

STANFORD LAW & POLICY PRACTICUM

# THE OUTLAW OCEAN

SPRING 2020

An Exploration of Policy Solutions to Address Illegal Fishing and Forced Labor in the Seafood Industry The Outlaw Ocean ii

# THE OUTLAW OCEAN

# An Exploration of Policy Solutions to Address Illegal Fishing and Forced Labor in the Seafood Industry

#### **RESEARCH TEAMS**

#### **IUU FISHING AND DATA POLICY**

Neil Nathan | MS Candidate, Earth Systems Hanna Payne | MA Candidate, Earth Systems Victor Xu | JD Candidate, Stanford Law School (SLS)

#### **IUU FISHING AND PORT ENTRY**

Laura Anderson | MA Candidate, Earth Systems Sadie Cwikiel | MS Candidate, Earth Systems Josheena Naggea | PhD Candidate, Emmett Interdisciplinary Program in Environment and Resources

#### FORCED LABOR IN FISHERIES

Nahla Achi | MA Candidate, Earth Systems Natasha Batista | MS Candidate, Earth Systems Trudie Grattan | BS Candidate, Human Biology Katelyn Masket | JD Candidate, SLS

#### **RESEARCH ASSISTANTS**

Shalini Iyengar | JSM, Fellow in the Stanford Program in International Legal Studies, SLS Hai Jin Park | JSD Candidate, SLS, PH.D. Minor, Computer Science Xiao Wang | LLM, Stanford Law School

#### **TEACHING TEAM**

Janet Martinez | Senior Lecturer, Director of Gould Negotiation and Mediation Program, SLS Jim Leape | Co-Director, Stanford Center for Ocean Solutions (COS)
Annie Brett | André Hoffmann Fellow, COS
Kevin Chand | Early Career Law and Policy Fellow, COS; Lecturer, Stanford dschool
Eric Hartge | Research Development Manager, COS

## **PROJECT ADVISORS**

Luciana Herman | Lecturer & Policy Lab Program Director, SLS

**Proposed Citation:** Stanford Center for Ocean Solutions (COS) and the Stanford Law School (SLS). "The Outlaw Ocean: An Exploration of Policy Solutions to Address Illegal Fishing and Forced Labor in the Seafood Industry," COS, September 2020. Available at: https://oceansolutions.stanford.edu/outlaw-ocean-report and https://law.stanford.edu/courses/policy-practicum-the-outlaw-ocean/

iii The Outlaw Ocean

# **ACKNOWLEDGEMENTS**

The teaching team would like to thank the many people who contributed to the success of *The Outlaw Ocean*: Our students—Hanna Payne, Josheena Naggea, Katelyn Masket, Laura Anderson, Nahla Achi, Natasha Batista, Neil Nathan, Sadie Cwikiel, Trudie Grattan, Victor Xu—brought boundless energy and commitment to their research projects, far beyond any reasonable expectations for a two-credit class. We are grateful for their dedication to meeting the clients' objectives and their resilience in dealing with all the kinks inherent to the first iteration of a class moved suddenly online.

Luci Herman of Stanford Law School supported our early vision for this class and provided invaluable guidance throughout the development process. Tony Long of Global Fishing Watch was the client for the IUU projects and provided valuable insight and connections to the students. Jessie Brunner of the Center for Human Rights and International Justice and Elizabeth Selig of the Stanford Center for Ocean Solutions, as the clients for the Forced Labor project, were a vital resource for the students, providing context and contacts in weekly check-ins.

We are grateful to the extraordinary guest speakers who shared their perspectives with the students: Ian Urbina (The Outlaw Ocean Project), Xiao Wang (Stanford Law), Ambassador David Balton (Wilson Center), Susan Jackson (International Seafood Sustainability Foundation), Ame Sagiv (Humanity United), and Meg Caldwell, John Claussen, and Januar Putra (the David and Lucile Packard Foundation).

A special thanks to Ian Urbina for allowing us to use "The Outlaw Ocean"—the title of his New York Times series and book—as the title for the class.

Our legal assistants, Shalini Iyengar and Hai Jin Park, helped develop the research questions and were a resource to the students throughout the quarter.

Thank you to Natalia Alayza for diligently vetting the Latin America legal analysis and conducting citation checks for the report.

A tremendous thank you to Hanna Payne, who turned the papers into this report and told the story of the course, under the guidance of Nicole Kravec, head of communications for the Stanford Center for Ocean Solutions.

Finally, we want to thank the many people, too numerous to list here, who took the time out to speak with our students as they pursued their research. A full list of interviewees can be found in Appendix B.

The Outlaw Ocean iv

# **FOREWORD**

Largely out of sight, criminals pillage the oceans. They steal millions of tons of fish each year. That is a huge economic loss to coastal nations, estimated to be somewhere in the tens of billions of dollars. It is an even larger threat to food security; a billion people depend on fish as their source of protein, and in many of the countries that are most dependent, one fish in three is stolen. Illegal, unreported, and unregulated (IUU) fishing undermines governments' efforts to manage their resources and undercuts the millions of fishers who are playing by the rules.

IUU fishing is also a human rights crisis. The vessels that fish illegally often carry slaves. Hundreds of thousands of people are trapped on boats, facing wanton brutality.

The Stanford Center for Ocean Solutions (COS) is working with the Friends of Ocean Action, convened by the World Economic Forum, to address these challenges. We are engaging governments, companies, and conservation and human rights groups to develop policy solutions for governments, such as measures to intercept illegal products at port, and to develop tools that enable companies to identify and address illegality or labor abuse in their supply chains.

The Outlaw Ocean Policy Practicum at Stanford Law School allowed us to engage students from across the University and bring their formidable talents and energy to bear on solving these problems. Working with Luci Herman at Stanford Law School's Law and Policy Lab, we developed a class that brought together students from law, human rights, environmental science, and policy. Over the course of the term, we heard from some of the world's leading experts on these issues, representing a range of perspectives. And, in smaller groups, the students worked with clients to dive deep into specific challenges facing diverse stakeholders around data access, policymaking, compliance, and enforcement.

Two groups of students worked on the challenge of IUU fishing—specifically, ensuring that illegal vessels have nowhere to land their catch. Their client was Global Fishing Watch (GFW), a nonprofit organization created by Google and Oceana, which has pioneered the use of satellite data to track fishing vessels on the water and help governments and others identify vessels that are fishing illegally. While GFW has been able to draw on global datasets that track the largest vessels, each fishing nation has its own vessel-tracking system that provides more granular data. The first student group investigated the legal precedents and challenges for enlisting governments to share those data with other governments and with the public. This team—Neil Nathan (MS '20), Hanna Payne (MA '20), and Victor Xu (JD '20)—looked at Chile, Peru, and Ecuador as case studies to understand how each has approached the issue of data sharing, and the political and legal forces that have shaped their approaches.

The second IUU group worked with GFW to come at this challenge from a different angle—to explore the possibilities for a system that rewards vessels that can demonstrate compliance with fishing regulations. Inspired by the Global Entry system familiar at airports, this team—Laura Anderson (MA '20), Sadie Cwikiel (MS '20), and Josheena Naggea (PhD candidate)—investigated how such a system could be developed within existing national and regional structures for port inspections. Examining port control systems in the Republic of the Marshall Islands and in Mauritius as case studies, they developed the framework for an Expedited Entry Port System

v The Outlaw Ocean

that could complement existing port controls and offer compelling incentives for vessels to be proactively transparent and compliant.

A third group focused on the issue of forced labor. Their clients were the Stanford Center for Ocean Solutions and the Stanford Center for Human Rights and International Justice, who are working with leading companies in the seafood sector to address human rights abuses at sea and in supply chains. This group—Natasha Batista (MS '19), Katelyn Masket (JD '21), Trudie Grattan (BS '21), and Nahla Achi (MA '20)—explored a key policy mechanism for tackling forced labor in fisheries: the International Labor Organization treaty known as C188. Through two case studies on Fiji and Indonesia, the students looked at how governments have translated the obligations of C188 into their national legislation and, more broadly, how they implemented fair labor practices in fisheries. They delved into the strengths and weaknesses of each country's approach, including the promising points of intervention and obstacles to implementation.

These are intricate and difficult questions. They took the students into domains that were new for most of them, and into the complexities of legal regimes and administration in multiple countries. Over the short span of the quarter, the students attacked these challenges with remarkable commitment and creativity, scouring public sources of information and interviewing a wide array of experts and actors. The resulting policy memos provide valuable insights into the lessons that can be drawn from the experiences of different countries, organizations, and actors and present innovative ideas for how those lessons can be applied.

This report is an important contribution to the work of the clients and will be the foundation for a second edition of The Outlaw Ocean Policy Practicum. In the fall term of 2020, eight students will work with two clients to research pressing questions on issues of illegal fishing and forced labor, drawing on the work done by the spring 2020 cohort. On the IUU fishing side, the student team will continue the client partnership established in the Spring with GFW. On the forced labor side, students will partner with the International Seafood Sustainability Foundation, which brings together the top tuna processors in the world to advance sustainability in the tuna sector. Supported by the Stanford Center for Ocean Solutions, students will also connect to a broad range of additional actors knowledgeable on these topics.

We are grateful to the teaching team—Kevin Chand, Annie Brett, and Eric Hartge, who were the backbone of this course, to Luci Herman of Stanford Law School who provided valuable guidance and resources to the class, to the clients, whose challenges inspired the students, to the many guest speakers who took their time to share their wisdom with all of us, and, most of all, to the students who, despite the challenges of the COVID-19 pandemic, brought extraordinary passion and intelligence to this collaboration. It was a privilege to work together.

