforced?

3. What are the U.S. Coast Guard capabilities to implement its OLE mission in the Asia-Pacific Region?

4. What was the U.S. Coast Guard strategy prior to the rebalance to the Asia-Pacific region, and how has it changed?

Organization of Chapter 4

Chapter 4 applies the ODM described in chapter 3 and is organized using the following aspects: (1) What is the Current Environment? (2) What is the Desired Environment? (3) What is the Problem? and (4) What is the Operational Approach? Each question or subchapter is further organized according to four focus categories: Pacific Tuna, WCPFC, U.S. Coast Guard, and China. Each focus category is analyzed by examining one or more of five specific considerations: Physical, Economic, Stakeholders, Security, and Legal. The Physical consideration examines the geography and biomass of Pacific Tuna. It also includes the areas of responsibilities and how these vast ocean spaces and species overlap. The Economic consideration explores the relationships of the commercial Pacific Tuna industry to the U.S., China, and other Pacific Island nations. The Stakeholder consideration demonstrates the complex relationships between industry, managers, enforcers, and coastal nations. This section also takes into consideration the complex relationships between the DHS, DOD, DOS, and DOC and how they view their roles and responsibilities related to living marine resources. The Security consideration defines the threats of IUU fishing and the impact to developed and underdeveloped coastal nations. Lastly, the Legal consideration explores the domestic and international legal frameworks that give the United States, China and other Asia-Pacific nations the authority and jurisdiction to conduct fisheries law enforcement on the high seas, that is, to

detect, and deter IUU fishing. Although the researcher chose only five key considerations, there are many more possibilities that could be used.

Current Environment

The current environment analysis examines status of the four focus categories (Pacific Tuna, WCPFC, U.S. Coast Guard, and China). These four categories are further analyzed in regard to five considerations (physical, economic, stakeholder, security, and legal). These five considerations define and conceptualize the current environment. Not every consideration applies to each category. However, each consideration provides one way to “visualize, understand, and depict” the current environment.¹⁵⁷ This aspect provides a baseline from which all subsequent analysis will follow.

Pacific Tuna

HMS like Pacific Tuna swim between international boundaries. This makes protecting these resources extremely challenging. Although most coastal states are dedicated to the protection and long-term sustainability of Pacific Tuna, not every country has the resources and capability to protect these resources within and outside their territories. RFMOs overcome these obstacles using the membership countries strengths to increase management, regulatory, and enforcement capacity. RFMOs are force multipliers. No one nation can do it alone. The RFMO is a governance system that provides a peaceful forum for coastal states with competing national interest to discuss their interest and grievances while protecting Pacific Tuna from the threat of overfishing. Currently, the “Food and Agriculture Organization (FAO) estimates that about one-third

¹⁵⁷Joint Chiefs of Staff, *Planner’s Handbook for Operational Design*, IV-1.

of the world's seven major tuna species are currently overexploited. Given continued strong consumer demand for products like *sashimi* and canned tuna, combined with overcapacity of fishing fleets, the status of tuna stocks is likely to deteriorate further if fisheries management is not improved.”¹⁵⁸ The WCPFC is a management body created to address these challenges and ensure long-term sustainability of Pacific Tuna. “The main commercial tuna species caught in the WCPFC region are albacore (*thunnus alalunga*), bigeye (*thunnus obesus*), skipjack (*katsuwonus pelamis*), and yellowfin (*thunnus albacares*).¹⁵⁹ The WCPFC has now expanded its conservation management measures of highly migratory species to include shark, marlin, and other billfish. Although this study only addresses Pacific Tuna, all of these species are part of a fragile ecosystem susceptible to both natural and man-made threats. In order to further understand this complex environment, the researcher provides an analysis of three considerations: Physical, Stakeholder, and Economic to describe the current Pacific Tuna environment.

Physical

This section addresses the Physical considerations of Pacific Tuna and why they are a challenge to manage. Tuna are a HMS. They can travel thousands of miles and swim up to speeds of 50 knots.¹⁶⁰ For example, albacore tuna migration begins during the

¹⁵⁸FAO, “Push to enhance management and conservation in tuna fisheries on the high seas.”

¹⁵⁹WCPFC, “Statistical Bulletins,” <http://www.wcpfc.int/statistical-bulletins> (accessed January 16, 2014).

¹⁶⁰NOAA Fish Watch, “Pacific Albacore Tuna,” http://www.fishwatch.gov/seafood_profiles/species/tuna/species_pages/pacific_albacore_tuna.htm (accessed January 20, 2014).

early summer months off the coast of Japan. By late summer, the same albacore tuna stocks are off the coast of the western United States.¹⁶¹ This is challenging for managers, policymakers, and enforcers because HMS species, like Pacific Tuna, swim in and out of multiple EEZ and high seas. In order to protect Pacific Tuna the international community under the 1982 UNCLOS, the 1993 FAO Compliance Agreement, the 1995 UN Code of Conduct for Responsible Fishing, and other international agreements, established RFMOs to protect Pacific Tuna from overfishing and ensure equitable international governance.

Stakeholders

Protecting Pacific Tuna requires stakeholder participation. Stakeholders include fishery resource managers, international and domestic regulators, enforcers, scientists, non-governmental organizations, and inter-governmental organizations, the commercial fishing industry, and local communities. Even consumers are considered stakeholders. All are important components in protecting Pacific Tuna stocks.

Economic

Tuna fishing is a multi-billion dollar global industry. Highly migratory tuna account for about 20 percent of the value of all marine capture fisheries; catches of the most important tuna species are alone worth over \$10 billion annually.”¹⁶² “Around 5.4 million tons are landed each year, with over 85 countries harvesting tuna in commercial quantities. Capture levels are highest in the Pacific Ocean, followed by the Atlantic and

¹⁶¹NOAA Fish Watch, “Pacific Albacore Tuna.

¹⁶²FAO, “Push to enhance management and conservation in tuna fisheries on the high seas.”

Indian Oceans.”¹⁶³ Not only is it important to the U.S. economic interest, it also supports and sustains small Pacific Island economies and provides protein for millions of people around the world. Economies based on living resources are susceptible to both natural and man-made impacts. If Pacific Tuna stocks are overfished and collapses could produce a devastating ripple effect in multiple national economies threatening a nation’s food and national security.

This next section examines the WCPFC as the primary stakeholder to demonstrate the complex relationships between stakeholders and Pacific Tuna resources. Other sections will provide further analysis of the other three focus categories: WCPFC, U.S. Coast Guard, and China.

WCPFC

This section addresses the current environment of the WCPFC and examines the following considerations: Physical, Stakeholder, Economic, Security, and Legal environments. The WCPFC is the leading international body for the protection of Pacific Tuna. RFMOs or Regional Fisheries Bodies like the WCPFC are formed from multilateral treaties to protect the world’s fish stocks from overfishing. The wide expanse of ocean and the small island states of the Western and Central Pacific limited capacity to manage, regulate, and police these isolated regions poses a major challenge for policy makers. The primary tool for improving enforcement capacity is by forging alliances and participating in multilateral agreements or treaties through RFMOs to increase the host

¹⁶³FAO, “Push to enhance management and conservation in tuna fisheries on the high seas.”

nation's law enforcement capacity. Currently there are five tuna-RFMOs in the world, including the WCPFC. This analysis is limited to the WCPFC.

Physical

This section examines the scale of the WCPFC area of responsibility. The WCPFC consist of 25 member countries, seven participating territories, and 11 cooperating non-members.¹⁶⁴ The United States and China are both member countries. “The area covered by the Convention covers almost 20 per cent of the Earth’s surface. Although the western boundary notionally extends to the East Asian seaboard, it is understood that the Convention Area does not include the South China Sea. In the east, the Convention Area adjoins, or overlaps, the area of competence of the Inter-American Tropical Tuna Commission. The southern boundary extends to 60 degrees south and the northern boundary extends to Alaska and the Bering Sea.”¹⁶⁵ Figure 1 below illustrates the WCPFC area of responsibility and their area of influence.

¹⁶⁴WCPFC Members: Australia, China, Canada, Cook Islands, European Union, Federated States of Micronesia, Fiji, France, Indonesia, Japan, Kiribati, Republic of Korea, Republic of Marshall Islands, Nauru, New Zealand, Niue, Palau, Papua New Guinea, Philippines, Samoa, Solomon Islands, Chinese Taipei, Tonga, Tuvalu, United States of America, Vanuatu. WCPFC Participating Territories: American Samoa, Commonwealth of the Northern Mariana Islands, French Polynesia, Guam, New Caledonia, Tokelau, Wallis and Futuna. WCPFC Cooperating Non-member(s): Belize, Democratic Peoples Republic of Korea, Ecuador, El Salvador, Mexico, Panama, Thailand, Vietnam. WCPFC, “About WCPFC.”

¹⁶⁵WCPFC, “Frequently Asked Questions and Brochures.”

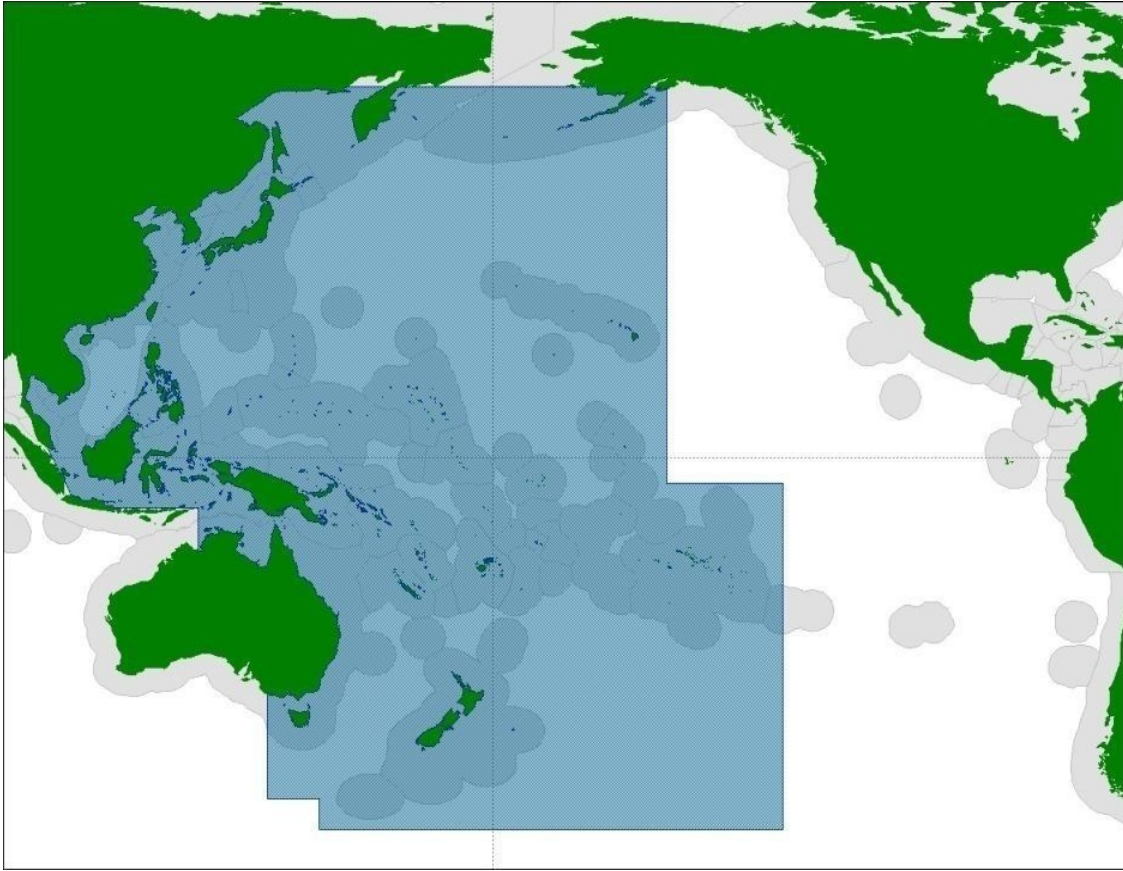


Figure 1. Tuna Fisheries of the Western and Central Pacific Ocean

Source: Secretariat of the Pacific Community, Ocean Fisheries Program, “Tuna Fisheries, Overview of Tuna Fisheries, Tuna Fisheries of the Western and Central Pacific Ocean,” <http://www.spc.int/OceanFish/en/tuna-fisheries/overview-tuna-fisheries> (accessed March 9, 2014).

Figure 2 illustrates the complex jurisdictional layers in managing highly migratory species like Pacific Tuna. The figure below shows five RFMOs; including the WCPFC, as well as the U.S. EEZ and other claimed maritime jurisdictions. Without RFMOs, it would be impossible to manage and protect HMS species.