Jim Leape and Janet Martinez

The Outlaw Ocean vi

#### A Note from the Stanford Law School, Law and Policy Lab

Engagement in public policy is a core mission of teaching and research at Stanford Law School. The Law and Policy Lab (The Policy Lab) offers students an immersive experience in finding solutions to some of the world's most pressing issues. Directed by former SLS Dean Paul Brest, the Policy Lab reflects the school's belief that systematic examination of societal problems, informed by rigorous data analysis, can generate solutions to society's most challenging public problems. Policy Lab students, closely guided by seasoned faculty advisers, counsel real-world clients in an array of areas, including environmental, trade, education, intellectual property, public enterprises in developing countries, policing, technology, and energy policy. The clients may be local, state or federal public agencies or officials, or private non-profit entities such as NGOs and foundations.

Typically, policy labs assist clients in deciding whether and how qualitative or quantitative empirical evidence can be brought to bear to better understand the nature or magnitude of their particular policy problem and identify and assess policy options. The methods may include comparative case studies, population surveys, stakeholder interviews, experimental methods, program evaluation or big data science, and a mix of qualitative and quantitative analysis. Faculty and students may apply theoretical perspectives from cognitive and social psychology, decision theory, economics, organizational behavior, political science or other behavioral science disciplines. The resulting deliverables reflect the needs of the client with most resulting in an oral or written policy briefing for key decision-makers.

Luciana Herman, Lecturer & Policy Lab Program Director, SLS

#### A Note from the Stanford Center for Ocean Solutions

The contents of this report—The Outlaw Ocean: An Exploration of Policy Solutions to Address Illegal Fishing and Forced Labor in the Seafood Industry—represent an investment by the Stanford Center for Ocean Solutions (COS) in developing future ocean leaders, equipping them with the skills and experiences necessary to address major ocean issues. Through partnering with Stanford Law School's Law and Policy Lab and Martin Daniel Gould Center for Conflict Resolution, COS engages a blend of students from a range of disciplines to investigate core issues relevant to addressing illegal fishing practices. The Spring 2020 Outlaw Ocean course provided students with an opportunity to practice interview skills, communicate across disciplines, conduct policy design sprints, and consider multinational perspectives—all while working as a distributed, virtual research team. Each of the directed research briefs illustrates a targeted area of interest for global fisheries management, including the human component and a specific related topic for COS's applied work. COS will continue to develop aspects of this research in the fall of 2020 and beyond, in collaboration with our partners in the Stanford Law and Policy Lab as well as with global networks including the World Economic Forum, the Friends of Ocean Action, and the Stanford Center for Human Rights and International Justice.

Eric Hartge, Stanford Center for Ocean Solutions, Research Manager

vii The Outlaw Ocean

# **TABLE OF CONTENTS**

IUU FISHING	9
I. INTRODUCTION.	9
II. PUBLIC DATA SHARING AS A MEANS OF COMBATING ILLEGAL FISHING: Three Case Studie	
Latin America	10
III. EXPEDITED ENTRY PORT SYSTEM: A Proposal for the Implementation of a Voluntary Compliance-Based Structure to Reduce Global IUU Fishing	44
FORCED LABOR	75
I. INTRODUCTION	75
II. POLICY APPROACHES TO ADDRESSING FORCED LABOR IN FISHERIES: Case Studies in Fiji Indonesia	
SUPPLEMENTAL RESEARCH	117
I. INTRODUCTION.	117
II. DISTANT WATER FISHING IN CHINA	118
III. IUU FISHING AND DATA POLICY: South Korea Case Study	134
IV. FORCED LABOR AND FISHERIES: Corporate Liability for Human Rights Abuses in the Fisher	
Sector	
APPENDIX A.	159
Acronyms and Abbreviations	159
APPENDIX B	163
Interviewees	163
APPENDIX C	165
IUU Fishing Appendices	165
APPENDIX D	173
Forced Labor Appendices	173

"This reality is driven by the simple notion that some pretty surprising things are happening out there [the high seas], much of it extra-legal if not illegal, much of it nefarious, and often at the intersection between environmental concerns and human rights concerns."



Ian Urbina, author of The Outlaw Ocean



9 The Outlaw Ocean

# **IUU FISHING**

#### I. INTRODUCTION

Illegal, unreported, and unregulated (IUU) fishing is one of the greatest threats to the sustainability of global fisheries. Fisheries managers' inability to know what is happening in the distant areas of the ocean is one of the main impediments to preventing IUU fishing. However, new tools are reshaping this landscape. In combination with emerging possibilities for data and social media analysis, technologies above and under the water are giving managers new, real-time insight into activity on the oceans. Global Fishing Watch (GFW) has been on the vanguard of technology pioneers. GFW uses satellite data with advanced machine learning analytics to track fishing vessel activity globally. GFW's platform and databases are becoming increasingly popular tools for both fisheries managers and enforcers in detecting and preventing IUU activity.

However, there are key legal questions about how GFW data can be used in different types of decision making. Automatic identification system (AIS) units, for example, were initially installed on boats for safety purposes and can easily be turned off by fishers wishing to evade detection. Data from AIS is thus usable only for certain kinds of enforcement decisions. Higher quality data from Vessel Monitoring System (VMS) units is more fit for enforcement decisions but is generally considered highly confidential by national governments.

GFW has begun an initiative to increase transparency in fisheries by encouraging governments to share their VMS data publicly. To date, only five countries have agreed to this: Indonesia, Chile, Peru, Panama, and Costa Rica. The first research paper in this section looks at what social, political, and legal conditions enabled Chile and Peru to agree to share their VMS data. It then uses this lens to address the potential for VMS data sharing in Ecuador. Understanding these conditions is essential to future efforts to encourage more countries to agree to share VMS data publicly via GFW. This research illustrates barriers to data sharing that are applicable not only in fisheries but to questions about sharing and using ocean data more broadly.

Requiring data sharing comes with many hurdles. The second research paper explores an alternative model—incentivizing compliance using voluntary mechanisms. Trusted traveler programs—like Global Entry in the United States—are an example of this approach. Travelers who willingly share additional data on themselves and go through background check processes are rewarded with expedited entry into the country. A similar mechanism could be used for fisheries port inspections. Vessels that are able to show compliance by sharing detailed information, including vessel track and fishing locations, could receive expedited inspection and offloading of their catch. The students' research lays out what a voluntary compliance model for port entry could look like, including a comparative regional case study of the Republic of The Marshall Islands and the Republic of Mauritius.

# II. PUBLIC DATA SHARING AS A MEANS OF COMBATING ILLEGAL FISHING: Three Case Studies in Latin America

Neil Nathan, Hanna Payne, Victor Xu

#### **Abstract**

Data transparency plays an important role in supporting regional and global efforts to combat illegal fishing and ensure healthy use of ocean resources. Location-monitoring data, like those generated by automatic identification systems (AIS) and Vessel Monitoring System (VMS) programs, offer an inside look at fishing vessels' activities. These data can aid enforcement of international maritime law and support states' reputations for engaging in sustainable and ethical fishing practices. Although the benefits of public data sharing are many, there are often legal and policy obstacles to achieving full data transparency. States face complex legislative histories that prohibit sharing of confidential information, such as VMS data. They must also navigate issues of political will and the influence of profitable fishing industry leaders. This research approaches the question of legal obstacles to data-sharing policy via case studies of three Latin American states. Peru, Chile, and Ecuador are all high-grossing coastal fishing nations and important global actors. Chile's and Peru's experiences with successfully publishing VMS data can provide insights into the key drivers of data publication. Meanwhile, a closer look at Ecuador's efforts to share data reveals some of the major hurdles to public sharing.

#### **Contents**

A. INTRODUCTION	11
B. CHILE CASE STUDY	13
1. Background	
2. Legal and Regulatory Framework for Fisheries	15
3. Industry Support	18
4. Coda	19
C. PERU CASE STUDY	19
1. Background	19
2. Legal and Regulatory Framework for Fisheries	23
3. Coda	26
D. ECUADOR CASE STUDY	27
1. Background	27
2. Legal and Regulatory Framework for Fisheries	31
3. Coda	40
E. INSIGHTS AND CONCLUSIONS	40
1. Generating Political Will	40
2. Legal Form and Barriers	41
3. Scope of Data Sharing	42

#### A. Introduction

The ways to address the problem of illegal, unreported, and unregulated (IUU) fishing vary, but one intervention offers promising returns and marks a natural starting point: making fishing data publicly available. Without data, countries cannot know the full extent of illegal fishing in their waters, and countries will face difficulty mustering the political will to address the issue. Without data, countries cannot effectively implement the Port State Measures Agreement (PSMA), as information regarding a particular vessel seeking to offload its catch would not be available to the port state. And, without data, novel methods of discovering and prosecuting illegal fishing will lie dormant. To put it simply, a complex global issue like IUU fishing will not be effectively addressed without data.

It's no accident that Article 119, §2 of the United Nations Convention on the Law of the Sea identifies the sharing of data among signatory states as a priority:

Available scientific information, catch and fishing effort statistics, and other data relevant to the conservation of fish stocks shall be contributed and exchanged on a regular basis through competent international organizations, whether subregional, regional or global, where appropriate and with participation by all States concerned.

Accordingly, nonprofit organizations like the Fisheries Transparency Initiative (FiTI) have underscored the critical importance of data transparency in the fisheries space. Among the FiTI's recommendations are the publication of national reports on the state of fish stocks, the establishment of public online registries of large-scale vessels and their catches, and the collection of information on small-scale fishers.

Location-monitoring data is one category of information for which transparency could pay major dividends. There are two principal forms of location-monitoring data in the fisheries sector: AIS and VMS. AIS is a transponder system using both satellite and VHF-radio bands for two-way communication.<sup>3</sup> AIS transmissions can occur between ships at sea or between a ship at sea and some receiver on land. The originally intended use of AIS was for safety—for example, preventing vessel collisions at sea. AIS is required by international law on all vessels of a certain size, but the system can be turned on or off by the crew to avoid detection (either for a beneficial reason, such as avoiding pirates, or for a less innocent reason, such as engaging in illegal fishing). The result of this AIS feature is gaps in data coverage when vessel operators turn off AIS or when ships are too far from other ships or a land-based receiver.

VMS also uses satellite technology to show vessel positioning, but VMS is closed and proprietary, meaning that the data is owned by a company, an organization, or an individual and is not open source. Thus, VMS is generally not available to the public. VMS offers one-way communication from a ship to monitoring agencies on shore, and it was introduced as a monitoring, control,

<sup>1</sup> Fisheries Transparency Initiative, "FiTI Standard," accessed May 20, 2020, https://fisheriestransparency.org/fiti-standard.

<sup>2</sup> Ibid.

<sup>3</sup> World Wildlife Fund for Nature, "Monitoring Vessels & Tracking Catches," accessed April 22, 2020, https://wwf.panda.org/our\_work/oceans/smart\_fishing/how\_we\_do\_this/good\_governance2/transparent\_seas\_/satellite\_tracking\_via\_ais\_.

and surveillance tool to address illegal fishing practices. VMS is regulated at the regional and national levels, but it has become increasingly relevant in global IUU discussions as a mechanism for transparency of fishing practices.<sup>4</sup> It has a higher spatial resolution than AIS, and it cannot be turned off manually by the crew because the onboard devices are secured.

Global Fishing Watch (GFW) is an international nonprofit organization whose mission is "to advance ocean sustainability and stewardship through increasing transparency." It was first developed as a collaborative project between Oceana, SkyTruth, and Google, but GFW has since become an independent nonprofit with partnerships around the world. GFW utilizes modern technology to help track and visualize global fishing activity and patterns on a public online platform. AIS data is used to track vessels on the platform, but a number of countries are beginning to sign agreements with GFW to share their VMS data on the platform for increased transparency and greater accuracy. GFW also engages in some data analysis and management on a case-by-case basis, but their primary product is the visual-tracking platform.

The past five years in particular have shown great progress in building a more transparent seafood system, from ship to shore to store. Since 2017, GFW has developed agreements with four countries—Indonesia, Peru, Chile, and Panama—that have resulted in the public sharing of VMS data on the GFW platform. At least two more countries—Costa Rica and Namibia—have made commitments to publish VMS data in the coming years.<sup>8</sup> To reach these milestones, GFW and their in-country partners who work for Oceana spend time partnering with local nonprofits in country and collaborating with government officials. Their goal is to help governments see the benefits of sharing vessel-tracking data, including a better global reputation, increased enforcement capacity, and additional data analysis. Each agreement is enshrined in a Memorandum of Understanding (MOU) between GFW and the partner country. The MOU expresses the terms by which GFW can publish and use the country's data. The MOU also ensures that the ownership of the data remains with the country so that GFW can only continue to share the VMS data with the country's permission.<sup>9</sup>

As more and more of the great expanse of the high seas is illuminated by transparent fishing practices via these MOU agreements, the trend toward sharing data will continue to grow. This creates an opportunity for GFW to continue partnering with governments worldwide in an effort to combat IUU fishing and build sustainable ocean systems. Because data production, distribution, and ownership look very different from country to country, it is vital that GFW approaches each partnership with an understanding of the legal and sociopolitical factors in each context, so that they can tailor and frame their work accordingly.

<sup>4</sup> Global Fishing Watch, "Understanding Fishing Activity Using AIS and VMS Data," accessed April 10, 2020, https://globalfishingwatch.org/wp-content/uploads/Understanding-Fishing-Activity.pdf.

<sup>5</sup> Global Fishing Watch, "Transparency in Commercial Fishing," accessed April 2, 2020, https://globalfishingwatch.org/about-us.

<sup>6</sup> For more information, refer to Ocean's website at https://peru.oceana.org/es.

<sup>7</sup> For more information, refer to SkyTruth's website at: https://skytruth.org.

<sup>8</sup> Samantha Emmert, "Vessel Monitoring Systems in the Fishing Industry," Global Fishing Watch, December 6, 2019, https://globalfishingwatch.org/vms-transparency.

<sup>9</sup> Tony Long, GFW, personal communication, April 9, 2020.

The research summarized in this report was born out of a need to better understand the influences that are at play in a country's decision to publicly share VMS data on a platform like GFW's. In this report, we assess the laws, regulations, and policies governing vessel-tracking data in three case study countries: Chile, Peru, and Ecuador. In support of GFW's mission, our goal is to identify any barriers to public sharing of VMS data. This research focuses on Latin America for a few key reasons. The southern and eastern Pacific Oceans are extremely productive marine ecosystems, and thus the coastal states of Chile, Peru, and Ecuador have economies that rely heavily on fisheries. The fishing grounds of these three countries also tend to overlap, so collaboration is key in maintaining healthy fish stocks. Chile, Peru, and Ecuador have each ratified the PSMA, signaling a shared commitment to transparency but perhaps differing yet illuminating legal barriers in each country. Because Chile and Peru have already made public their VMS data via GFW and Ecuador has not yet done so, a case study approach to this research provides insights into the major hurdles and key drivers of data publication and allows us to potentially apply lessons learned in Chile and Peru in the context of Ecuador.

"The politics of data-sharing are so important. What is a country's identity? How does a country want to be perceived? Are they getting criticized for other things in the fishing industry?"



Bronwen Golder, COS

This report is divided into four main parts: the three country-based case studies and a conclusion that outlines our central insights and takeaways. Within each case study, we give background on the role that fisheries play in each country's economic and political spheres, as well as the governance structure and legal framework for fisheries management. We conclude by identifying and discussing themes for both obstacles and drivers of data sharing in all three case studies. With a better understanding of the legal and sociopolitical contexts in country, governments and nonprofits like GFW will be better equipped to collaborate on agreements that increase transparency for global fisheries and ensure sustainable marine resource management.

# B. Chile Case Study

### 1. Background

Chile is distinctive for its unique geography and extensive coastline. With a western seaboard spanning 4,300 kilometers, its exclusive economic zone (EEZ) covers 3,681,989 square kilometers and is the eleventh largest in the world.<sup>10</sup> The Humboldt Current moves cold, nutrient-dense water north along Chile's coast, making its fisheries some of the most productive in the world. Its annual exports total \$US6 billion, making it the eighth largest fishing nation.<sup>11</sup> Most of its landings

<sup>10</sup> D. Pauly, D. Zeller, and M.L.D. Palomares, eds., "Sea Around Us Concepts, Design and Data (seaaroundus.org)," 2020.

<sup>11</sup> IUU Watch, "Oceana Celebrates the Public Release of Chile's Fishing Vessel Tracking Data," March 5, 2020, https://www.iuuwatch.eu/2020/03/oceana-celebrates-the-public-release-of-chiles-fishing-vessel-tracking-data.

are smaller species, such as anchovies, jack mackerel, and sardines, which are processed into oil and fishmeal. <sup>12</sup> Chile's fleet consists of nearly 14,000 vessels used for industrial fishing, artisanal fishing, and aquaculture. <sup>13</sup>

But Chile's lengthy coastline and large EEZ also make its waters particularly vulnerable to IUU fishing. In addition to harming ecologically important fish stocks, illegal fishing substantially impacts Chile's seafood economy. An estimated 320,000 metric tons of fish landings valued at \$US400 million are attributed to IUU fishing in the EEZ. 14 This corresponds to about 30% of the fishing in Chile.

A national policy to fight IUU fishing was announced by Chile at the Our Ocean conference that took place in Washington, DC, in 2014. The announcement came alongside the Straddling Fish Stocks Agreement, which granted greater high-seas enforcement capacity to the Chilean Navy. The following quote from the 2016 Report on the Committee on Fisheries and Aquaculture describes Chile's stance on illegal fishing:

[I]llegal fishing became one of the most questionable violations of national law because it not only puts the future of our countries at risk, but it causes a great social impact due to the enormous number of people who live and work around the fishing, processing, and marketing of fishery products.<sup>16</sup>

Chile is currently one of fifteen members of the South Pacific Regional Fisheries Management Organization (SPRFMO).<sup>17</sup> The primary resources managed in the Southeast Pacific are jack mackerel and jumbo flying squid.<sup>18</sup> The goal of a Regional Fisheries Management Organization (RFMO) is to improve compliance with international agreements related to fishing practices and acts on the high seas. The SPRFMO is particularly successful in terms of management, compliance, and anti-IUU efforts globally.<sup>19</sup>

Chile has played an active role in many of the international marine conservation movements, and the nation has ratified most of the major conventions and treaties relating to ocean policy and stewardship, such as the Food and Agriculture Organization of the United Nations (FAO) Code of Conduct for Responsible Fisheries, United Nations Convention on the Law of the Sea, the Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas, and the International Plan of Action to Prevent, Deter and

- 12 National Oceanic and Atmospheric Association, "The Fisheries of Chile," Marine Fisheries Review . 50, no. 1 (1988): 62-7.
- 13 Supra, note 11.
- 14 Biblioteca del Congreso Nacional de Chile, "Historia de la Ley 21,123," January 31, 2019, https://www.bcn.cl/historiadelaley/nc/historia-de-la-ley/7619.
- Madeleine Simon, "Chile Announces New Policy Against Illegal Fishing," Oceana, June 30, 2014, https://oceana.org/blog/chile-announces-new-policy-against-illegal-fishing.
- 16 Supra, note 14.
- 17 South Pacific Regional Fisheries Management Organization home page, accessed April 25, 2020, https://www.sprfmo.int.
- 18 Ibid.
- 19 Cristian Laborda, personal communication, May 6, 2020.