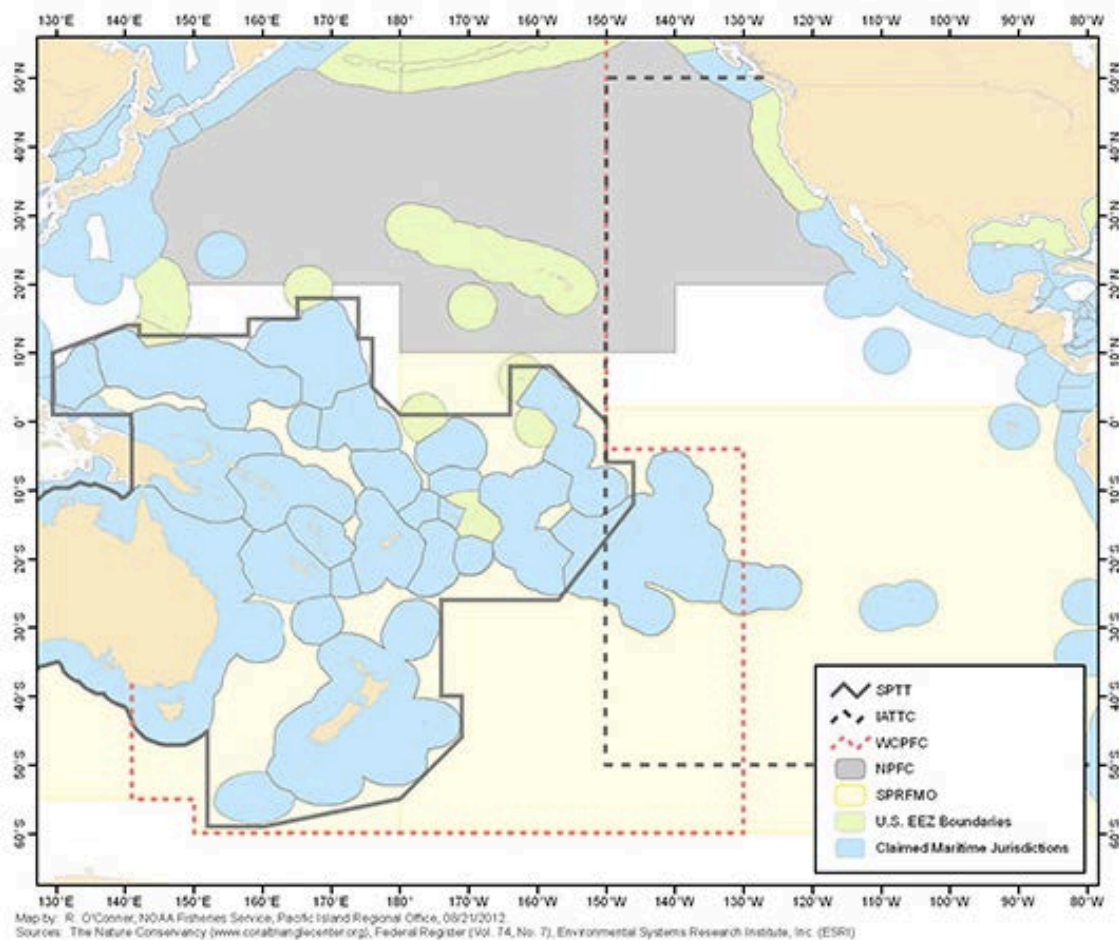


Figure 2. Western Central Pacific Ocean Regional Fisheries Management Boundaries

Source: NOAA Fisheries, Pacific Island Regional Office, “International Fisheries, WCPO Regional Fisheries Management Boundaries,” http://www.fpir.noaa.gov/IFD/ifd_wcpfc_fisheries_map.html (accessed March 9, 2014).

Stakeholders

In addition to the WCPFC, this section identifies the stakeholders who make up the current environment. These stakeholders include commercial fisherman, scientist, fishery resource managers, enforcers (navies/coast guard), international and domestic regulators, Non-Governmental Organizations and Inter-Governmental Organizations, the

commercial fishing industry, developing Pacific States, and local communities. This section briefly discusses the roles and relationships of, commercial fishing industry, developing Pacific states, other regional fisheries management organizations, and other fisheries agencies dedicated to protecting Pacific Tuna.

Commercial Fishing Industry

Without commercial fishermen there is no commercial fishing industry. Without Pacific Tuna, there is neither an industry nor economy. One threat to legitimate commercial fishing is IUU. NOAA Fisheries identified how IUU fishing affects the seafood industry and U.S. consumers. “By dodging conservation and management measures, companies engaging in IUU fishing can cut corners and lower their operating costs. As a result, their illegally caught products provide unfair competition for law-abiding fisherman and seafood industries in the marketplace.”¹⁶⁶ The threat of IUU fishing on the U.S. economy is significant. “U.S. consumers spent an estimated \$82.6 billion for fishery products in 2012. By producing and marketing a variety of fishery products for domestic and foreign markets, the commercial marine fishing industry contributed \$42 billion (in value added) to the U.S. Gross National Product.”¹⁶⁷ If IUU can impact the U.S. commercial fishing industry then it is likely to have an even greater impact on small Pacific Island economies that depend on it. This leads to the next group of important stakeholders.

¹⁶⁶NOAA Fisheries, “IUU Fishing – Frequently Asked Questions,” <http://www.fisheries.noaa.gov/ia/iuu/faqs.html> (accessed November 11, 2013).

¹⁶⁷Ibid.

Developing Pacific States

Developing Pacific States in the Asia-Pacific Region are important stakeholders. Their fragile economies depend on access to Pacific Tuna and other living marine resources. “The small island developing States of the Pacific have long held aspirations for developing their own domestic commercial fisheries and retaining an even greater share of the benefits from the multi-billion dollar fishery in their backyards. At the same time, the well-established fleets of the industrialized countries continue to grow and become more efficient with the advent of new and better fishing technology. Such growth in the number of fishing vessels in both small and large fleets, coupled with higher productivity in some fleets, poses real threats to the sustainability of Western Central Pacific Ocean tuna resources.”¹⁶⁸ According to the U.S. DOS, “The large numbers of developing states that depend on fisheries for food security and export income are particularly vulnerable.”¹⁶⁹ Food security for developing states is a matter of national security. Denied or disrupted access to Pacific Tuna could severely impact and destabilize countries that solely depend on this industry. The Western and Central Pacific Fisheries Commission provide a process in which developing states can participate to protect their fishing interest.

¹⁶⁸WCPFC, “Frequently Asked Questions and Brochures.”

¹⁶⁹U.S. Department of State, “Illegal, Unreported, and Unregulated Fishing,” <http://www.state.gov/e/oes/ocns/fish/illegal/index.htm> (accessed November 11, 2014).

Other Tuna RFMOs

Besides the WCPFC, there are four global organizations responsible for protecting Pacific Tuna. These organizations work collectively to support conservation management goals and ensure a level playing field for all stakeholders.

As a member of the global RFMO family, the WCPFC has concluded a number of Memoranda of Understanding (MOU) with related fisheries organizations, including the Inter-American Tropical Tuna Commission (IATTC), the Commission for the Conservation of Southern Bluefin Tuna (CCSBT), the Indian Ocean Tuna Commission (IOTC) and the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR).¹⁷⁰

These RFMOs all have large areas of responsibility, with some overlap and are all dedicated to protecting Pacific Tuna and other highly migratory species. The goal of these RFMOs is to strengthen and improve an international governance system that conserves the resource and ensures a level playing field for all stakeholders. Although this is not a one size fits all solution, there are benefits to exchanging scientific, management and enforcement best practices. For example, members of the WCPFC are also members of these other RFMOs. This ensures continuity of governance and contributes to the overarching goal of protecting the resource. In addition, these areas of responsibility are man-made ocean boundaries. Pacific Tuna and other highly migratory species swim unaware of these artificial boundaries.

Other Fishery Agencies

There are many multi-national fishery agencies and RFMOs with overlapping jurisdictional responsibilities and similar missions all seeking to overcome the challenges and threats to protect Pacific Tuna. One organization in particular that demonstrates

¹⁷⁰WCPFC, “Frequently Asked Questions and Brochures.”

another complex link to the current stakeholder environment is the Pacific Island FFA. The Pacific Island FFA is comprised of 17 Pacific Island countries.¹⁷¹ Its mission is to “strengthen national capacity and regional solidarity for sustainable tuna fisheries.”¹⁷² “FFA was established to help countries sustainably manage their fishery resources that fall within their 200 mile Exclusive Economic Zones (EEZs). FFA is an advisory body providing expertise, technical assistance and other support to its members who make sovereign decisions about their tuna resources and participate in regional decision making on tuna management through agencies such as the Western and Central Pacific Fisheries Commission (WCPFC).”¹⁷³ As mentioned in the previous section, continuity of management, regulations, and enforcement are key in protecting Pacific Tuna. Pacific Tuna should be sustainably managed everywhere. Any weakness in the system can be exploited. IUU fishers can exploit any loophole in governance. The FFA is another valuable component to ensure sustainable ocean governance. The FFA provides a wealth of experience and expertise to coastal nations who desire to increase their own scientific, management, and law enforcement capacity. The FFA’s partnership with the WCPFC advances international and regional goals to protect Pacific Tuna.

¹⁷¹“Based in Honiara, Solomon Islands, FFA's 17 Pacific Island members are Australia, Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, New Zealand, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu and Vanuatu.” Secretariat of the Pacific Community, Ocean Fisheries Program, “Tuna Fisheries, Regional Bodies, Forum Fisheries Agency,” <http://www.spc.int/OceanFish/en/tuna-fisheries/regional-bodies> (accessed March 9, 2014).

¹⁷²Pacific Island Forum Fisheries Agency, “Who we are,” 2008, <http://www.ffa.int> (accessed April 27, 2014).

¹⁷³Secretariat of the Pacific Community, Ocean Fisheries Program, “Tuna Fisheries, Regional Bodies, Forum Fisheries Agency.”

Economic

Pacific Tuna is a billion dollar industry:

The fishery resources of the western and central Pacific Ocean are relatively abundant and the returns on investments are high, with the fishery estimated to be worth approximately US \$5 billion annually. This has increased international interest in Western and Central Pacific Fisheries Commission (WCPFC), with more countries applying for participatory status in the Commission every year. With increased membership come more diverse interests within the Commission, making negotiations and agreement ever more challenging.¹⁷⁴

This example demonstrates how supply and demand influences the current economic environment. There is a natural friction between the have and have-nots. Developed nations with distant water fleets like U.S. and China have an advantage. There are smaller Pacific Island nations that want to expand their fleet capacity in order to have a larger share of the market. This is a friction point in the current economic environment.

Security

This section focuses on the threat of IUU fishing on Pacific Tuna. The WCPFC was formed to govern the high seas and eliminate IUU fishing. IUU fishing practices undermine those in the commercial fishing industry who abide by existing international rules and regulations. There are many countries in the Asia-Pacific region with weak domestic fisheries regulations and a limited enforcement capability to prevent IUU fishing within their EEZ. If one adds disputed territories to the mix, the nation that has the largest commercial fishing fleet and a military or coast guard presence to back it up can dictate the terms. IUU fishers are profit motivated but they are also enticed by weak governance and enforcement. “Independent experts have estimated economic losses

¹⁷⁴WCPFC, “Frequently Asked Questions and Brochures.”

worldwide from IUU fishing to be between \$10 billion and \$23 billion annually.”¹⁷⁵ This is a staggering number when compared to the \$10 billion for the whole of the tuna commercial fishing industry. As mentioned earlier, “highly migratory tuna account for about 20 percent of the value of all marine capture fisheries - catches of the most important tuna species are alone worth over \$10 billion annually.”¹⁷⁶ This value provides the practical motivation to manage and govern tuna fish stocks.

Most Pacific Island economies depend on Pacific Tuna as not only a primary protein food source; their economies depend on it as well. Food security is one of many issues that threaten regional stability in the Asia Pacific region. The World Food Summit of 1996 defined food security as existing “when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life.”¹⁷⁷

“Commonly, the concept of food security is defined as including both physical and economic access to food that meets people's dietary needs as well as their food preferences.”¹⁷⁸ Access to this living marine resource is essential to Pacific Island’s food, economic, and overall national security.

¹⁷⁵NOAA Fisheries, “NOAA to Work with 10 Nations to Address Illegal, Unreported, and Unregulated Fishing and Stem the Bycatch of Protected Species.”

¹⁷⁶FAO, “Push to enhance management and conservation in tuna fisheries on the high seas.”

¹⁷⁷According to the World Health Organization, food security is built on three pillars: availability, access, and use. Food availability: sufficient quantities of food available on a consistent basis. Food access: having sufficient resources to obtain appropriate foods for a nutritious diet. Food use: appropriate use based on knowledge of basic nutrition and care, as well as adequate water and sanitation. World Health Organization, “Food Security,” <http://www.who.int/trade/glossary/story028/en/> (accessed November 17, 2013).

¹⁷⁸World Health Organization, “Food Security.”

Many of the small Pacific Islands are also suitably located in the Asia-Pacific region to provide critical line of communication for the U.S. maritime forces forward presence strategy. Although this study did not fully analyze U.S. forward maritime presence strategy in the Pacific, there is a security connection worthy of discussion. Access to Pacific Islands was key to U.S. victory in the Pacific during World War II. These islands were key logistical supply points and communication stations for U.S. naval and marine forces. This remains as true today as it ever was. The tyranny of distance still prevails. Continued access to these areas allows the United States to project power in the Pacific. The converse is also true. The United States must assume these strategic Pacific islands are also strategic to potential competitors such as China. If tensions escalate, these territories would become strategic locations for both the United States and any opponent.

Legal

The fifth consideration is the current legal environment. The United States is mandated by law to participate in the WCPFC. “The Western and Central Pacific Fisheries Convention Implementation Act, 2007, provides that the United States shall be represented in the Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean (WCPFC) by five Commissioners.”¹⁷⁹ These five commissioners are presidential appointees. These Commissioners must have experience with highly migratory fish stocks in the Western

¹⁷⁹NOAA Fisheries, *Part I: International and Regional Management Arrangements - Pacific Ocean, Western and Central Pacific Fisheries Convention (WCPFC)*, www.nmfs.noaa.gov/ia/agreements/regional_agreements/pacific/wcpfc.pdf (accessed March 9, 2014), 68-71.

and Central Pacific. One must be an officer or employee of the DOC; one a member of the Western Pacific Fishery Management Council and one must be a member of the Pacific Fishery Management Council.¹⁸⁰ The commissioners from the Western Pacific and Pacific Fishery Management Councils provide continuity between domestic rulemaking and regulations within the U.S. EEZ and the conservation management measures proposed by the RFMOs. Once again, the areas of responsibility of these councils overlap. Pacific tuna travel in and out of the U.S. EEZ. Domestic management measures must take into account the impact of their harvesting quotas with the entire international and national systems. Harmonizing domestic policy with international agreements like the WCPFC is an essential component in protecting Pacific Tuna. Once again, IUU fishers will exploit areas with weaker governance and enforcement capabilities. It is incumbent the United States partner closely with the WCPFC and international enforcement agencies to share information and coordinate enforcement to keep the pressure on fishing fleets who take advantage of weak governance and enforcement.

U.S. Coast Guard

The third focus category examined in this study is the U.S. Coast Guard. This section addresses four considerations: Physical, Stakeholder, Security, and Legal. These considerations illustrate the current linkages between the U.S. Coast Guard and the other three categories: Pacific Tuna, WCPFC, and China. The U.S. Coast Guard is the principle federal agency responsible for maritime safety, security, and environmental stewardship.

¹⁸⁰NOAA Fisheries, *Part I: International and Regional Management Arrangements - Pacific Ocean*, 69.

In particular, the U.S. Coast Guard is the lead federal agency for at-sea enforcement of the nation’s fisheries and marine protected species laws and regulations. The lead federal agency for at-sea enforcement is an important distinction because the U.S. Coast Guard is the only agency that has the air and surface capabilities to project a sustained offshore law enforcement presence. However, they cannot do this alone. They share this responsibility. “Living marine resource enforcement is a joint responsibility of both NOAA Enforcement and the U.S. Coast Guard, with assistance from the DOD and state enforcement agencies.”¹⁸¹ The U.S. Coast Guard has two fisheries law enforcement statutory missions. This analysis specifically focuses on the OLE mission. “The Other Law Enforcement (OLE) mission is more accurately described as Foreign Fishing Vessel Law Enforcement . . . and ensures the integrity of the U.S. maritime border and EEZ, strengthens the deterrence of living marine resource thefts from areas of U.S. jurisdiction, supports the elimination of illegal fishing practices on the high seas, and provides monitoring compliance with international living marine resource regimes and international agreements [like the WCPFC] to which the U.S. is party.”¹⁸²

Physical

The first consideration provides a general overview of the U.S. Coast Guard’s current Physical environment. The U.S. Coast Guard is responsible for patrolling the U.S. EEZ. “The United States has the largest EEZ in the world, 3.36 million square miles,

¹⁸¹U.S. Coast Guard, *Ocean Guardian*, 1.

¹⁸²DHS and U.S. Coast Guard, *United States Coast Guard Fiscal Year 2009 Performance Report*, 36.

containing an estimated 20 percent of the world's fisheries resources."¹⁸³ "The Western Pacific EEZ covers approximately 1.5 million square miles, representing nearly half of the total U.S. EEZ. The total operating area for the Coast Guard is three million square miles."¹⁸⁴ With extended Pacific Island territories like Guam and American Samoa, the United States has a vast ocean region to protect from IUU fishing practices.

According to the 2006 U.S. Coast Guard *International Strategic Plan*, "the Pacific region contains more than 50 percent of the earth's surface; nearly 60 percent of the world's population, 43 countries, 20 foreign territories and possessions, 10 U.S. territories, the world's six largest armed forces, and five of the seven worldwide U.S. mutual defense treaties."¹⁸⁵ This diversity of politics, economies, cultures, religions, and societies makes a challenging problem. What also makes this unique is the large expanse of ocean spaces. Fleets of commercial and military ships traverse these vast ocean spaces to support globalized economies and protect national interest. The Coast Guard is the first line of defense from maritime threats like IUU fishing. What makes this challenging is the large area and limited resources to patrol these vast ocean spaces. The Coast Guard has a finite amount of air and surface resources. Competing missions, shrinking budgets and limited resource hours also make it challenging for planners to dedicate the necessary operational hours to adequately patrol the Western and Central Pacific. In order to

¹⁸³U.S. Coast Guard, *United States Coast Guard Protecting America's Fisheries*, 9.

¹⁸⁴*Ibid.*, 10.

¹⁸⁵U.S. Coast Guard, *International Strategic Plan*, 2006. U.S. Department of Homeland Security, http://www.uscg.mil/international/affairs/policy/strategic_plan.htm (accessed April 22, 2014), 15.

overcome this challenge, the United States uses international agreements and may rely on DOD assets to augment its fisheries law enforcement mission. The next section explores the relationships between two key stakeholders, the DOD, and the DHS stakeholders.

Stakeholders

This section examines the current stakeholder environment and identified six actors: USPACOM, Naval Fleet Command, U.S. Coast Guard Pacific Area, U.S. Coast Guard District Fourteen, NOAA: National Marine Fisheries Service, and Department of State: Office of Marine Conservation.

USPACOM

The USPACOM mission is “committed to enhancing stability in the Asia-Pacific region by promoting security cooperation, encouraging peaceful development, responding to contingencies, deterring aggression, and, when necessary, fight to win.”¹⁸⁶ They are headquartered at Camp H.M. Smith near Honolulu, HI. In order to understand USPACOM’s role in the current environment, the researcher examined their area of responsibility. “The U.S. Pacific Command (USPACOM) area of responsibility (AOR) encompasses approximately half the earth’s surface and more than half of its population.”¹⁸⁷ This is significant because U.S. Coast Guard forces operate in

¹⁸⁶U.S. Pacific Command, “USPACOM Facts: Headquarters, United States Pacific Command.”

¹⁸⁷“The 36 nations that comprise the Asia-Pacific region are home to more than 50 percent of the world’s population, three thousand different languages, several of the world’s largest militaries, and five nations allied with the U.S. through mutual defense treaties. Two of the three largest economies are located in the Asia-Pacific along with ten of the fourteen smallest. The AOR includes the most populous nation in the world, the largest democracy, and the largest Muslim-majority nation. More than one third of Asia-

USPACOM's AOR 365 days a year. The Coast Guard's fishery law enforcement mission is one place where both the DHS and the DOD can combine resources to accomplish common goals. For example, the U.S. Navy has embarked U.S. Coast Guard fisheries law enforcement officers on board their ships to detect IUU fishers in the Western Central Pacific. These Joint Operations capitalize on each service's capabilities. The U.S. Navy has excellent deep-water range and endurance. In addition, the Navy's Intelligence, Surveillance, and Reconnaissance surface and air capabilities provide unique capabilities to observe and detect illegal fishing.

U.S. Pacific Fleet

Within USPACOM's AOR, there is another key stakeholder in the Pacific, U.S. Pacific Fleet. Pacific Fleet's Operational Commanders are the U.S. 3rd and 7th Fleets. This research specifically focuses on the 7th Fleet's mission and AOR since this overlaps with Coast Guard Pacific Area (PACAREA) and the WCPFC. The U.S. Pacific Fleet mission is to "protect and defend the maritime interest of the U.S. in the Indo-Asia-Pacific region."¹⁸⁸ "The 7th Fleet's Area of Responsibility encompasses more than 48 million square miles (more than 124 million square kilometers); from the Kuril Islands in the north to the Antarctic in the south, and from the International Date Line to the 68th

Pacific nations are smaller, island nations that include the smallest republic in the world and the smallest nation in Asia." U.S. Pacific Command, "USPACOM Facts: Headquarters, United States Pacific Command."

¹⁸⁸Commander, U.S. Pacific Fleet, "About Us," <http://www.cpf.navy.mil/about/#aor.htm> (accessed June 4, 2014).

meridian east, which runs down from the India-Pakistan border.”¹⁸⁹ This region is home to the “world’s five largest foreign armed forces” including robust near peer navies.¹⁹⁰ These navies protect their national interest and this includes commercial fishing interests. All of these countries have large commercial fishing fleets. Another key linkage is the 7th Fleet participation in bilateral and multilateral military exercises. “U.S. 7th Fleet units take part in as many as 125 bilateral and multilateral exercises each year, comprising over 1,800 total days per year of regional engagement.”¹⁹¹ The 7th Fleet ensures security and stability in the Asia-Pacific region and is a major stakeholder in the region. If tensions escalate, the 7th Fleet is strategically located to respond.

U.S. Coast Guard PACAREA

Pacific Area (PACAREA) is the Coast Guard’s regional command element and force provider for maritime safety, security, and stewardship in the Pacific [figure 3]. PACAREA’s area of responsibility encompasses six of the seven continents, 71 countries, and more than 74 million square miles of ocean -- from the U.S. Western States to Asia, and from the Arctic to Antarctica.¹⁹²

Similar to PACOM and 7th Fleet, PACAREA is responsible for a geographical area.

Overlapping jurisdictions provide command and control linkages between DOD and the

¹⁸⁹“The area includes 36 maritime countries and the world’s five largest armed forces—People’s Republic of China, Russia, India, North Korea and the Republic of Korea. Five of the seven U.S. Mutual Defense Treaties are with countries in the area—Republic of the Philippines, Australia, and New Zealand, Republic of Korea, Japan, and Thailand.” Commander, U.S. 7th Fleet, “About the U.S. 7th Fleet,” U.S. Navy, <http://www.c7f.navy.mil/about.htm> (accessed May 2, 2014).

¹⁹⁰Commander, U.S. 7th Fleet, “About the U.S. 7th Fleet.”

¹⁹¹Ibid.

¹⁹²U.S. Coast Guard, “U.S. Coast Guard, Pacific Area,” U.S. Department of Homeland Security, <http://www.uscg.mil/pacarea/> (accessed January 30, 2014).

DHS. PACAREA provides command and control for all Coast Guard forces in the Pacific. PACAREA allocates major cutter surface assets, Medium and High Endurance cutters to three District commands. PACAREA provides command and control and oversees of three Coast Guard Districts: Eleven (Alameda, CA); Fourteen (Honolulu, HI); and Seventeen (Juneau, AK). These districts all dedicate operational hours and resources to fishery law enforcement missions. This study focuses on Coast Guard District Fourteen.

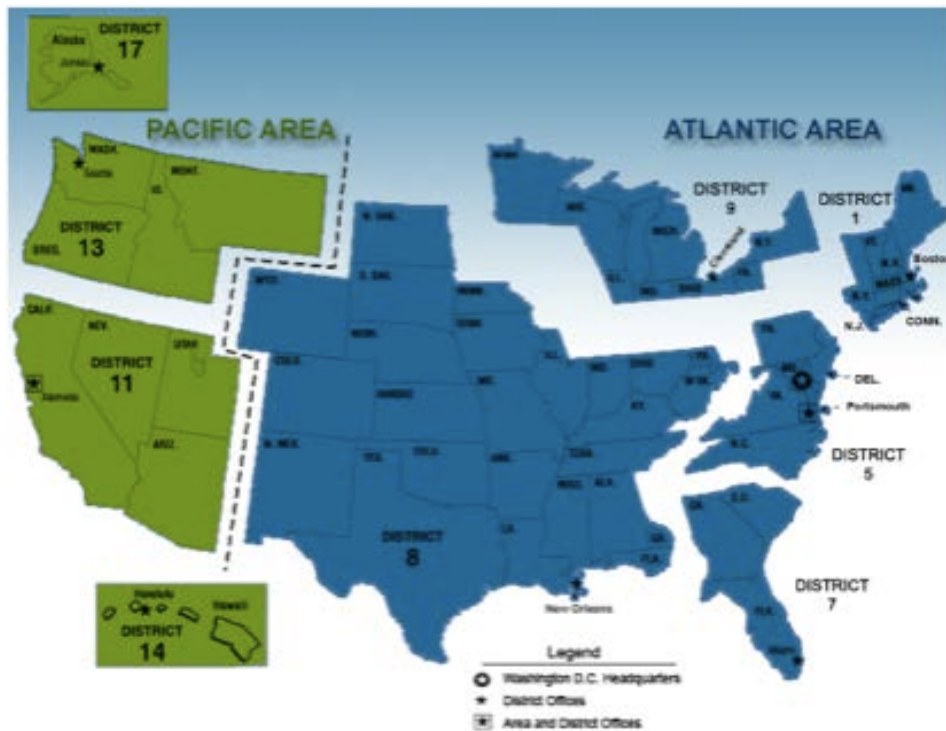


Figure 3. U.S. Coast Guard Area and District Headquarters

Source: U.S. Coast Guard, “U.S. Coast Guard Area and District Headquarters,” U.S. Department of Homeland Security, <http://www.uscg.mil/top/units> (accessed June 4, 2014).