Eliminate Illegal, Unregulated and Unreported Fishing.<sup>20</sup> Past leadership has been particularly progressive in their stewardship of marine resources. For example, former President Michelle Bachelet designated more than one million square kilometers as marine reserves, increasing protection by more than 25%. The current government and administration continue to advance sustainability and equity in the marine resource sector. On May 15, 2019, Chile, through the National Fisheries Service (SERNAPESCA), and GFW signed an agreement to make its vessel-tracking data publicly available through GFW's map.<sup>21</sup> Last year, during the third Chile-Peru Binational Cabinet, both countries signed the Paracas Declaration, in which they committed to establish a working plan to carry out reciprocal support activities to prevent, discourage, and eliminate IUU.<sup>22</sup>

#### 2. Legal and Regulatory Frameworks for Fisheries

#### General Law on Fisheries and Aquaculture

Law No. 18,892, or the General Law on Fisheries and Aquaculture, forms the backbone of Chile's regulatory structure, which has continuously developed since the law's enactment in 1989.<sup>23</sup> It covers fisheries management, implementation of national and international treaties, conservation of hydrobiological resources, artisanal and subsistence fishers, animal welfare, and aquaculture.<sup>24</sup> Supreme Decree No. 430 was issued in 1991 to maintain the "consolidated, coordinated and systematized text" of the General Law on Fisheries, including all subsequent modifications and amendments.<sup>25</sup>

#### VMS Data Laws and Amendments

Numerous amendments have been made to the General Law on Fisheries and Aquaculture to keep pace with the technological advancement and globalization of the fisheries sector. The introduction of VMS was one such advancement that required updated laws and control mechanisms for the robust monitoring, control, and surveillance (MCS) tool. Law No. 19,521 was introduced in 1997 to require the installation of VMS on registered Chilean fishing vessels and factory ships as well as foreign-flagged vessels authorized to fish and land in Chile.<sup>26</sup> The amendment added the following article to the General Law on Fisheries and Aquaculture:

- 20 Anthony Cox, An Appraisal of the Chilean Fisheries Sector (Paris; OECD Publishing, 2009).
- 21 Sarah Bladen, "Chile to Publish Vessel-Tracking Data Through Global Fishing Watch," Global Fishing Watch, May 15, 2019, https://globalfishingwatch.org/press-release/chile-to-publish-vessel-tracking-data-through-gfw.
- 22 Agencia Peruana de Noticias, "Peru y Chile Firman Compromisos en Pesca, Acuicultura Y Desarrollo Productivo," October 10, 2019, https://andina.pe/agencia/noticia-peru-y-chile-firman-compromisos-pesca-acuicultura-y-desarrollo-productivo-769339.aspx.
- 23 Ministerio de Economía, Fomento y Reconstrucción, "LEY-18892 23-DIC-1989 MINISTERIO DE ECONOMÍA, FOMENTO Y RECONSTRUC-CIÓN," Ley Chile Biblioteca del Congreso Nacional, June 9, 1991, https://www.leychile.cl/Navegar?idNorma=30265.
- 24 Ibid
- 25 Ministerio de Economía, Fomento y Reconstrucción, "DTO-430 21-ENE-1992 MINISTERIO DE ECONOMÍA, FOMENTO Y RECONSTRUC-CIÓN," Ley Chile Biblioteca del Congreso Nacional, accessed May 16, 2020, https://www.leychile.cl/Navegar?idNorma=13315.
- 26 Ministerio de Economía, Fomento y Reconstrucción, "LEY-19521 23-OCT-1997 MINISTERIO DE ECONOMÍA, FOMENTO Y RECONSTRUC-CIÓN, SUBSECRETARÍA DE ECONOMÍA, FOMENTO Y ECONSTRUCCION," Ley Chile - Biblioteca Del Congreso Nacional, accessed May 16, 2020, https://www.leychile.cl/Navegar?idNorma=76464.

Article 64D. The information obtained through the system will be reserved. Its destruction, subtraction, or disclosure will be sanctioned with the penalties indicated in articles 242 or 247 of the Penal Code, as appropriate.<sup>27</sup>

This provision specifically prohibits the sharing of VMS data outside of the Chilean government. Responsibility for receiving and managing the data was split between the SERNAPESCA and the General Directorate of the Maritime Authority. Article 64D clearly posed a legal hurdle for Chile if it wanted to work with GFW on greater data transparency, and public disclosure would require additional amendments to the General Law on Fisheries in order to share national VMS data. The text of Article 64D remained unchanged until January 2019, with the publication of Law No. 21,132, modernizing the function of the SERNAPESCA.

The history of Law No. 21,132 details much of the discussion during the three constitutional procedures as well as the Mixed Commission regarding the details of the law.<sup>29</sup> Of note, the Mixed Commission Report states that this particular piece of legislation "was approved by unanimous consent, without changes."<sup>30</sup>

That recent law modifies several distinct laws relating to the Ministry of Finance, the Ministry of Economy, Development, and Reconstruction, and other agencies to update the role and capacity of SERNAPESCA.<sup>31</sup> Article 9 of the law updates the first paragraph of Article 64D from Law No. 21,132 as follows:

§ 6. The information emanating from the automatic positioning system will be public and must be updated monthly and published on the National Fisheries and Aquaculture Service's website. Anyone who maliciously destroys renders useless or alters the automatic positioning, or the information contained in it will be sanctioned with the penalty of minor prison in its minimum to medium degrees.<sup>32</sup>

This represented a significant shift in the fisheries data policy of Chile. Rather than writing a more nuanced piece of legislation allowing conditional use and sharing of VMS data, the entirety of the positioning data was made open to the public. This data includes vessel identity numbers, gear type, location, speed, direction, and other relevant monitoring information. Additionally, the nature of VMS allows the data to be shared in near real time.<sup>33</sup> While the data is public, the new law only requires it to be updated monthly on SERNAPESCA's website. However, the agreement between Chile and GFW expedites the publishing of the VMS data. Currently, a live

- 27 Ibid.
- 28 Ibid.
- 29 Supra, note 14.
- 30 Ibid
- 31 Ministerio de Economía, Fomento y Turismo, "LEY-21132 31-ENE-2019 MINISTERIO DE ECONOMÍA, FOMENTO Y TURISMO," Ley Chile Biblioteca del Congreso Nacional, accessed May 18, 2020, https://www.leychile.cl/Navegar?idNorma=1128370.
- 32 Ibid
- 33 Tony Long, "Chile Shows Global Leadership on Fisheries Transparency," Global Fishing Watch, March 3, 2020, https://globalfishingwatch.org/vms-transparency/chile-leadership.

map of Chilean fishing and aquaculture vessels can be found on SERNAPESCA's website, thanks to GFW.<sup>34</sup>

This specific piece of legislation sets Chile apart from some of the other nations that have reached VMS data-sharing agreements with GFW. The now public nature of the data allows GFW to immediately release information such as International Maritime Organization (IMO) numbers (unique identifiers) and vessel names. Other countries are stricter with the information published, whether through more conservative MOU agreements or more restrictive national legislation. For example, the Ministry of Production, Fisheries Sector, of the Government of Peru (PRODUCE) requires, through their MOU with GFW, a ten-day delay before their VMS data is published onto the platform, and Panama's vessel IMO numbers are replaced with anonymous GFW ID numbers. These distinctions mark Chile as a true leader and first mover in data transparency.

It should be noted that there is still no existing platform that can be used to flag illegal fishing in time to prevent entry at ports in Chile. FAO is working on the development of such a platform, but GFW's platform is not being used for port-entry inspection. Therefore, Chile's transparency is principally a deterrent for IUU fishing activity. As Chile has made all VMS data public and available through GFW's platform, vessel owners and operators are less likely to engage in IUU behavior. This is especially true for the Chilean fleet, as all information related to vessel identity is available without the stipulation of delay or censorship.

#### Modernization of the National Service for Fisheries and Aquaculture (SERNAPESCA)

The continuous regulatory developments in response to IUU fishing, as well as other sustainability concerns, have significantly increased the duties of SERNAPESCA. The service plays a major role in the monitoring, controlling, and surveilling domestic and foreign-flagged vessels, but even more must be done to address the economic and environmental threat that IUU fishing poses, especially considering the size of the country's EEZ. Hence, Chile passed Law No. 21,132 in January of 2019 to increase the role of SERNAPESCA. One aspect of Law No. 21,132 is an addition of capacity to the organization. Specifically, Article 7 of the law increases the maximum staffing positions in the agency by 253.<sup>37</sup>

The law expands the role of the Department of Management of Fisheries Control Programs; particularly, the department now also assumes the role of coordinating the certification system of landing information, as SERNAPESCA performs this work directly or by contracting accredited auditing entities in cases where the law authorizes it. Finally, the modernization of SERNAPESCA changed the status of the VMS data to public access.

<sup>34</sup> Inicio, "Monitoreo Satelital de Naves y Embarcaciones Pesqueras," accessed May 14, 2020, https://www.sernapesca.cl/informacion-utili-dad/monitoreo-satelital-de-naves-y-embarcaciones-pesqueras.

<sup>35</sup> Global Fishing Watch, "Global Fishing Watch Shared Workspace," accessed April 28, 2020, https://globalfishingwatch.org/map.

<sup>36</sup> Ibid.

<sup>37</sup> Supra, note 31.