U.S. Coast Guard District Fourteen

U.S. Coast Guard District Fourteen headquarters is located in Honolulu, HI. Their AOR includes Hawaii, Guam, and American Samoa (figure 3). District Fourteen has a unique challenge in the Pacific because most of the U.S. EEZ is not geographically contiguous. District Fourteen must cover large ocean spaces not just within the U.S. EEZ, but they must patrol vast high seas areas. High seas areas are those areas outside the U.S. national jurisdictions. Ensuring adequate coverage of these vast areas is a challenge for Coast Guard operational planners. Planners must ensure enforcement assets are in the right place at the right time. According to the *United States Coast Guard: Fiscal Year 2009 Performance Report*, the Coast Guard's detected incursions in the vast Western and Central Pacific EEZ increased from 12 to 26.¹⁹³ This requires focused analysis to ensure assets are deployed in the pre-determined high threat areas. In fiscal year 2009:

Coast Guard operations in the Western and Central Pacific focused patrol efforts through use of electronic monitoring systems including Vessel Monitoring System (VMS) and predictive analysis of oceanic environmental factors conducive to illegal fishing. In August 2009, these tools enabled Coast Guard air patrol in the U.S. waters of the Northern Marianas Islands to detect three Taiwan fishing vessels illegally fishing within U.S. waters. NOAA used the evidence gathered by the Coast Guard to negotiate a settlement with Taiwanese officials. This case also highlights the effectiveness of the international fishery regimes in combating IUU fishing. The IUU listing process of the Western and Central Pacific Fisheries Commission and the threat of sanctions facilitated the response by the vessels' owners and Taiwan to reach a settlement.¹⁹⁴

¹⁹³DHS and U.S. Coast Guard, *United States Coast Guard: Fiscal Year 2009 Performance Report*, 36.

¹⁹⁴*Ibid.* Vessel Monitoring Systems are used to track a fishing vessels position to ensure they are fishing where they are supposed to fish. These systems also provide real-time information to managers and enforcers to ensure legal fishing is taking place.

Coast Guard District Fourteen provides representation to the WCPFC. These representatives coordinate with the WCPFC and obligate fisheries law enforcement patrol resources to enforce the treaties conservation management measures (CMM). The CCMs provide member nations with the enforcement teeth necessary to carry out fishery patrols on the high seas. There are advantages and disadvantages to these obligations. The advantages are Hawaii and U.S. territories extend the U.S. EEZ into the Asia-Pacific region. This gives the United States further reach into the Pacific and access to the abundant Pacific Tuna resources. District Fourteen's AOR overlaps with the abundant Pacific Tuna habitats and migration routes.

In June of 2009, Coast Guard law enforcement officers based in Hawaii joined the crew of USS CROMMELIN (FFG 37) to support Coast Guard fisheries enforcement in the Western and Central Pacific. USS CROMMELIN was on a routine deployment in the Western Pacific at the time. The Coast Guard and Navy's cooperative effort greatly enhanced the Coast Guard's maritime domain awareness and increased its effective presence. This partnership has demonstrated DOD's willingness to support the Coast Guard's efforts to combat IUU fishing in the Pacific."¹⁹⁵

National Marine Fisheries Service

Two key U.S. interagency partners play an important role in U.S. fisheries law enforcement and international agreements like the WCPFC. They are the DOC, National Marine Fisheries Service (NMFS) or NOAA Fisheries and the DOS, and the Office of Marine Conservation (OMC). This section discusses the roles and responsibilities of NMFS. "NMFS is the lead federal agency responsible for the stewardship of the nation's

¹⁹⁵DHS and U.S. Coast Guard, *United States Coast Guard: Fiscal Year 2009 Performance Report*, 36.

offshore living marine resources and their habitat.”¹⁹⁶ The relationship between the U.S. Coast Guard and NMFS is complementary. NMFS manages the fisheries and shares enforcement responsibility with the Coast Guard.¹⁹⁷ Their authority and jurisdiction extends from three to 200 miles offshore.¹⁹⁸ The Coast Guard provides the air and surface capabilities enabling an offshore law enforcement presence while the NMFS provides the shore side law enforcement component. It is not uncommon for NMFS agents and uniformed officers to embark on board U.S. Coast Guard aircraft, boats, and cutters to patrol and conduct joint domestic and international fisheries law enforcement boardings.

DOS

Similar to the DOC, the DOS also has a major role in international fisheries.

The Office of Marine Conservation (OMC) is a part of the State Department's Bureau of Oceans and International Environmental and Scientific Affairs (OES). The Office of Marine Conservation is responsible for formulating and implementing U.S. policy on a broad range of international issues concerning living marine resources. In executing this responsibility, OES/OMC negotiates bilateral and multilateral fisheries agreements, participates in international fisheries conservation and management organizations and arrangements at the regional and global levels, and represents the U.S. in a variety of other international fora associated with the conservation and management of living marine resources.”¹⁹⁹

¹⁹⁶NOAA, “Fisheries,” U.S. Department of Commerce, <http://www.noaa.gov/fisheries.html> (accessed February 2, 2014).

¹⁹⁷U.S. Coast Guard, *United States Coast Guard Protecting America’s Fisheries*, 6.

¹⁹⁸NOAA Fisheries, “About National Marine Fisheries Service,” <http://www.nmfs.noaa.gov/aboutus/aboutus.html> (accessed April 30, 2014).

¹⁹⁹U.S. Department of State, “Fisheries and Marine Conservation,” <http://www.state.gov/e/oes/ocns/fish/index.htm> (accessed April 30, 2014).

The Office of Marine Conservation coordinates with other U.S. government agencies like the U.S. Coast Guard and the National Marine Fisheries Service to control and prevent IUU fishing. The U.S. Coast Guard works closely with the DOS to develop and enforce international fisheries agreements.

Security

This section addresses the current security environment. “By 2045, the global population is projected to reach nine billion.”²⁰⁰ To feed the world’s population, this will place enormous pressure on the ocean’s living marine resources. This will likely lead to a race for fish and expanded access to fish. In this grab to exploit ocean resources there is potential for instability and greater conflict. The Cod Wars between Iceland and the United Kingdom during the 1950s and 1970s are but one example of the volatility surrounding access to living marine resources.²⁰¹ Asia-Pacific countries depend on the access to these rich and diverse living marine resources for their livelihood. This is likely to continue as these countries turn to the ocean’s bounty to harvest natural living marine resources to feed their own population. The United States through its participation in international fisheries agreements is determined to ensure all stakeholders adopt sustainable fishing practices to protect these precious resources. Left unchecked, unsustainable fishing practices combined with higher demand for fish will lead to overfishing and eventual collapse.

²⁰⁰Kunzig.

²⁰¹Nyman, 5-14.

The commercial fishing industry underpins the security and economic prosperity of many nations. According to the UN FAO, “the world fishing fleet consisted of about 4.4 million vessels in 2010, relatively stable since 1998, with 73 percent of these vessels flagged in Asia, followed by Africa, Latin America and the Caribbean, North America and Europe.”²⁰² “The United States is the fifth largest fishing nation in the world, with approximately 110,000 commercial vessels.”²⁰³ Many commercial fishing fleets’ vessels are flagged or registered under different nations with limited or minimal regulations and associated registration or licensing fees. A majority of these countries are either ill equipped or otherwise incapable of adequately enforcing their domestic laws and international agreements. This is why RFMOs are important in governing ocean spaces. As a member of the WCPFC, these countries with limited resources become a part of a larger coalition of coast guard forces and resources.

Legal

This section provides a general overview of the complex legal frameworks that obligate the United States and its U.S. Coast Guard to participate in international fisheries agreements like the WCPFC. Before discussing this relationship, the researcher presents a brief discussion in U.S. domestic law, statutes, and policies. This begins with the nation’s Constitution and covers over a century of legal precedence, including the 1900 Lacey Act, the 1964 Bartlett Act, and the 1976 Magnuson-Stevens Fishery Conservation and Management Act. Other than the legislative acts, the study also looked at former

²⁰²FAO, “Overview: Major Trends and Issues.”

²⁰³U.S. Coast Guard, *United States Coast Guard Protecting America’s Fisheries*, 9.

President Clinton's Presidential Directive/NSC-36 (PDD-36) that protects the ocean environment and the conservation of living marine resources.

U.S. Law

The Constitution of the United States is the primary legal framework from which the Coast Guard enumerates its authority. According to Article 1, Section 8, of the U.S. Constitution, "Congress shall have the Power to lay and collect Taxes, Duties, Imposts and Excises, to pay the Debts and provide for the common Defense and general Welfare of the United States . . . to define and punish Piracies and Felonies committed on the high Seas, and Offenses against the Law of Nations."²⁰⁴ The focus of this Article 1, Section 8, is "to define and punish Piracies and Felonies committed on the high seas, and offenses against the Law of Nations."²⁰⁵ This demonstrates that the highest law of the United States is committed to the security and enforcement of the high seas and offenses against the Law of Nations. In this case, the Law of Nations has expanded to the 1982 UNCLOS. UNCLOS will be discussed later in this chapter. The U.S. Coast Guard is the premier U.S. maritime law enforcement agency with the authorities and jurisdiction to deter, detect, and IUU fishing in the U.S. EEZ and on the high seas. In addition to the Constitution, three Congressional Acts demonstrate our current commitment to protect wildlife, seize foreign fishing vessels, and protect living marine resources.

²⁰⁴Constitution of the United States.

²⁰⁵Ibid.

The 1900 Lacey Act was the first federal law protecting fish or wildlife.²⁰⁶ The act extends the reach of the law to regulate trade and transport of commercial fisheries. “The Coast Guard enforces the Lacey Act, which makes it unlawful for any person subject to the jurisdiction of the United States to import, export, transport, sell, or receive fish or wildlife taken in violation of any U.S. Law, treaty, or foreign law.”²⁰⁷ This act is the principle law used to prosecute IUU fishers.

The second important act is the 1964 Bartlett Act. “The Bartlett Act prohibited foreign fishing in U.S. Territorial waters and authorized the seizure of foreign vessels in violation.”²⁰⁸ The Coast Guard is the maritime law enforcement agency capable of enforcing the Bartlett Act. U.S. territorial waters extend out to 12 nautical miles. Prior to the enactment of this law foreign fishing vessels could fish close to U.S. shores. This law represents the first step to push foreign fishing fleets (competitors) away from U.S. shores. Pushing out foreign fishing vessels preserves U.S. fishing rights in U.S. territorial seas and lays the foundation for better living marine resource stewardship.

The third and “most significant legislation regarding fisheries management and conservation is the Magnuson-Stevens Fisheries Conservation Management Act (MSFCMA). Adopted by Congress in 1976, the Act established the 200-nautical-mile

²⁰⁶“When the Lacey Act was passed in 1900, it became the first federal law protecting wildlife. It enforces civil and criminal penalties for the illegal trade of animals and plants. Today it regulates the import of any species protected by international or domestic law and prevents the spread of invasive, or non-native, species.” U.S. Fish and Wildlife Service, “Lacey Act,” <http://www.fws.gov/international/laws-treaties-agreements/us-conservation-laws/lacey-act.html> (accessed March 20, 2014).

²⁰⁷U.S. Coast Guard, *United States Coast Guard Protecting America’s Fisheries*, 5.

²⁰⁸*Ibid.*

Exclusive Economic Zone.”²⁰⁹ As a result, the U.S. has 3.4 million square miles of EEZ. This is the largest EEZ in the world. “The Magnuson-Stevens Fishery Conservation and Management (MSFCMA), the main U.S. domestic fisheries legislation, was reauthorized in 2006 with substantial new obligations to address IUU fishing, including the prospect for action against nations whose vessels engage in IUU fishing.”²¹⁰ The Magnuson-Stevens Fisheries Conservation Management Act tasks the U.S. Coast Guard with the responsibility to enforce fishery laws at sea.

The executive branch also contributes to the ocean policy and fisheries law enforcement discussion. For example, in 1995, President Clinton issued PDD/NSC-36. PDD/NSC-36 is the U.S policy on protecting the ocean environment and conserving living marine resources. “It recognizes the need for stewardship of the marine resources under our jurisdiction and for U.S. leadership in promoting international cooperation to care for high seas.”²¹¹ According to PDD/NSC-36, the United States has five principle objectives in protecting the ocean and coastal environment. One of the objectives is to ensure sustainable management of ocean fisheries.²¹² “Coastal states [like the US] have

²⁰⁹Ibid.

²¹⁰U.S. Department of State, “Illegal, Unreported, and Unregulated Fishing.”

²¹¹U.S. President, Presidential Decision Directive/NSC-36, “US Policy on Protecting the Ocean Environment,” April 5, 1995, William J. Clinton Presidential Library and Museum, <http://www.clintonlibrary.gov/assets/storage/Research%20-%20Digital%20Library/directives/2010-1225-F-pdd-36-us-policy-on-protecting-ocean-environment-april-5-1995.pdf> (accessed March 20, 2014).

²¹²“The U.S has five principle objectives in this area: becoming a party to 1982 UNCLOS, as modified in 1994; ensuring sustainable management of ocean fisheries; supporting integrated coastal resource management and reducing marine and coastal pollution; promoting the conservation of marine biodiversity, including whales and other protected species; and conducting scientific research and ocean monitoring both to

the most responsibility for fisheries and coastal zone management, as 90 percent of the world's fish catch takes place within their 200-mile exclusive economic zones (EEZs).”²¹³

To conserve our own fisheries and those on the high seas, the United States should assist other coastal states, particularly developing nations, to better manage the fisheries within the EEZs. Relevant agencies should work to help countries improve their scientific, management, and enforcement capabilities related to fisheries and should encourage multilateral institutions to provide focused and coordinated programs to strengthen national management capacities.²¹⁴

PDD/NSC-36 is an important legal consideration to explain the current environment.

International Law

This section examines five significant international law instruments: the 1982 UNCLOS, the 1993 FAO Compliance Agreement, the 1995 UNFSA, and the 1995 Code of Conduct for Responsible Fisheries, and the 2001 UN FAO IPOA-IUU.

The 1982 UNCLOS is considered the “Constitution for the Oceans.”²¹⁵ “The Convention is an unprecedented attempt by the international community to regulate all aspects of the resources of the sea and uses of the ocean, and thus bring a stable order to mankind's very source of life.”²¹⁶ UNCLOS provided a new framework for the better

support these objectives and to more fully understand oceanic and atmospheric processes of global importance.” U.S. President, Presidential Decision Directive/NSC-36.

²¹³Ibid.

²¹⁴Ibid.

²¹⁵United Nations, *United Nations Convention on the Law of the Sea*, http://www.un.org/Depts/los/convention_agreements/texts/unclos/ (accessed May 1, 2014).

²¹⁶Division for Ocean Affairs and the Law of the Sea, “United Nations Convention on the Law of the Sea: A historical perspective,” last modified August 22, 2013, United Nations, http://www.un.org/Depts/los/convention_agreements/convention_historical_perspective.htm#Protection%20of%20the%20Marine%20Environment (accessed May 1, 2014).

management of marine resources. Specifically, the Convention addresses 12 key provisions. Two of these key provisions are important to this study. The first provision is the establishment of the EEZ. This gives coastal states the jurisdictional rights to “exploit, develop, manage, and conserve all resources - fish or oil, gas or gravel, nodules or sulphur - to be found in the waters, on the ocean floor and in the subsoil of an area extending 200 miles from its shore.”²¹⁷ The second key provision is the Protection of the Marine Environment. Although this provision addresses pollution, this provision also focuses on living marine resource protection, like Pacific Tuna. Specifically, this provision addresses the “necessity to combat the degradation and depletion of fish stocks, both in the zones under national jurisdiction and in the high seas and its causes, such as overfishing and excess fishing capacity, by-catch and discards.”²¹⁸ The goal of UNCLOS is one of peace, protection, and prosperity. “The hope was for a more stable order, promoting greater use and better management of ocean resources and generating harmony and goodwill among States that would no longer have to eye each other suspiciously over conflicting claims.”²¹⁹ As of 2014, the United States has not ratified UNCLOS but has implemented most of its provisions in support of this international framework.

The second international instrument is the 1993 FAO Compliance Agreement. The 1993 FAO Compliance Agreement is the agreement to promote compliance with international conservation and management measures by fishing vessels on the high seas.

²¹⁷Ibid.

²¹⁸Ibid.

²¹⁹Ibid.

While UNCLOS focused predominately on the rights and responsibilities within a coastal state's EEZ, the original 1982 UNCLOS did not go far enough to address highly migratory species and straddling fish stocks that swim in and out of EEZs. The Compliance Agreement closes this gap and provides international standards for all high seas fishing.

The third instrument is the 1995 UNFSA:

The purpose of the 1995 UN Fish Stocks Agreement is to facilitate the implementation of certain provisions of the 1982 United Nations Convention on the Law of the Sea (1982 Convention) concerning the conservation and management of straddling fish stocks and highly migratory fish stocks [like Pacific Tuna]. The Agreement complements the 1993 FAO Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas (1993 FAO Compliance Agreement) and the 1995 FAO Code of Conduct for Responsible Fisheries.²²⁰

The 1995 Agreement provides more clarity and additional responsibilities for RFMOs for high seas fishing operations. "States, either directly or through RFMOs, are obligated to pursue cooperation to ensure the effective conservation and management of straddling fish stocks and highly migratory fish stocks."²²¹ "The U.S. has ratified the Fish Stocks and Compliance Agreements, it still has not ratified the most basic international convention governing the world's oceans [UNCLOS]."²²²

The fourth instrument is the 1995 Code of Conduct for Responsible Fisheries. The Code of Conduct is a voluntary instrument that supports the FAO Compliance and UNFSA. In 1995, under the UNCLOS, the UN adopted a Code of Conduct for

²²⁰Fisheries and Aquaculture Department, "United Nations Fish Stock Agreement," <http://www.fao.org/fishery/topic/13701/en> (accessed May 2, 2014).

²²¹Ibid.

²²²Mallory, 85.

Responsible Fisheries to deter and prevent the overexploitation of global fish stocks and other living marine resources. The Code is “voluntary” and “global in scope.”²²³ “It provides a necessary framework for national and international efforts to ensure sustainable exploitation of aquatic living resources in harmony with the environment.”²²⁴ The Code also provides a framework for developing nations, like small Pacific Island states, who are geographically located in lucrative Pacific Tuna fishing grounds but lack capacity to compete against U.S. and Chinese Pacific Tuna fleets.

The fifth international instrument is the 2001 IPOA-IUU. This is another “voluntary instrument for all States, entities, and fishers.”²²⁵ The IPOA specifically focuses on the threat of IUU fishing. The objectives of the IPOA are to encourage States to implement measures to prevent, deter, and eliminate IUU fishing. “These measures focus on all State responsibilities, flag State responsibilities, coast State measures, port State measures, internationally agreed market-related measures, research and regional fisheries management organizations [like WCPFC].”²²⁶ In 2003, the United States adopted and organized a U.S. IUU plan of action based on the IPOA. From the U.S. plan, the U.S. Coast Guard developed an action plan to implement these recommendations “to monitor compliance with various international agreements and assist coastal nations to

²²³Fisheries and Aquaculture Department, “Code of Conduct for Responsible Fisheries,” FAO Corporate Document Repository, <http://www.fao.org/docrep/005/v9878e/v9878e00.htm> (accessed May 2, 2014).

²²⁴Ibid.

²²⁵FAO, “International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported, and Unregulated Fishing.”

²²⁶Ibid.

combat damaging IUU fishing activity.”²²⁷ The IPOA is significant to the United States and the U.S. Coast Guard because they have adopted this framework to model their current strategy in the Asia-Pacific to combat IUU fishing.

This section provided a general overview of the complex legal frameworks that obligate the United States and the U.S. Coast Guard to participate in international fisheries agreements like the WCPFC. This analysis illustrates the U.S. and U.S. Coast Guard’s legal authorities and statutory commitment to “expand effective law enforcement presence and deterrence efforts against IUU fishing on the high seas through the development of new partnerships and enhancement of existing partnerships with the fisheries law enforcement agencies of key fishery states within the Pacific region.”²²⁸ The United States should develop strong partnerships with key fishery States in the Pacific and international enforcement agencies to protect and ensure that conservation management measures are adequately followed and enforced.²²⁹

China

This section addresses the current environment with China by analyzing the physical, stakeholders, economic, security, and legal considerations. This section explores China’s position and influence in the Asia-Pacific region in relation to the three focus categories: Pacific Tuna, WCPF, and the U.S. Coast Guard.

²²⁷DHS and U.S. Coast Guard, *United States Coast Guard: Fiscal Year 2009 Performance Report*, 36.

²²⁸U.S. Coast Guard, *International Strategic Plan*, 17.

²²⁹*Ibid.*, 16.

Physical

The current Physical environment for China is that China has the largest commercial fishing fleet in the world. They are global in nature and they engage in near and distant water fishing. These distant water fishing fleets target highly migratory species like Pacific Tuna. According to Elizabeth Nyman, fishing has already collapsed in the South China Sea.²³⁰ This collapse pushes China to pursue other more lucrative fishing grounds. Currently, China pursues bi-lateral fishing agreements with African countries to gain access to other fisheries. According to Tabitha Mallory, “Fisheries access is not the only concern in the South China Sea, but also in Chinese fishing agreements in Africa.” She suggests that fisheries access agreements can harm sustainable fisheries management because the distant water fishing nations like China has little interest in the long-term management of the host country’s resources. Developing countries with poor governance are vulnerable to corruption in fisheries agreement negotiations, and often lack coast guard enforcement capacity.²³¹ As Mallory highlights, the problem with bi-lateral fishing agreements is they are short-term, profit driven without due regard to long-term sustainability. China purchases access to fishing grounds within African countries’ EEZ. These African countries lack adequate management and enforcement capabilities.²³² Weak enforcement and only minor civil penalties create an environment conducive to corruption and cheating. This also makes it extremely difficult to determine the actual impact on the resource and the entire ecosystem. “Overfishing

²³⁰Nyman, 5-14.

²³¹Mallory, 89.

²³²Ibid.

from more powerful distant water fleets can undercut the livelihoods of local fisherman and threaten the food security of coastal populations—there is evidence that this is occurring in West Africa.”²³³ This can have a catastrophic impact on all those countries that are trying to abide by the rules and fish legitimately.

Whether it is West Africa or Asia-Pacific, China’s fishing fleet combined with weak fisheries management and enforcement presence can have a major impact on the national security of a small country. This can destabilize a country and a region whose fragile economies depend on the indigenous commercial fishing industry. There is an opportunity here for China to improve its law enforcement presence and contribute to living marine resource conservation.²³⁴ China is expanding their maritime interest and influence in the Asia-Pacific region. They are also building navy and coast guard assets to implement their national security strategy. China can use these assets to expand and coordinate effective law enforcement coverage on the high seas.

Stakeholders

The current Stakeholders environment for China is they are a member of the WCPFC. “China has joined a number of regional fisheries management organizations in accordance with the [1995 Fish Stocks] Agreement, and follows many of the requirements of these organizations, though there are some quality and accuracy problems with logbook and data reporting.”²³⁵ This demonstrates ostensibly China’s

²³³Ibid.

²³⁴Ibid.

²³⁵Ibid., 86.

stewardship commitment as a stakeholder in international fisheries agreements. However, according to Tabitha Mallory, “China’s economic goals have predominately eclipsed sustainability targets when it comes to enforcement.”²³⁶

Economic

The current Economic environment for China is they are one of the leading fishing countries in the world. “China is the top-ranking major fishing country in terms of quantity followed by Indonesia, India, and the United States of America.”²³⁷ This is significant because this is a potential friction point to U.S. national security interest. China, Indonesia, and India all have economic ties to the Asia-Pacific region. As their economies expand, it would be naive not to see aggressive strategic gamesmanship in sovereignty and access claims, especially for food fish.

Security

The current Security environment for China is demonstrated by their commitment to fisheries law enforcement. The United States has a bilateral agreement with China to embark their FLEC officers during North Pacific Ocean High Seas Driftnet patrols. “Chinese fisheries enforcement officers have actually served temporarily on U.S. cutters in the North Pacific, using the U.S. Coast Guard deck to take enforcement action against Chinese fishing boats. Chinese officers have also attended fisheries enforcement school in Kodiak, Alaska.”²³⁸ This relationship has proven to be fruitful. The U.S. Coast Guard

²³⁶Ibid.

²³⁷FAO, “Overview: Major Trends and Issues.”

²³⁸Goldstein.

provides the platforms for Chinese fisheries law enforcement officers to conduct boardings on their vessels on the high seas.

Legal

This section examines the U.S. vice China legal considerations that shape the current environment in the Asia-Pacific region. First and most importantly, China ratified the UNCLOS in 1996. Second, China has signed but not ratified the UNFSA addressing straddling and highly migratory stocks.²³⁹ Third, “China has not signed the [UN’s 1993 FAO] Compliance Agreement which, establishes important standards for high seas fishing operations.”²⁴⁰ In comparison, the United States has ratified both the UNFSA and FAO Compliance agreements. Fourth, both China and the United States are members of the WCPFC.

Desired Environment

The Desired Environment analysis is quite similar to the current environment aspect, but from a different temporal perspective. It represents and describes a desired future environment based on strategic vision; a concept of an altered environment manifest in strategic guidance documents and statements by senior leaders. For this research, this section presents the various ends states from eight strategy documents, including the U.S. Coast Guard fishery law enforcement strategy *Ocean Guardian*. Presentation of this data will provide the components for comparison with the baseline

²³⁹Straddling Fish Stocks refers to fish that migrate between EEZs of two or more states. Mallory, 86.

²⁴⁰Mallory, 85.

current environment described previously. That comparison constitutes the analysis step, and will identify the gaps between the current and desired end state. Those gaps will be considered by addressing the third ODM question: What are the obstacles impeding progress toward the desired end state?