#### 3. Industry Support

One issue at the forefront of VMS data sharing is the publication of sensitive information regarding fishing grounds. The industrial fisheries sector has always been competitive, and a large part of its success is knowing where and when to fish. While vessel owners have historically been strongly opposed to sharing information regarding their fishing grounds, that may not be the case anymore. Cristian Laborda is a Chilean lawyer and director of Laborda Abogados. He formerly acted as the head of the Oceanic Affairs Department in the Ministry of Foreign Affairs of Chile, as well as a legal advisor in the matter of International Law of the Seas and Fisheries. Regarding the new data transparency clause in Law No. 21,132, Cristian said there was little to no opposition from the industry.<sup>38</sup> While this may seem counterintuitive, it is also important to note that fishing grounds data can be acquired through other means. A combination of AIS data, fisheries statistics, and oceanographic data can produce valuable information on profitable fishing grounds, so vessel owners may be less concerned about data sharing.<sup>39</sup>

Chile's Association of Industrial Fisheries (ASIPES) itself confirmed industry support for the public access of its VMS data.<sup>40</sup> The association's president, Macarena Cepeda Godoy, stated that the new law is a "very good advance[ment] in transparency and information on how the different fishing actors operate at sea since it will allow us to know where they carry out their tasks, how they respect the respective exclusion zones, protected areas or areas of high natural value and combat illegal fishing."<sup>41</sup> This highlights several motivations for their support of public access for VMS data. First, many industrial vessels have received accusations and complaints from the artisanal sector, claiming that the industrial fleet is fishing in reserved, artisanal-only zones. It is in the best interest of the industrial fishers to dispute these claims, and ASIPES believes that transparency will resolve the accusations. Second, the fisheries are losing 30% of their catch to illegal fishing, providing a financial incentive. Lastly, the progressive association of fisheries values sustainability of marine resources, understanding the dependence of their industry on the health of their fish stocks.<sup>42</sup>

ASIPES created its own fisheries data platform in 2016, similar to that of GFW.<sup>43</sup> The program is called the Online Supply Monitoring System for the Fisheries Industry (SIDES). Operating across four areas, the online platform aims to offer more information than GFW does. First, real-time satellite data from the fishing fleets of ASIPES companies is available publicly. A second initiative is to post daily reports of fishing catches for each vessel in the association. Lastly, the platform aims to provide holistic information on the supply chain for hook-to-plate transparency, including raw material destinations and third-party purchases.<sup>44</sup> Joining this platform is compulsory for all companies that are part of ASIPES. This includes Blumar, Pacific Blu, Landes, Camanchaca, and

<sup>38</sup> Supra, note 19.

<sup>39</sup> Ibid.

<sup>40</sup> ASIPES, "Asipes Valora Acceso Público del Sistema de Monitoreo Satelital Impulsado por Sernapesca y Recalca Su Compromiso por la Protección del Mar y Sus Recursos," accessed May 25, 2020, https://www.asipes.cl/novedades/detalle/id/419.

<sup>41</sup> Ibid.

<sup>42</sup> Ibid.

<sup>43</sup> Genesis Saldaña Vásquez, "BIOBIO – Pesca Industrial Incorpora Inédito Monitoreo en Línea de Abastecimiento de Materia Prima," Peru Pesquero, June 3, 2016, https://www.perupesquero.org/biobio-pesca-industrial-incorpora-inedito-monitoreo-en-linea-de-abastecimiento-de-materia-prima.

Alimar.<sup>45</sup> SIDES is accessible online today, but it requires registration with a Unique National Role (RUT)- a Chilean citizen identification number.

This platform was implemented by the industry to guarantee traceability, combat illegal fishing, and dispute allegations from the artisanal sector. Hence, the large industry players had no need to oppose a law requiring public access to VMS data. Rather, they advocated for this law and played a role in its success.

#### 4. Coda

Chile's relatively early move toward data transparency can be linked to three factors. First, the political will within the country's government was high, because Chile has a history of leadership in global marine stewardship. Additionally, the quantification of IUU efforts and its impact on the Chilean economy drove political motivation to directly address the issue. Second, the support of industry players was important, especially because VMS data is installed and paid for by the vessel owners themselves. In Chile's case, the major industrial fishers had several reasons to make VMS data public and increase transparency and traceability in their sector. Evidence for compliance with artisanal zone regulations and long-term sustainability of the fishing business were two principal reasons. Lastly, the legal frameworks previously in place and a significant modification to the General Law on Fisheries and Aquaculture streamlined Chile toward data transparency. A prior clause preventing the sharing of VMS data outside of the country was unanimously modified to make all VMS data public, and this has made Chile the most data-transparent country on the GFW platform to date.

While sharing VMS data with GFW allows for a public audience, SERNAPESCA also gains value from the use of the platform. They are able to use the map and GFW algorithms "to visualize and track the position of the vessels in its fleet, including vessels participating in aquaculture." The algorithms for detecting "apparent fishing activity" streamline the investigative work that SERNAPESCA is responsible for. This is true for other countries as well. While one aspect of GFW's platform is public transparency, another is to provide monitoring assistance to national agencies regulating fishing activity. Each country that shares data with GFW has access to a personalized platform with complete, unredacted data to detect IUU fishing in their waters or fleets. These two mechanisms together can have a significant impact on illegal fishing, so joining the GFW platform provides incentive for countries struggling with this issue in their waters.

<sup>45</sup> Ibid.

<sup>46</sup> SERNAPESCA, "Monitoreo Satelital de Naves y Embarcaciones Pesqueras," accessed May 24, 2020, https://www.sernapesca.cl/informa-cion-utilidad/monitoreo-satelital-de-naves-y-embarcaciones-pesqueras.

# C. Peru Case Study

#### 1. Background

Peru is situated such that the cold Humboldt Current, together with winds blowing along the country's 2,414-kilometer coastline, generates an upwelling system that brings nutrients and cold water to the surface from the deep ocean. The result is an exceptionally fertile aquatic environment that sustains a huge variety of ocean life.<sup>47</sup>

On this geographical backdrop, fishing has become deeply ingrained in Peru's economy, politics, and culture. Peru is the second largest fishing country in the world, behind only China.<sup>48</sup> Indeed, about 10 percent of the world's catch comes from Peruvian waters.<sup>49</sup> As can be expected, this catch is vital to Peru's economy. By some estimates, some 232,000 Peruvian jobs—comprising fishermen, shippers, processors, restaurant workers, and more—depend on the country's seafood sector as of 2014.<sup>50</sup> In 2019, Peru's fishing sector exported almost \$US3.5 billion worth of fish—mostly several million metric tons of anchoveta.<sup>51</sup>

The fishing sector in Peru is centered around anchoveta, a species of fish in the anchovy family that is a very common base for fishmeal, which is a processed commercial product widely used to feed livestock. Peru has the world's largest anchoveta fishery, and anchoveta dominates fish landings.<sup>52</sup> Other prominent catches include invertebrates like giant squid, tuna, and mackerel, roughly in descending order of contribution to gross domestic product (GDP).<sup>53</sup>

Given the number of Peruvians who rely on fishing for their livelihood, overfishing, IUU fishing, and El Niño events exacerbated by climate change are particularly pressing problems for the country. These factors have contributed to low annual catches in the middle of the past decade, including reports of low landings and small, sexually immature fish in 2014, 2015, and 2016.<sup>54</sup>

In particular, overfishing and IUU fishing have emerged as serious, interlinked threats in Peru. Reliable systematic analyses of overfishing in Peru are limited due to the lack of reliable information on fish stocks and because concepts like overfishing and overexploitation are not

<sup>47</sup> Alfred Grünwaldt, "Will Peru Have Enough Seafood in 50 Years? The Reason for Sustainable Fishing," Inter-American Development Bank, March 4, 2019, https://blogs.iadb.org/sostenibilidad/en/will-peru-have-enough-seafood-in-50-years-the-reason-for-sustainable-fishing.

<sup>48</sup> Food and Agriculture Organization of the United Nations, "State of World Fisheries and Aquaculture 2018," 2018, http://www.fao.org/state-of-fisheries-aquaculture/es.

<sup>49</sup> Ibid

<sup>50</sup> Villy Christensen, Santiago de la Puente, Juan Carlos Sueiro, Jeroen Steenbeek, and Patricia Majluf, "Valuing Seafood: The Peruvian Fisheries Sector," *Marine Policy* 44 (February 2014): 302–11, https://doi.org/10.1016/j.marpol.2013.09.022.

<sup>51</sup> Sociedad Nacional de Pesquería, "Exportaciones Pesqueras Año 2019," https://www.snp.org.pe/wp-content/uploads/2020/01/12-RE-PORTE-DE-LAS-EXPORTACIONES-PESQUERAS-A%C3%91O-2019.pdf.

<sup>52</sup> Supra, note 50.

<sup>53</sup> Ibid.

<sup>54</sup> Allison Guy, "Overfishing and El Niño Push the World's Biggest Single-Species Fishery to a Critical Point," Oceana, February 2, 2016, https://oceana.org/blog/overfishing-and-el-ni%C3%B1o-push-world%E2%80%99s-biggest-single-species-fishery-critical-point.

contemplated in national regulations.<sup>55</sup> However, anecdotal evidence points to a crisis. Analyzing data between 2009 and the first half of 2011, investigative journalists found that 630,000 metric tons of anchoveta, worth nearly \$200 million as fishmeal, were caught and processed, yet simply missing from official counts.<sup>56</sup> Despite reforms to anchoveta fishery management, the trend of unreported anchoveta continues today. Between 120,000 and 150,000 metric tons of anchoveta are not reported each year.<sup>57</sup> Similarly, researchers estimate that Peru's total aggregate fish catch between 1950 and 2010 was underreported by 25%.<sup>58</sup> Peru has also struggled with juvenile-heavy catches, a telltale sign of overfishing. For example, despite regulations limiting the acceptable juvenile catch ratio to 30%, a 2009 report from the Sea Institute of Peru (IMARPE) showed that some 60% of caught jack mackerel were juveniles.<sup>59</sup> Furthermore, Samuel Amorós, a World Wildlife Fund Peru marine affairs specialist, believes that more than 9,000 of the more than 16,000 fishing vessels in Peru are illegal.<sup>60</sup>

For Peru, IUU fishing and overfishing are not mere annoyances. They threaten the food and nutritional needs of some 300,000 Peruvians.<sup>61</sup>

Peru has responded through various efforts to combat IUU fishing and overfishing. Working with the World Bank since 2009, the Peruvian government has adopted and implemented rights-based management of industrial anchoveta fleets, with quotas set by a scientific body and assigned to individual companies. The ultimate goal is to reduce fishing and rebuild fish stocks. Early impacts have seemed positive—as of 2017, a quarter of the country's industrial anchoveta fleet was decommissioned under the new management system (fishers who were out of a job received access to unemployment benefits). Peru has also made efforts toward combating other less directly anthropogenic causes of fish stock depletion. For example, Peru has cooperated with the Inter-American Development Bank to develop the technological capacity to monitor and evaluate climate change impacts on oceanic ecosystems. Moreover and overlaps and overlaps are considered to monitor and evaluate climate change impacts on oceanic ecosystems.