Pacific Tuna

The 1995 FAO Code of Conduct best describes the desired environment for Pacific Tuna for Responsible Fisheries. The Code “provides a necessary framework for national and international efforts to ensure sustainable exploitation of aquatic living resources in harmony with the environment.”²⁴¹ The Code also ensures stakeholders adopt sustainable conservation management practices that maintain and promote a healthy ocean ecosystem for future generations. This section explores the desired physical, stakeholder, and economic considerations mentioned in the previous current environment section. The three recurring themes are: (1) it is in everyone’s national interest to preserve and protect all living marine resources; (2) it is a global responsibility to deter and enforce efforts to eliminate IUU fishing; and (3) the international community must ensure stakeholders adopt sustainable fishing practices that preserve and protect ocean ecosystems for future generations. The following is an analysis of the physical, stakeholder, and economic considerations.

²⁴¹Fisheries and Aquaculture Department, “Code of Conduct for Responsible Fisheries.”

Physical

The desired Physical environment is that Pacific Tuna remains plentiful and resilient against natural or man-made pressures. As stated in the current environment section, Pacific Tuna is a finite resource. It swims across the Pacific without regard to international boundaries. While there are natural and man-made impacts that contribute to or detract from the overall health and viability of the resource, international agreements like the WCPFC continue to strengthen its conservation management measures to protect Pacific Tuna from IUU fishing.

Stakeholders

The desired Stakeholder environment is best summed up by Michele Kuruc, of the World Wildlife Fund, U.S. vice president for marine conservation:

By transforming the way we manage global fisheries like tuna, we are ensuring a sustainable source of seafood that can help support a seven-billion-person planet while conserving nature. By harnessing the power of government, fisheries management organizations, civil society and the private sector, this innovative partnership can deliver meaningful change on the water and throughout communities around the world.²⁴²

Stakeholder participation in the WCPFC is key in protecting Pacific Tuna. Building mutual trust and strengthening management and enforcement regimes is essential to protect Pacific Tuna. In short, it is in everyone's best interest to contribute to ensure future sustainability and protect against overfishing.

²⁴²FAO, "Push to enhance management and conservation in tuna fisheries on the high seas."

Economic

The desired Economic environment is best expressed by Russell Smith, NOAA, Deputy Assistant for International Fishers, who stated, “This is about leveling the playing field for fishermen around the world, and IUU fishing represents one of the biggest threats to the U.S. fishing industry. Seafood is a global business, and U.S. fishermen following the rules should not have to compete with those using illegal or unsustainable fishing practices.”²⁴³ The international community should continue to take steps to combat IUU fishing, as it is in their best long-term economic interest. Andrew Norris emphasizes the importance of how “fisheries income play a critical role in the national economies of small island developing states.”²⁴⁴ He suggests, “The worldwide threat to the tuna fishery has migrated to Pacific Island nations whose economic stability depends on the catch-potentially endangering U.S. national security interest in the region.”²⁴⁵ The protection of living marine resources, like tuna fisheries, is key to protecting Asia-Pacific island nations’ fragile economies. Moreover, Norris recommends the United States adopting “a coordinated long-term strategy to address the significance of the region to America and the world; a plan to strengthen law-enforcement regimes that deliver persistent presence and improved situational awareness to counter-threats to national sovereignty; and multilateral approach to improve Pacific island nations capacity to

²⁴³NOAA Fisheries, “NOAA to Work with 10 Nations to Address Illegal, Unreported, and Unregulated Fishing and Stem the Bycatch of Protected Species.”

²⁴⁴Norris.

²⁴⁵Ibid.

promote stability and prosperity.”²⁴⁶ He also states, “the Joint Interagency Task Force West should expand their perspective to include all transnational threats in the region, not just those that are drug related.”²⁴⁷ Norris identifies the need to ensure language in future national policies and strategies emphasize sustainable harvesting of living marine resources as a key component for regional stability. A man-made or natural collapse of the tuna fishing industry would likely have a devastating impact to the region and the national security of many nations. As the world’s population increases so will demand, and the market will continue to dictate the value of Pacific Tuna. This billion-dollar fishery can continue to flourish only as long as there are fish to be caught.

WCPFC

The desired environment of the WCPFC is best described by what the Convention seeks to address. “The WCPFC Convention seeks to address problems in the management of high seas fisheries resulting from unregulated fishing, over-capitalization, excessive fleet capacity, vessel re-flagging to escape controls, insufficiently selective gear, unreliable databases and insufficient multilateral cooperation in respect to conservation and management of highly migratory fish stocks.”²⁴⁸ Finding consensus in the international community is a challenging task, especially in international fisheries agreements. Not every country has the resources to fully implement every aspect of the agreement. The developed countries like the United States often take a leadership role

²⁴⁶Norris.

²⁴⁷Ibid.

²⁴⁸WCPFC, “About WCPFC.”

and provide expertise to developing countries that lack resources. The WCPFC builds capacity and accomplishes its objective by utilizing the strengths of the stakeholders that participate.

Physical

The desired Physical environment has adequate enforcement presence to support the WCPFC's conservation management measures. The WCPFC has a large AOR. No one nation has the resources to do it alone. Combining resources builds a stronger and more comprehensive management and enforcement capability. The U.S. Coast Guard has dedicated operational hours in support of the WCPFC to patrol IUU high threat areas. As other countries, like China, invest and build capacity in their navies and coast guards, there is an opportunity for these nations to provide operational resource hours, contributing to a desired end state of persistent enforcement coverage.

Stakeholders

The desired Stakeholder environment is one in which everyone who participates in the WCPFC continues working together to protect Pacific Tuna and other species from IUU fishing. Similar to the desired WCPFC Physical environment, increased stakeholder participation has advantages and disadvantages. The active participation of more countries and their respective private and public sectors in the WCPFC increases enforcement capacity and voluntary compliance. Promoting future sustainability of highly migratory species and straddling fish stocks, the WCPFC provides a forum to collectively manage the resource and to ensure adequate protection measures are in place. The disadvantage of increased stakeholder participation is the inherent difficulty of

building consensus. Not every decision is considered fair by all participants. The more developed the country the more influence it has to shape the conservation and management decisions. The goal is compromise, but this can create an environment of haves and have-nots. The WCPFC is an instrument to not only strengthen and improve conservation management measures but to open dialogue between stakeholders with disputed territorial claims or grievances that could escalate into armed conflict without international forum for peaceful resolution.

Economic

The desired Economic environment for the WCPFC is to ensure there is a sustainable resource and industry that complies with international agreements for the management and protection of living marine resources. As discussed in the previous sections, there are many competing interest. Countries like China and the United States have major influence in the global commercial fishing industry. Their economies depend on continued access to these resources. However, China and the United States are not the only coastal nations with a vested interest in access to Pacific Tuna. Many other coastal nations would like to take part and desire greater access and share of the resources. Some small coastal nations' economies are heavily dependent on the commercial fishing industry. If there were a significant decline or collapse in the Pacific Tuna population, their economies would be devastated.

Security

The desired Security environment for the WCPFC is one with improved compliance monitoring schemes. Compliance monitoring schemes are tools used to

evaluate the effectiveness of CMMs). “The WCPFC also has conservation management measures (CMM) in place addressing other living marine resources, including North Pacific striped marlin, South Pacific striped marlin, Pacific bluefin tuna, North Pacific albacore, South Pacific albacore, Southwest Pacific swordfish, sharks, sea turtles, and seabirds.”²⁴⁹ The Security objective is to expand these CMMs to protect all highly migratory species that are targeted by unattainable fishing practices. The desired security environment is one in which there are enough law enforcement resources to board vessels engaged in fishing to verify catch and reporting claims. Currently, this responsibility falls largely on the U.S. Coast Guard, who has the high endurance capabilities to patrol remote fishing areas. In the future, China will likely increase their presence and patrol the high seas as their navy and coast guard fleets expand in size and capability.

Legal

The desired Legal environment for the WCPFC is best described by the Convention’s overall objective:

The objective of the Convention is to ensure, through effective management, the long-term conservation and sustainable use of highly migratory fish stocks in the western and central Pacific Ocean in accordance with the 1982 United Nations Convention on the Law of the Sea and the 1995 UN Fish Stocks Agreement. For this purpose, the Convention establishes a Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean (WCPFC).²⁵⁰

The WCPFC is a model RFMO and continues to refine and strengthen CMMs to combat IUU. Cooperation toward a common goal to protect living marine resources is essential

²⁴⁹NOAA Fisheries, *Part I: International and Regional Management Arrangements - Pacific Ocean*.

²⁵⁰Ibid.

for long-term sustainability. International agreements like the WCPFC are continually strengthening conservation management measures to bolster responsibilities, enhance participation, and improve cooperation.

U.S. Coast Guard

The desired environment for the U.S. Coast Guard is addressed by three considerations: Physical, Security, and Legal. The first section focuses on the desired Physical environment for the U.S. and the U.S. Coast Guard. The second and third sections will examine the desired Security and Legal environments.

Physical

John Thomas in “Engaging Oceania” presents the desired Physical environment for the United States and its U.S. Coast Guard. He discusses the importance of devoting strategic attention to the small island nations in Oceania. Thomas stresses the need for the United States to start paying more attention to this region. Identifying three primary reasons the United States should care about Oceania. “Oceania is important for three primary reasons: it’s living marine resources are plentiful at a time when the global supplies are nearly depleted; collectively, Oceania presents a considerable diplomatic force that can support U.S. foreign policy; and Oceania is located in an area that is strategically important to maritime routes between the U.S., Australia, New Zealand, East Asia, and Guam.”²⁵¹ Focusing strategy in the Asia-Pacific will impact all U.S. stakeholders and may require increased U.S. Coast Guard presence.

²⁵¹Thomas, 98.

Security

The desired Security environment for the U.S. Coast Guard is to continue if not expand fisheries law enforcement expertise to China and emerging Pacific Island states. Lyle Goldstein suggests there is an opportunity for the United States and China coast guards to exchange information, experience, and expertise to coordinate effective enforcement.²⁵² The United States and China can partner with other international fisheries agencies to strengthen their presence on the high seas. Similar to the U.S. Coast Guard and China's FLEC bilateral agreement to detect, deter, and seize illegal high seas driftnet fishing vessels in the North Pacific Ocean. China is in the process of building 30 coast guard cutters.²⁵³ This will expand their capabilities to conduct high seas fisheries law enforcement boardings. Continued sharing of enforcement expertise is one way the U.S. Coast Guard can enhance our relationship and achieve the overall objective to protect living marine resources. The more countries enforcing conservation management measures the better the coverage to deter and detect IUU fishing in the Western and Central Pacific.

Legal

The desired Legal environment for the U.S. Coast Guard is best expressed in the 2004 *Ocean Guardian: U.S. Coast Guard Fisheries Enforcement Strategic Plan*. "There are three enforcement goals: 1) Prevent encroachment of the U.S. Exclusive Economic

²⁵²Goldstein.

²⁵³Coast guard vessels are commonly referred to as cutters instead of ships. For example, the U.S. Coast Guard designates any boat over 65 feet in length a cutter. Goldstein.

Zone (EEZ) and internal waters by foreign fishing vessels; 2) Ensure compliance with domestic living marine resource laws and regulations with the U.S. EEZ by U.S. fisherman; 3) Ensure compliance with international agreements for the management of living marine resources.”²⁵⁴ The key goal which directly supports this research is to “ensure compliance with international agreements for the management of living marine resources” like the WCPFC. “*Ocean Guardian* provides three strategies for achieving this goal: 1) partner closely with NOAA and DOS to develop enforceable international agreements; 2) partner with international fisheries enforcement agencies to share information and coordinate effective enforcement; and 3) implement UN Fish Stocks Agreement and IUU International and National Plans of Action.”²⁵⁵

Other international legal instruments worth mentioning in this section are the 1995 Code of Conduct for Responsible Fisheries and the 2001 IPOA-IUU. The overall objective of the 1995 Code of Conduct for Responsible Fisheries is “sustainable fisheries.” The 2001 IPOA-IUU objective “is to prevent, deter and eliminate IUU fishing by providing all States with comprehensive, effective and transparent measures by which to act, including through appropriate regional fisheries management organizations established in accordance with international law.”²⁵⁶ In summation, this section illustrates the complex legal considerations.

²⁵⁴U.S. Coast Guard, *Ocean Guardian*, 7-10.

²⁵⁵*Ibid.*, 10.

²⁵⁶FAO, “International Plan of Action to Prevent, Deter, and Eliminate Illegal, Unreported, Unregulated Fishing.”

China

To describe the desired environment for China this study examined five considerations: Physical, Stakeholder, Economic, Security, and Legal. Due to the difficulty in obtaining factual information concerning Chinese fisheries governance and strategy, analysis is partially based on material from academic journals.