New initiatives like these in the fisheries space corresponded with a growing political will for transparency after years of diminished catches in the 2010s. Crucial to this shift was a change in the industrial fishers' position. This occurred in part because leaders in the fishing industry determined that the risk of sharing prime fishing spots was no longer prohibitive, as such

- 55 Oceana Peru, "Promover la Pesca Sostenible," accessed May 29, 2020, https://peru.oceana.org/es/our-campaigns/promover\_la\_pesca\_sostenible/campaign.
- 56 Milagros Salazar, "Peru's Vanishing Fish," The Center for Public Integrity, January 26, 2012, https://publicintegrity.org/environment/perus-vanishing-fish.
- 57 Yvette Sierra Praeli, "Peru: The Wealth of a Biodiverse Sea Open to Exploitation," Mongabay, August 23, 2018, https://es.mongabay.com/2018/08/oceanos-mar-de-peru-explotacion.
- 58 Jaime Mendo and Claudia Wosnitza-Mendo, "Reconstruction of Total Marine Fisheries Catches for Peru: 1950-2010," Fishing Centre Working Paper Series, University of British Columbia, 2014, http://www.seaaroundus.org/doc/publications/wp/2014/Mendo-et-al-Peru.pdf.
- 59 Ibid
- 60 Milton López Tarabochia, "Illegal Fishing in Peru: A Threat to Marine Conservation," Mongabay, June 9, 2016, https://es.mongabay.com/2016/06/pesca-ilegal-peru-amenaza-la-salud-publica-las-areas-conservacion-marinas.
- 61 Food and Agriculture Organization of the United Nations, "Peru Defines Further Measures to Tackle IUU Fishing," February 26, 2019, http://www.fao.org/iuu-fishing/news-events/detail/en/c/1182106.
- 62 World Bank, "In Peru, Fishing Less Anchoveta Pays Off," March 6, 2017, https://www.worldbank.org/en/news/feature/2017/03/06/peru-anchoveta-pescadores.
- 63 Inter-American Development Bank, "PE-T1297: Adaptación al Cambio Climático del Sector Pesquero y del Ecosistema Marino-Coste," accessed May 19, 2020, https://www.iadb.org/es/project/PE-T1297.

information was already available to interested parties via other oceanographic data that can be relatively easily obtained. Additionally, industrial leaders were impressed with the growing technological possibilities of analyzing public vessel-location datasets. For instance, one Oceana affiliate had developed a method that cross-referenced satellite imaging and AIS data to visualize Chinese IUU fishing in Peruvian waters. Although this method used AIS and not VMS data, such new algorithms and methods have brought attention to the potential upsides of data transparency.

According to Juan Carlos Sueiro, Oceana's fisheries director, the industry's position also changed in part due to shifting employment of individuals between the public and private sectors in Peru. 66 Of note, former Minister of Production Elena Conterno, a major advocate of data transparency in fisheries during her tenure in 2009, became head of the National Fishery Society (SNP), an organization representing Peru's large industrial fishers. Conterno attempted to broker a public data-sharing agreement between the government and industry stakeholders in 2009, though the effort was unsuccessful then. But through her new position leading SNP, Conterno was able to steer the position of the industrial fishers toward public data sharing. 67

In addition, a slate of new leaders focused on fisheries issues emerged. According to Sueiro, the Vice Minister of Fisheries and Aquaculture, Héctor Soldi, brought to the Ministry of Production an internationalist lens on fisheries issues.<sup>68</sup> Indeed, Peru ratified the PSMA in 2017. Soldi had spent time in the United States representing the interests of Peru and Latin America, and he was keen on the possibilities in international cooperation to address Peru's fisheries issues.

Peru's position shifted dramatically since the last time public VMS data sharing was suggested in 2009. By 2016, serious discussions on public data sharing were underway. Around the same time, Peru also created an online portal called TRASAT, <sup>69</sup> which publicly documents vessel data for all ships passing through Peru's jurisdictional waters, though TRASAT is more limited than the GFW platform—it can be searched only one vessel at a time, and the timeframe for which data is available is limited.

Ultimately, Peru signed a MOU with GFW on October 5, 2017, promising to work to make its VMS data public.<sup>70</sup> Data on Peruvian-flagged ships began appearing on the GFW platform a year later, making Peru the second country, behind only Indonesia, to make its VMS dataset freely and publicly available on GFW's platform.<sup>71</sup>

- 64 Juan Carlos Sueiro, personal communication, May 12, 2020.
- 65 Ibid.
- 66 Ibid.
- 67 Ibid.
- 68 Ibid
- 69 Peru Ministry of Production, "TRASAT," accessed May 20, 2020, https://www.produce.gob.pe/index.php/shortcode/servicios-pesca/trasat.
- 70 Andy Sharpless, "CEO Note: A Victory for Transparency in Peru," Oceana, September 29, 2017, https://oceana.org/blog/ceo-note-victo-ry-transparency-peru.
- 71 Samantha Emmert, "Peru's Vessel Tracking Data Now Publicly Available Through Global Fishing Watch," Global Fishing Watch, October 25, 2018, https://globalfishingwatch.org/press-release/perus-vessel-tracking-data-now-publicly-available.

In this section, we first discuss the current state of the fishing sector in Peru. We then examine the legal framework on which Peru implemented public sharing of its VMS dataset.

#### 2. Legal and Regulatory Frameworks for Fisheries

In this subsection, we discuss the legal framework for VMS datasets and data privacy rules in Peru that ultimately empowered Peru to publicly share its VMS data with GFW.

#### Vessel-Monitoring System Framework

The General Fishing Law approved by Decree Law No. 25977 in 1992 sets out the framework for the management of oceanic resources. The General Fishing Law declares broadly that the hydrobiological resources contained in the territorial waters of Peru constitute national patrimony, so that the government must regulate the integral management and rational exploitation of these resources to achieve sustainability and preservation for future generations. Under the Constitution of Peru, the maritime domain of the Peruvian government includes the sea adjacent to its coastal water, rivers, and underground waters up to a distance of 200 nautical miles. This area is commonly known as Peru's EEZ. Importantly, the General Fishing Law<sup>72</sup> and its Regulation (approved by Supreme Decree No. 012-2001-PE) are the regulatory framework for essentially all fishing regulations since 1992. See, for example, Legislative Decree N° 1084, Law of Maximum Catch per Vessel (the aforementioned individual vessel quota system instituted in 2009).

The Ministry of Production, through the Vice Ministry of Fisheries and Aquaculture, is the governing authority in charge of formulating, coordinating, executing, and monitoring Peru's fisheries and aquaculture development policy. Its main functions are the following: to adopt fisheries management measures; to grant administrative rights to individuals for the development of fishing activities; and to inspect—and punish, if appropriate—any infringers of promulgated rules.<sup>73</sup>

Because natural resources are national heritage, their exploitation must be determined by law under the Peruvian Constitution. The Peruvian government, through its competent entities, must authorize any exploitation of natural resources. In the case of industrial fishing vessels seeking to extract fishing resources from Peruvian waters, such vessels must obtain a fishing permit from the Ministry of Production.<sup>74</sup> But artisanal fishers and subsistence fishers need not acquire a permit.

Peru first conceived of its VMS requirement for Peruvian-flagged ships in 2001, when the VMS system was addressed in the Regulation of the General Fishing Law. That regulation created a satellite tracking system called SISESAT.<sup>75</sup> Administered by the Ministry of Production, SISESAT

<sup>72</sup> In order for the General Fishing Law to enter into force, a regulation is needed, which is approved through a Supreme Decree by the Executive Power.

<sup>73</sup> Baker McKenzie, "Doing Business in Peru 2017," November 2017, https://www.bakermckenzie.com/-/media/files/insight/publications/2017/11/bk\_peru\_doingbusiness\_nov17.pdf?la=en.

<sup>74</sup> Decreto Supremo No. 012-2001-PE, Articles 28 and 40.1.

<sup>75</sup> Decreto Supremo No. 012-2001-PE, Articles 109-110.

aims to "contribute to the adoption of fisheries management measures and the responsible use of hydrobiological resources, as well as complementing follow-up, control and surveillance actions of extractive activities."<sup>76</sup> In essence, SISESAT mandates that all industrial vessels along with other specific categories of fishing vessels install VMS equipment,<sup>77</sup> maintain signal continuously, and transmit data to the Ministry of Production at stated fixed intervals.<sup>78</sup> The regulation also grants the Ministry of Production broad enforcement authority against vessels that fail to use an operational VMS system.<sup>79</sup> A list of offenders over any given preceding 24-hour period is published online.<sup>80</sup>

Peru periodically updates its SISESAT framework to maintain currency amid shifting technology and contractual obligations. For example, a major update to SISESAT came in 2003 with Supreme Decree N° 026-2003-PRODUCE. That regulation, although it is now repealed, established the main data each transmission from a vessel should contain: date and time, identification, GPS coordinates, and messages varying depending on the context. The regulation also established technical specifications and qualification standards for providers of the VMS technology. The continuous update and improvement of SISESAT led the Peruvian government to approve a new regulation for SISESAT, which is the Supreme Decree N° 001-2014-PRODUCE. The Supreme Decree focused on the development of measures regarding technical specifications, installation and maintenance of satellite equipment, alert messages, latency of emissions, means of transmission, reception, and data security as well as technical specifications from the satellite communication service to the SISESAT control center in the Ministry of Production.

#### Data Rights

In Peru, VMS data property rights was initially a contested issue. Resolution of this issue in favor of the government was a significant step toward public sharing of VMS datasets.

Supreme Decree N° 012-2001-PE contains three relevant provisions:84

#### Article 115 - Reserved nature of the information and data

115.1 The rights to data, reports, and information from the Satellite Tracking System related to fishing vessels dedicated to the extraction of highly migratory and transzonal hydrobiological resources are reserved and confidential. The ship owners have access through the system to the data related to their fishing vessels.

- 76 Decreto Supremo No. 012-2001-PE, Article 109.
- 77 Decreto Supremo No. 001-2014-PRODUCE, Article 4.
- 78 Decreto Supremo No. 012-2001-PE, Article 111.
- 79 Decreto Supremo No. 012-2001-PE, Article 114.
- 80 Peru Ministry of Production, "Seguimiento Satelital", accessed May 5, 2020, https://www.produce.gob.pe/index.php/dgsfs-pa/seguimiento-satelital.
- 81 Decreto Supremo No. 001-2014-PRODUCE, first complementary derogatory provision.
- 82 Decreto Supremo No. 026-2003-PRODUCE, Article 3.
- 83 Decreto Supremo No. 026-2003-PRODUCE, Articles 6-7.
- 84 Decreto Supremo No. 012-2001-PE, Article 115, as modified by Decreto Supremo No. 008-2006-PRODUCE, Article 2.

115.2 The data, reports, and information from the Satellite Tracking System relating to fishing vessels dedicated to the extraction of hydrobiological resources other than those referred to in the preceding paragraph, may be used by fishing associations and guilds constituted according to law and that are duly recognized before the Ministry of Production, when so requested.

115.3 Non-individualized data, reports, and information may be used by other natural and legal persons authorized by the Ministry of Production and disseminated, in the cases, it deems appropriate, in accordance with the applicable legal provisions.

Article 116 states that fishing associations or guilds may obtain VMS data from the Main Control Center of the Ministry of Production.<sup>85</sup> Additionally, Article 117 makes all "data, reports, and information" from the SISESAT system admissible evidence in the prosecution of any legal violations.<sup>86</sup>

The general rule concerning information owned by the Peruvian government is that such information must be publicly available. Article 115.1 of Supreme Decree N° 012-2001-PE states that VMS data rights are "reserved and confidential." But vessel owners can access to VMS data related to their vessels. Article 115.2 allows fishing associations and guilds to use VMS data, which will be provided by the Control Center of the Ministry of Production. The right Article 115 appears to grant vessel owners is the right to access their individualized data; the provision does not phrase the right of access as a property right. The regulation does state (1) that non-individualized data may be used and disseminated by the government and (2) that even individualized vessel data may be accessed by approved fishing associations and guilds that request such data. As a whole, Article 115 tees up the question of who owns and can distribute VMS data—the government or vessel owners.

Peru's courts have ruled on the question in favor of the government's ability to publicly disseminate its VMS datasets. That conclusion was described in a 2009 Peru Constitutional Court case, 88 in which the appellant Pesquera Alejandria S.A.C., a major fishing company and fish meal processor, 89 challenged the Ministry of Production's claimed power to disseminate vessel data. The appellant sought a writ of habeas data—essentially a type of lawsuit seeking a judgment ordering the government to properly protect the appellant's personal data. 90

The appellant had argued that Article 115.2 and Article 116, paragraph 2, of Supreme Decree N° 012-2001-PE violated its constitutional right to informational self-determination. The Constitutional Court rejected this argument:

- 85 Decreto Supremo No. 012-2001-PE, Article 116, as modified by Decreto Supremo No. 008-2006-PRODUCE, Article 2.
- 86 Decreto Supremo No. 026-2003-PRODUCE, Article 117, as modified by Decreto Supremo No. 008-2006-PRODUCE, Article 2.
- 87 Law of Transparency and Access to Public Information, Amendment to Law No. 27806.
- 88 Exp. N.0 04670-2007-PHD/TC, Lima, Pesquera Alejandría S.A.C., Tribunal Constitucional (February 20, 2009).
- 89 SeafoodSource, "China Fishery Nets Peruvian Fishing Operation." May 18, 2010, https://www.seafoodsource.com/news/supply-trade/china-fishery-nets-peruvian-fishing-operation.
- 90 Rosalía Quiroz Papa de García, "El Hábeas Data, Protección al Derecho a la Información y a La Autodeterminación Informativa," Letras 87, no. 126 (2016).

[Satellite location] information collected is not sensitive or reserved, so it can be disseminated by the Ministry of Production without violating any constitutional rule.... As can be seen, the information collected is not sensitive or reserved, so that, in the present case, the appellant's constitutional right to informative self-determination is not being violated, since the data being disseminated by the Ministry of Production is not sensitive or private. Nor do they refer to some mechanism or procedure that affects in a way the industrial or business secrets of the appellant, since the disclosed information refers only to the location and movement of fishing vessels. In this sense, the Constitutional Court considers that the disclosure of said data to third parties does not affect the right to informative self-determination of the appellant.

The upshot of the Constitutional Court's decision is that the Peruvian government need not ask vessels for permission to disseminate VMS data. An adverse ruling here could have seriously stymied Peru's efforts to share its VMS dataset publicly, perhaps requiring legislation or even constitutional amendment, but the Constitutional Court's holding is certainly decisive on the issue in favor of public sharing.

But, interestingly, the Ministry of Production ultimately did obtain support from industry leaders anyway. As discussed earlier, the fishing industry in Peru agreed to share vessel data publicly as a result of a multiyear shift in political will toward data transparency measures. It likely would not have been wise to antagonize industry leaders by sending their VMS datasets for publication, even if the government was able to do so, considering how the Constitutional Court resolved the data rights issue, as the public sharing of VMS data is only one step toward revitalizing Peru's fisheries. To realize the General Fishing Law's purpose of preserving Peru's hydrobiological resources for future generations, the government should be working closely with the relevant stakeholders of the fishing sector for future policy initiatives as well, and burning that bridge to implement any one particular initiative would be shortsighted.

#### 3. Coda

With the confluence of political will and a favorable data rights determination, the stage was set for Peru to sign the MOU with GFW, becoming in 2019 the first country in Latin America and the second country in the world to make all of its VMS data publicly available. Early insights have shown what could be possible with Peru's data. For instance, Peruvian VMS data was used to show the presence of Chinese and Korean fleets fishing giant squid just outside of Peru's EEZ, with intra-EEZ fishing suspected. Padditionally, the data indicated a significant quantity of unreported shark catches. In 2017, SISESAT allowed the capture of 19 foreign and 45 national vessels that were involved in illegal fishing. As a result, 10 million metric tons of marine resources were delivered to low-income people.

<sup>91</sup> Supra, note 64.

<sup>92</sup> Bloomberg Philanthropies, "Vibrant Oceans Q&A: Indonesia and Peru Commit to Publishing VMS Data on Global Fishing Watch," Medium, July 13, 2017, https://medium.com/@BloombergDotOrg/vibrant-oceans-q-a-indonesia-and-peru-commit-to-publishing-vms-data-on-global-fishing-watch-e3148a62590a.

<sup>93</sup> Ibid

<sup>94</sup> Diario Gestion, "Como Funciona el Sistema Satelital para Identificar a las Embarcaciones de Pesca Legal e Ilegal?," August 31, 2017, https://gestion.pe/economia/funciona-sistema-satelital-identificar-embarcaciones-pesca-legal-e-ilegal-142698-noticia.

Countries seeking to navigate data rights and privacy issues in the fisheries space should pay close attention to how Peru ultimately shared its VMS data publicly, but they should also pay attention to the ways Peru is still working to improve its data transparency. Peru is clearly a first mover in the data transparency space, but there are nevertheless avenues for further improvement. For instance, Peru currently shares its VMS data with GFW after a 10-day delay, whereas other countries on the GFW platform share their data on a shorter 72-hour delay.

# D. Ecuador Case Study

#### 1. Background

Ecuador is a coastal state in Latin America with 4,525 kilometers of coastline and an EEZ of around 1,150,000 square kilometers. Elike Chile and Peru, Ecuador is situated on the eastern Pacific Ocean where the Humboldt Current results in the upwelling of cold, nutrient-rich water and the subsequent diversity and abundance of marine life. Ecuador's marine territorial holdings also include the region surrounding the Galapagos Archipelago, much of which is protected under the Galapagos Marine Reserve.

As a leading actor in both regional and global fisheries, Ecuador is the largest producer of shrimp and the second largest producer of tuna in the world. For all global capture fisheries, Ecuador ranks in the top 25 countries, with a reported catch of about 715,357 metric tons in 2016. He fisheries sector also plays a substantial role in Ecuador's economy, supporting more than 90,000 jobs and ranking second in value of exports, just after oil. Both the country's industrial fishing fleet—about 150 vessels—and artisanal fishing fleet—around 45,500 vessels—rely on effective government management of coastal and high seas fisheries to sustain regional and global demand.