Physical

Tabitha Mallory and Zou Keyuan best express the desired Physical environment for China. Tabitha Mallory suggests, “China has geopolitical motivations for wanting a global fishing presence. China’s strength as a fishing nation contributes to China’s global sea power, which gives China more influence in the international system vis-à-vis other nations.”²⁵⁷ According to Zou Keyuan, “China has committed itself to develop its domestic laws and regulations on marine affairs in line with the United Nations Convention on the Law of the Sea (UNCLOS) and to establish its marine legal system to meet the demands and changed circumstances in the use of oceans.”²⁵⁸ Both of these experts present a unique view of the desired Physical environment. Mallory suggests the primary factors are geopolitical motivations and a desire to expand influence in the international system. Keyuan highlights China’s commitment to the international governance system. China’s ratification of UNCLOS demonstrates a commitment to international law. This commitment also indicates a desire to participate in RFMOs.

²⁵⁷Mallory, 87.

²⁵⁸Zou Keyuan, *China’s Marine Legal System and the Law of the Sea* (Leiden, NLD: Martinus Nijhoff Publishers, 2005), <http://site.ebrary.com/lib/carl/Doc?id=10171756&ppg=17> (accessed October 18, 2013).

Stakeholder

The desired Stakeholder environment for China is to continue to participate in RFMOs. “China increasingly participates in international fisheries institutions, its diplomats and scientist join an epistemic community, which supports convergence in knowledge and approaches with regard to global fisheries management. International reputation among other countries is a motivator for Chinese participation.”²⁵⁹ By participating in the WCPFC, China not only becomes a force multiplier to combat IUU, they improve their stewardship reputation in the international community.

Economic

The desired Economic environment for China is a globally competitive fishing industry.²⁶⁰ As the leading importer and exporter of fisheries in the world, China will continue to be a major stakeholder in global commercial fisheries.

Security

The desired Security environment for China is interpreted from various academic scholars and experts. According to Lyle Goldstein, both the United States and China have found common ground on non-military issues. “The U.S. and China want safe, clean oceans, sustainable and fair extraction of resources, and security from seaborne asymmetric threats.”²⁶¹

²⁵⁹Mallory, 87.

²⁶⁰Ibid.

²⁶¹Goldstein.

Legal

The desired Legal environment for China is consideration open for interpretation. Once again, this research turned to academic journals and research articles to analyze this environment. China seeks to expand its participation in the international community and increase compliance and cooperation with RFMOs. China also seeks to improve and strengthen current domestic laws and regulations. Tabitha Mallory again provides a description of the desired Legal environment. “China’s role in global ocean governance could be enhanced by its contribution to monitoring, control, and surveillance of fisheries, for example through coast guard partnerships.”²⁶² As China’s navy and coast guard forces expand, one might assume they will increase their participation in the WCPFC and assist in policing the Western and Central Pacific Ocean, a desirable outcome.

The Problem

The next step in this analysis describes the problem, which “identifies those areas of tension that merit further consideration as areas of possible intervention.”²⁶³ The problem in the Asia-Pacific region is the eventual collapse of Pacific Tuna and tuna-like species due to overfishing caused by an increased global demand, poor governance, and weak enforcement. The following tension areas were identified:

1. Overfishing of Pacific Tuna is a systemic problem and a collapse of the fish stocks could contribute to regional instability in the Asia Pacific region.

²⁶²Mallory, 87.

²⁶³Joint Chiefs of Staff, *Planner’s Handbook for Operational Design*, V-16.

2. Poor governance, weak conservation management measures, and inadequate monitoring, control, and surveillance capacity presents opportunities for IUU fishers to exploit these ungoverned ocean spaces.

3. China's interest in access to Pacific Tuna is expanding along with their participation and influence into RFMOs like the WCPFC.

Operational Approach

The final stage in the ODM is a recommended method or an operational approach to transform the current environment into the desired environment. "The operational approach is how the leadership believes U.S. instruments of national power and other interorganizational actions should address the various factors that comprise the gap between the current and the desired systems."²⁶⁴ Below is a graphic of the researcher's Operational Approach (figure 4). Figure 4 illustrates the lines of effort to close the gap between the current and desired environments identified in this research.

²⁶⁴Joint Chiefs of Staff, *Planner's Handbook for Operational Design*, VI-1.

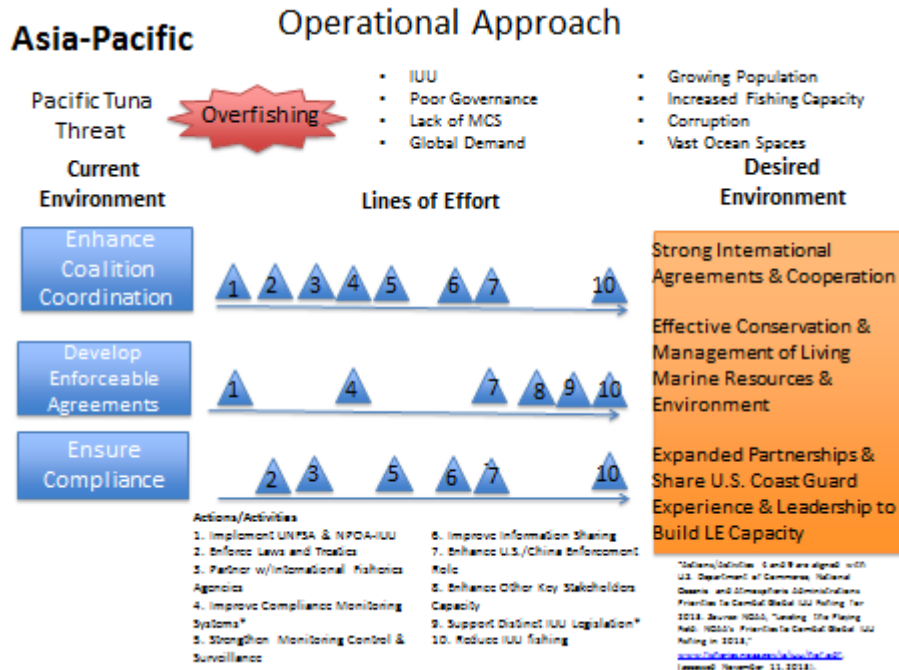


Figure 4. Operational Approach

Source: Created by author.

The three endstates are to strengthen international agreements and cooperation, encourage conservation and management of living marine resources and their environment, and expand law enforcement partnerships and capacity by sharing U.S. Coast Guard experience and leadership. In order to accomplish this there were three lines of effort and 10 actions or activities along those lines (figure 4) to move the United States, and the U.S. Coast Guard from the Current to the Desired Environment with the ultimate goal of deterring overfishing both legally and illegally. This Operational Approach allowed the researcher to address the primary and four secondary research questions. The conclusions of this analysis are discussed in the next section.

Secondary Research Questions

There are four secondary questions addressed in this research. The first secondary question is: What is the nature of competition for Pacific Tuna resources in the region? The researcher identified that the quest for Pacific Tuna is a global multi-billion dollar industry. This industry is dependent on the access and availability of the resource. In some cases, this industry is also the economic backbone of small nations. It provides jobs and feeds large populations. Any natural or man-made collapse of the resource would be catastrophic. The international community recognizes IUU fishing as the number one threat to Pacific Tuna. IUU fishing contributes to overfishing and makes it impossible to accurately estimate what is harvested and whether or not the true harvest is sustainable. Those who abide by international agreements are competing against IUU fishers who are cheating. This makes it challenging for regulators and RFMOs to protect Pacific Tuna. RFMOs are international instruments used to bring member countries together to manage and conserve highly migratory species like Pacific Tuna. The WCPFC currently partners with 25 member countries to protect Pacific Tuna. The United States is a major participant in the WCPFC.

The second question is: What agreements are in place, and how are they enforced? The research identified the WCPFC as the primary international instrument to protect Pacific Tuna. The United States is a member of the WCPFC and multiple other international agreements dedicated to protecting the world's Pacific Tuna from IUU fishing. The United States uses the U.S. Coast Guard to implement its fisheries law enforcement strategy in the Asia-Pacific Region.

The third question is: What are the U.S. Coast Guard capabilities to implement its fisheries law enforcement strategy in the Asia-Pacific Region? The U.S. Coast Guard implements the U.S. treaty obligations and “partners with international enforcement agencies to share information and coordinate effective enforcement.”²⁶⁵ The U.S. Coast Guard dedicates air and surface law enforcement assets to patrol the high seas in support of the WCPFC’s conservation management measures to protect Pacific Tuna.

In addition to U.S. Coast Guard assets is a successful joint interagency initiative to implement its fisheries law enforcement strategy in the Asia-Pacific region. “The Oceania Maritime Security Initiative (OMSI) is a Secretary of Defense program which leverages DOD assets transiting the region to increase the U.S. Coast Guard’s maritime domain awareness, ultimately supporting its maritime law enforcement operations in Oceania.”²⁶⁶ “Oceania contains 43 percent, or approximately 1.3 million square miles, of United States’ EEZs.”²⁶⁷ The Oceania Maritime Security Initiative is a program that uses DOD assets with embarked U.S. Coast Guard Law Enforcement Detachment Teams to combat IUU fishing vessels in Oceania. Patrolling these vast ocean spaces in the Asia-Pacific region makes it extremely difficult to effectively patrol these areas within the U.S. EEZ and on the high seas for long durations without refueling and resupply. This makes it an ideal environment for IUU fishing vessel operators. They understand the tyranny of

²⁶⁵U.S. Coast Guard, *Ocean Guardian*, 3.

²⁶⁶Defense Video and Imagery Distribution System News, “Coast Guard, Navy Partner in Oceania Maritime Security Initiative,” May 11, 2012, <http://www.dvidshub.net/news/88776/coast-guard-navy-partner-oceania-maritime-security-initiative#Uo6uvxaRPz1> (accessed November 21, 2013).

²⁶⁷*Ibid.*

distance and the remote odds of detection and interception. The lack of monitoring, control, and surveillance assets both inside and outside areas of national jurisdictions in the Asia-Pacific are limited. The likelihood of being caught and their vessels catch seized is low. This is an excellent example of risk versus gain. Since IUU fishing is a billion dollar venture, the gain outweighs the risk. This is a risk that most IUU fishing vessel operators are willing to take.

The fourth question is: What was the U.S. Coast Guard strategy prior to the rebalance to the Asia-Pacific region, and how has it changed? The U.S. Coast Guard's fisheries law enforcement strategy, *Ocean Guardian*, was released in 2004. The stated mission was to "provide effective and professional at-sea enforcement to advance national goals for the conservation and management of living marine resources and their environments."²⁶⁸ *Ocean Guardian* had three objectives to support this mission: (1) prevent encroachment of the U.S. Exclusive Economic Zone (EEZ) and internal waters by foreign fishing vessels; (2) ensure compliance with domestic living marine resource laws and regulations within the U.S. EEZ by U.S. fishermen; and (3) ensure compliance with international agreements for the management of living marine resources. The third objective directly aligns with this study and illustrates the foundational linkages of the U.S. Coast Guard's involvement the WCPFC. Although *Ocean Guardian* was released prior to the U.S. strategy shift to the Pacific, this study revealed that these objectives are still valid and complementary to rebalancing strategy to the Pacific. In fact, there may be opportunities to leverage the Coast Guard's fisheries law enforcement mission in the Asia-Pacific region and expand this mission into the joint operations realm, as fisheries

²⁶⁸U.S. Coast Guard, *Ocean Guardian*, 3.

law enforcement is a peacetime mission with joint operations potential. The Coast Guard continues to dedicate time and resources to this important mission.

Primary Research Question

The primary research question for this study is: How does the rebalance in the U.S. national security policy and strategy to the Asia-Pacific region affect alignment of the U.S. Coast Guard to protect living marine resources in areas outside U.S. national jurisdiction? Using the ODM, the researcher concluded that the U.S. Coast Guard's fisheries law enforcement roles and responsibilities in international agreements like the WCPFC should continue and expand. The U.S. Coast Guard is ideally positioned to implement the U.S. pivot to the Pacific strategy. However, it cannot do this alone. In an austere budget environment, the U.S. Coast Guard, and their key interagency partners, DOS, DHS, NOAA Fisheries, DOD, and international partners must seek cooperative and creative solutions to deter and prevent IUU fishing.

Summary and Conclusions

Chapter 4 provided an analysis of the data to determine an operational approach and answer the study's primary and secondary research questions. The Joint ODM facilitated the critical analysis of the linkages between the four focus categories (Pacific Tuna, WCPFC, U.S. Coast Guard, and China). The results of this analysis provide the above conclusions below, and options that may lend themselves to addressing identified gaps. Below is a list of the most important issues or solutions that emerged from the four focus categories:

Pacific Tuna

1. Overfishing Pacific Tuna could destabilize region and threaten U.S. national security.
2. The world's future food security depends on sustainable access to Pacific Tuna.

Western and Central Pacific Fisheries Commission

1. Strengthening ocean governance is key to preventing overfishing.²⁶⁹
2. The role of the United States and China in the WCPFC is imperative and has the potential to expand cooperative partnerships and defuse regional tensions.

U.S. Coast Guard

1. The U.S. Coast Guard has an adequate strategy in the Western and Central Pacific Ocean. However, it is time to revalidate and update *Ocean Guardian* and consider ways to expand in which this mission best aligns with the U.S. strategic pivot to the Pacific.
2. The U.S. Coast Guard's OLE mission is highly complementary to other DOD security missions in the Pacific. There is an opportunity to leverage or combine capabilities and resources even in a budget restrictive environment.

China

1. China's influence in the Pacific is increasing. Engagement and expanding enforcement partnerships with China is essential to enhancing security in the region.

²⁶⁹For the purposes of this recommendation, "ocean governance" refers to both the U.S. and the international community cooperating to strengthen management, regulations, and enforcement

2. As China's maritime presence increases so will its potential contributions to policing the high seas to prevent IUU fishing and ensure sustainable fish stocks.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The purpose of this research was to examine the U.S. Coast Guard's OLE mission in the current Fisheries Enforcement Strategic Plan, *Ocean Guardian*, and in view of the shift to the Asia-Pacific region; examine the requisite capabilities needed to implement this enforcement strategy. The ultimate goal of this study is to assess if there is a gap in *Ocean Guardian* or the requisite U.S. Coast Guard capabilities as the overall U.S. security strategy rebalances to the Asia-Pacific region. This research goal was accomplished.

The ODM was challenging for organizing the researchers thinking, building a common perspective, and creating a shared understanding of the complex operational environment in U.S. Coast Guard OLE activities in the Asia-Pacific region. ODM is a useful tool for decision makers to visualize the operational environment, understand the problem, and develop a broad approach to create or propose a desired end-state for Coast Guard strategic thinking.²⁷⁰ Like all exercises in operational design, it is an ongoing project that requires continued discussion, iteration, and refinement. Now is the time for the U.S. Coast Guard to review and revalidate the current fisheries law enforcement strategy, *Ocean Guardian*. This paper should spur the debate on how the U.S. Coast Guard intends to shape its living marine resource strategy and the overall strategic potential of the OLE mission. Failure to have a meaningful discussion without the

²⁷⁰Joint Chiefs of Staff, *Planner's Handbook for Operational Design*, IV-1 to IV-2.

appropriate Coast Guard, DOD, and interagency representatives would be a mistake. Since 9/11, the Coast Guard under DHS has naturally gravitated to a more centralized and direct security oriented message. This is a detractor from the traditional Coast Guard Fisheries Law Enforcement and OLE missions. It may be time to reconsider the legacy Coast Guard message (Safety, Security, and Stewardship). At the same time, the U.S. Coast Guard has an opportunity to revalidate their fisheries law enforcement strategy that is in the best interest of the nation.

This research also identified the subtle less known tensions between the United States and China over natural resources like Pacific Tuna. The statecraft of using RFMOs to expand and exert influence outward is a subtle and asymmetric way to extend influence and get access to living marine resources. China has global reach with their commercial fishing fleets. China's intent may be to employ diplomatic and economic instruments of power not only to protect their own economic interest and preserve their billion dollar commercial fishing industry but to use this to set the agenda, to control the narrative, and ultimately to influence the current international system.

Although there are many other international security threats to the United States, this study revealed how unsustainable fishing practices (overfishing of finite species) can present strategic challenges to U.S. sovereignty and security. ODM is useful for flushing trends and examining how some of the most nuanced relationships can increase tension and threaten U.S. national security interest. The U.S. rebalancing or pivot to the Pacific and China's push eastward into the Pacific to exert influence makes this a timely discussion. China is exerting strategic influence in RFMOs. By participating in RFMOs,

they are establishing legitimacy, setting precedence, and most importantly gaining economic access.

This study also identified that China is slowly making progress to assume on a greater law enforcement stewardship role on the high seas. This is advantageous not only for mighty Pacific Tuna but for facilitating positive engagement between the United States and China. Overfishing is a global food security problem. The United States and China are in a position to lead by example and prevent the collapse of Pacific Tuna and other fish stocks. This research indicates that China desires to improve their domestic and international fisheries law enforcement program and through increased capacity hold themselves and others accountable. The researcher believes China is taking their stewardship role seriously. As their naval and coast guard capabilities expand, so will their presence in the Pacific. This increased presence will improve the international community's capacity to monitor and police the ocean for IUU fishing. This desired condition complements our current national security strategy. The foundation of the 2010 *U.S. National Security Strategy* is "Pursuing Comprehensive Engagement."²⁷¹ Which means the United States "will continue to deepen [their] cooperation with other 21st century centers of influence including China—on the basis of mutual interest and mutual respect."²⁷² Specifically, "certain bi-lateral relationships—such as U.S. relations with China—will be critical to building broader cooperation on areas of mutual interest."²⁷³ The evidence in this thesis supports the U.S. position of engagement with China. Sharing

²⁷¹U.S. President, *National Security Strategy*, 11.

²⁷²Ibid.

²⁷³Ibid., 43.

U.S. Coast Guard’s fisheries law enforcement experience and expertise with China is one instrument that supports an engagement strategy with China while protecting Pacific Tuna.

The hope of this study is to provoke a discussion on how relevant the Coast Guard’s OLE mission is to the U.S. maritime strategy, especially in light of the U.S. pivot to the Pacific. The researcher believes the U.S. Coast Guard has an opportunity to validate and focus the fisheries law enforcement strategy, *Ocean Guardian* using the OLE mission in the Western and Central Pacific.

China’s diplomatic and economic influence in the Asia-Pacific region is increasing. This is exemplified by their desire to participate in international forums like the WCPFC.²⁷⁴ “China’s strength as a fishing nation contributes to China’s global sea power, which gives China more influence in the international system vis-à-vis other nations.”²⁷⁵ As this study indicated, China will likely do more to police the high seas and combat IUU fishing. The Coast Guard has established a productive partnership with China’s FLEC. Expanding this law enforcement partnership is a way for the United States to impart our leadership and expertise on high seas fisheries law enforcement. Expanded participation between the United States and China spreads the stewardship responsibility.

What this research revealed was how important it is for agencies like the U.S. Coast Guard to ensure its OLE mission remains linked and consistent with U.S. national priorities. It is incumbent on the Coast Guard’s organizational leadership and fisheries

²⁷⁴Mallory, 86.

²⁷⁵Ibid., 87.

law enforcement experts to synchronize these priorities and continually revalidate and align our strategies. Coast Guard leaders are obligated to continually assess where we have been, where we are, and where we are going. It has been 12 years since the Coast Guard was subordinated to the DHS. It is time to reassess and revalidate the Coast Guard's OLE mission within *Ocean Guardian* and invigorate a new debate on how to move forward. This may require a special task force, which includes DOD and interagency partners. Identifying the right leaders and experts to shape this debate is extremely important. In a condition of austere funding, leadership is the most important. The Coast Guard needs organizational leaders who understand complex strategic and operational environments. The best strategy is only as good as its leadership.

What inspired this thesis is how a living marine resource like Pacific Tuna can impact and shape the geo-political sea and landscape. This shaping can lead either to peace or war in the Asia-Pacific region. Pacific Tuna provides a vehicle to critically think and consider possibilities that could destabilize a region and threaten our national security.

Recommendations

Revalidate *Ocean Guardian*: The Coast Guard Living Marine Resource Strategic Plan, *Ocean Guardian*, is 10 years old. Over the past 10 years, the U.S. Coast Guard has undergone major changes in the management, regulation, and enforcement of living marine resources domestically and internationally. Establish a task force at the Rear Admiral level to revalidate *Ocean Guardian*. This task force should include interagency and DOD stakeholders to consider the pivot to the Pacific strategy. Particular emphasis should be given to Coast Guard District Fourteen (Honolulu, HI) and Seventeen (Juneau,

AK). Districts Fourteen and Seventeen are on the front lines of our pivot to the Pacific. These districts have the resident knowledge and expertise necessary to shape the direction of the Coast Guard's fisheries law enforcement strategy in the Western and Central Pacific.

Expand International Fisheries Law Enforcement partnerships: The U.S. Coast Guard has an opportunity and an obligation to expand partnerships and share resident fisheries law enforcement expertise, experience, and leadership to build enforcement capacity in the Asia-Pacific region to prevent overfishing. As this study addressed, China will likely be asked to do more to police the high seas and combat IUU fishing. The Coast Guard has established a productive partnership with China's Fisheries Law Enforcement Command. Expanding this law enforcement partnership is a way for the United States to impart our leadership and expertise in high seas fisheries law enforcement. Expanded participation between the United States and China spreads the responsibility for stewardship.

Expand Joint DOD and Interagency Operations to Combat IUU: Coordinate with USPACOM to expand joint maritime presence and effectiveness to combat IUU in Asia-Pacific Region. The Oceania Maritime Security Initiative is an example of a successful program that leverages DOD assets transiting the region to increase the U.S. Coast Guard's maritime domain awareness and support maritime law enforcement operations.

GLOSSARY

Exclusive Economic Zone (EEZ). “Each coastal State may claim an Exclusive Economic Zone (EEZ) beyond and adjacent to its territorial sea that extends seaward up to 200 nm from its baselines (or out to a maritime boundary with another coastal State). Within its EEZ, a coastal State has: (a) sovereign rights for the purpose of exploring, exploiting, conserving and managing natural resources, whether living or nonliving, of the seabed and subsoil and the superjacent waters and with regard to other activities for the economic exploitation and exploration of the zone, such as the production of energy from the water, currents and winds; (b) jurisdiction as provided for in international law with regard to the establishment and use of artificial islands, installations, and structures, marine scientific research, and the protection and preservation of the marine environment, and (c) other rights and duties provided for under international law.”²⁷⁶

High Seas. “The high seas are comprised of all parts of the sea that are not included in the exclusive economic zone, in the territorial sea or in the internal waters of a State, or in the archipelagic waters of an archipelagic State.”²⁷⁷

Highly Migratory Species (HMS). These are tuna, bullfish, sharks, and other “species with wide geographic distribution, both inside and outside the 200-mile zone [EEZ], and which undertake migrations on significant but variable distances across oceans for feeding or reproduction.”²⁷⁸

Illegal Unreported Unregulated (IUU). “IUU fishing is a global problem that threatens ocean ecosystems and sustainable fisheries. IUU products often come from fisheries lacking the strong and effective conservation and management measures to which U.S. fishermen are subject. IUU fishing most often violates conservation and management measures, such as quotas or bycatch limits, established under international agreements. By adversely impacting fisheries, marine ecosystems, food security and coastal communities around the world, IUU fishing undermines domestic and international conservation and management efforts. Furthermore, IUU fishing risks the sustainability of a multi-billion-dollar U.S. industry.”²⁷⁹

²⁷⁶NOAA Office of General Counsel, “Maritime Zones and Boundaries,” August 12, 2013, http://www.gc.noaa.gov/gcil_maritime.html#eez (accessed April 20, 2014).

²⁷⁷Ibid.

²⁷⁸Fisheries and Aquaculture Department, “Highly Migratory Species,” FAO, <http://www.fao.org/fishery/topic/13686/en> (accessed April 22, 2014).

²⁷⁹NOAA Fisheries, “Illegal, Unreported, and Unregulated (IUU) Fishing.”

Maritime Domain Awareness (MDA). “Is the effective understanding of anything associated with the global maritime domain that could impact the security, safety, economy, or environment of the United States.”²⁸⁰

Monitoring Control and Surveillance (MCS). “Contemporary definitions of MCS go beyond the traditional idea of MCS as simply policing. A comprehensive suite of MCS activities includes: *Monitoring* the collection, measurement, and analysis of fishing activity including, but not limited to: catch, species composition, fishing effort, bycatch, discards, area of operations, etc. This information is primary data that fisheries managers use to arrive at management decisions. If this information is unavailable, inaccurate, or incomplete, managers will be handicapped in developing and implementing management measures. *Control* involves the specification of the terms and conditions under which resources can be harvested. These specifications are normally contained in national fisheries legislation and other arrangements that might be nationally, sub regionally, or regionally agreed. The legislation provides the basis for which fisheries management arrangements, via MCS, are implemented. *Surveillance* involves the regulation and supervision of fishing activity to ensure that national legislation and terms, conditions of access, and management measures are observed. This activity is critical to ensure that resources are not over exploited, poaching is minimized and management arrangements are implemented.”²⁸¹

Regional Fisheries Management Organizations (RFMO). “Many fish stocks and other living marine resources move freely through several countries’ waters and the high seas. Countries must cooperate to conduct scientific study and set fisheries rules that will ensure that these resources are conserved and managed sustainably. There are a number of organizations that have been established by treaty to enable this kind of cooperation. The United States is a member of many of these organizations, and the State Department works closely with other U.S. agencies, including the National Marine Fisheries Service, to represent U.S. interests within them.”²⁸²

²⁸⁰U.S. Coast Guard, *The U.S. Coast Guard Strategy for Maritime Safety, Security, and Stewardship*, 30.

²⁸¹Fisheries and Aquaculture Department, “Monitoring, Control, and Surveillance,” FAO, <http://www.fao.org/fishery/topic/3021/en> (accessed April 22, 2014).

²⁸²U.S. Department of State, “Regional Fisheries Management Organizations,” <http://www.state.gov/e/oes/ocns/fish/regionalorganizations/index.htm> (accessed April 22, 2014).

Significant Violation. “A significant violation is a domestic or international living marine resource violation which results in one or more of the following conditions:

- (1) Significant damage/impact to the resource/fisheries management plan;
- (2) Significant monetary advantage to the violator over his/her competitor; and/or
- (3) High regional or national interest.”²⁸³

²⁸³U.S. Coast Guard, *Ocean Guardian*, 8.

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