The government agency in charge of administering Ecuadorian fisheries has changed over time. Details of the history of government agency restructurings are located in Appendix C-I. Today, the body in charge of fisheries management and development is the Vice Ministry of Aquaculture and Fisheries, nestled under the Ministry of Production, Foreign Trade, Investment and Fisheries, and regulated by Ministerial Agreement No. MPCEIP-DMPCEIP-2019-0034, which provides the Vice Ministry with "the exercise of the powers, functions, powers and responsibilities legally established to the highest authority, to continue subscribing the normative administrative acts and authorizations for the execution of the fishing activity in its various phases". <sup>100</sup>

<sup>95</sup> Supra, note 71.

<sup>96</sup> Marine Spatial Planning Programme, "Home," accessed May 23, 2020, https://msp.ioc-unesco.org/world-applications/americas/ecuador.

<sup>97</sup> Jimmy Martínez-Ortiz, Alexandre M. Aires-da-Silva, Cleridy E. Lennert-Cody, and Mark N. Maunder, "The Ecuadorian Artisanal Fishery for Large Pelagics: Species Composition and Spatio-Temporal Dynamics," PloS One 10, no. 8 (2015): e0135136.

<sup>98</sup> CNP Ecuador, "Tarjeta Amarilla, Una Oportunidad para Desarrollar un Nuevo Marco Regulatorio," December 3, 2019, https://camaradepes-queria.ec/tarjeta-amarilla.

<sup>99</sup> Supra, note 48.

<sup>100</sup> Ministerio de Producción Comercio Exterior Inversiones y Pesca, "Normativa legal de creación de la Subsecretaría de Recursos Pesqueros," https://www.produccion.gob.ec/normativa-legal-de-creacion-de-la-subsecretaria-de-recursos-pesqueros.

Since 1974, the agencies charged with managing Ecuadorian fisheries have been governed by the Law on Fisheries and Fisheries Development issued by Decree Law 178.<sup>101</sup> Modifications to the law were issued in 1985, and an updated Codification of the Law on Fisheries and Fisheries Development was published in 2005.<sup>102</sup> The 2005 Codification established a National Fisheries Development Council, which until April of 2020 acted as the main body in charge of "establishing and guiding the country's fisheries policies."

In April of 2020, motivated by and in response to a "pre-identification" notice in October 2019 from the European Commission regarding noncompliance with international rules on fisheries policy, Ecuador passed La Ley Orgánica para el Desarrollo de la Acuicultura y Pesca. <sup>103</sup> Hereinafter referred to as the Organic Fisheries Law, the law replaced the original 1974 fisheries legislation.

With the passing of the Organic Fisheries Law came a restructuring of fisheries governing agencies and institutions. Under the new legislation, there is to be established a National Aquaculture and Fishing System, which will be a large database that will integrate relevant information for countywide management of fisheries and aquaculture. Under the new law, the Vice Ministry of Fisheries and Aquaculture will maintain authority and responsibility for overseeing the management of the fishing industry, and the National Aquaculture and Fishing System will act as a tool for facilitating such management. 104

Ecuador is a member of two RFMOs, a cooperating nonmember of three regional organizations/conventions, and a party to the PSMA, having approved Legislative Opinion No. 008-18-DTI-CC. Still, despite membership in multiple international management regimes and its ratification of the PSMA, Ecuador has been identified as noncompliant in addressing concerns around IUU fishing by national and international bodies—for example, the United States National Marine Fisheries Service in their Biennial Reports to Congress since 2011, and via the European Union's third-country carding process under the EU IUU Regulation as of October 2019. 106

The EU's carding process is one that identifies countries based on their capacity and effort to "comply with agreed standards under international law of the seas as flag, port, and market states." Specifically, the yellow carding requires that Ecuador develop (1) a more robust enforcement and sanctioning system for IUU activity, and (2) more adequate control of the activity of fish processing plants. If Ecuador were not able to make sufficient improvements in their legal system that helped address the EU's concerns within six months from the initial identification, then the EU could decide to move one step further and issue a red card. A red card would mean that the EU would place a ban on imports from the Ecuadorian fisheries sector, a decision that would have a large impact on the economy of Ecuador. Currently, fisheries exports to Europe account for about

<sup>101</sup> Supra, note 96.

<sup>102</sup> Ley de Pesca y Desarrollo Pesquero, Codificación 2005-007, H. Congreso Nacional.

<sup>103</sup> Nueva Ley de Acuicultura y Pesca Regulara Impulsara y Fomentara el Desarrollo de la Actividad Acuicola y Pesquera Nacional, "Ministerio de Producción Comercio Exterior Inversiones y Pesca." February 19, 2020, https://www.produccion.gob.ec/nueva-ley-de-acuicultura-y-pesca-regulara-impulsara-y-fomentara-el-desarrollo-de-la-actividad-acuicola-y-pesquera-nacional/?preview=true.

<sup>104</sup> Pablo Guerrero, personal communication, May 20, 2020

<sup>105</sup> Legislative Opinion No. 008-18-DTI-CC.

European Commission, "Commission Notifies the Republic of Ecuador over the Need to Step up Action to Fight Illegal Fishing," October 30, 2019, https://ec.europa.eu/commission/presscorner/detail/en/ip\_19\_6036.

\$US1.4 billion a year toward the Ecuadorian economy. The timeline for evaluation of Ecuador's response to the yellow card set the first in-country visit of an EU commission to Ecuador in April of 2020. Following the initial visit, subsequent evaluations will occur every six months. The status of these evaluations at the time of this research is unclear, given government shutdowns, bans on international travel, and a focus on public health due to the COVID-19 pandemic, which began in December 2019. At the time of this research, no press releases or updates have been issued by either the Ecuadorian government or the EU as to the status of the yellow card process, but it has been confirmed that the initial visit—scheduled for April 2020—did not occur due to the pandemic. On the pandemic.

To understand fisheries management and a country's ability to effectively combat IUU fishing, it is also very important to understand the political context that influences economic and environmental policy.

In addition to the frequent restructuring of ministries in Ecuador, there is a high turnover in top positions within the governing bodies for fisheries management, which results in frequent shifts in political priorities. According to Pablo Guerrero, Marine Conservation Director for WWF Ecuador, the Vice Ministry for Fisheries and Aquaculture had at least four different undersecretariats for fisheries resources in 2019, a rate of replacement that far surpasses Ecuador's usual four-year term for federal positions.

Guerrero also cites industry opinion as being influential in the Ecuadorian government's decisions around fisheries policy, particularly when it comes to data sharing. He explained that the Ecuadorian tuna industry, in particular, has varying concerns about government regulation of fisheries. He categorized the industry into two groups: the first is composed of the large industrial fishing companies, and the second includes smaller industrial fishers and artisanal fishers. The larger companies are those that rely primarily on an export-based economy; they are more vertically integrated, they are less dependent on other companies for processing or marketing, and they sometimes have their own environmental and social policies in place, including requirements about mandated observers and VMS data. The structure of the smaller companies and artisanal fishers is less understood because this group often relies on multiple other organizations to move fish through the supply chain. Only purse seiners that are greater than 363 cubic meters in capacity are considered Class VI boats by the Inter-American Tropical Tuna Commission (IATTC) and are required to have observers on board for all trips. Observer coverage on industrial longliners greater than 20 meters in length averages around 5%, further obscuring government and non-governmental organization (NGO) understanding of vessel behavior. Ecuador's tuna fleet has 22 longliners registered with the IATTC, while the remaining 112 ships are purse seiners. 110

<sup>107</sup> Agence France-Presse and ThemeGrill, "EU Warns Ecuador over Illegal Fishing," October 30, 2019, https://www.courthousenews.com/eu-warns-ecuador-over-illegal-fishing.

El Universo, "Unión Europea Evaluará Progresos de Ecuador Para Retiro de Tarjeta Amarilla Sobre Pesca de Atún," November 28, 2019, https://www.eluniverso.com/noticias/2019/11/28/nota/7624820/union-europea-evaluara-progresos-ecuador-retiro-tarjeta-amarilla.

<sup>109</sup> Supra, note 104.

<sup>110</sup> Ibid.

Guerrero notes that while national or global reputation might be an incentive for the larger companies described above, that is rarely the case for smaller companies or the artisanal sector. In this context, international NGOs like WWF are working with local companies to establish more transparent fisheries practices, whether by issuing eco-certifications that assure consumers that the fish was legally caught or by automating onboard processes such as logbooks and observers.

Guerrero mentions that reputation can drive industry change but that it's a process. "Changing minds and changing ships is not easy," he notes.

"Changing minds and changing ships is not easy. It's a process."



Pablo Guerrero, WWF

Guerrero cites particular pushback from industry leaders at the regional level within the RFMOs of which Ecuador is a member, particularly the IATTC. Many of the companies represented in the RFMOs are skeptical of how confidential data would be handled, worried about losing potentially profitable fishing grounds to other vessels, and suspicious of conflicting fisheries' practices between countries. Guerrero mentions that, though possibly more attainable than global sharing, data exchange at the RFMO level via a regional VMS system is difficult given the level of consensus needed. He notes that there have been proposals for such a mechanism in the past five to six years, but no progress because of the parliamentary procedures in the IATTC, which require approval via consensus among all members before the passing of a conservation measure or management agreement.

Additionally, data ownership and distribution rights in Ecuador are skewed more so toward the military—specifically the Navy—than any other government agency, a context that was not present in our research on both Chile and Peru. The relevant legislation will be discussed later in this report, but anecdotally, the role of the Ecuadorian Navy in VMS data sharing is more complex than initially understood. According to Guerrero, VMS data is managed by the Navy because it serves a much broader purpose than fisheries regulation. VMS data is used for managing issues of national defense, including illegal immigration, smuggling, narcotics and drugs, piracy, and other forms of crime that happen at sea. The Navy holds discretion in deciding how and what data is shared and does so via MOUs with specific ministries and agencies within the government. In the case of fisheries, because fishing activity is still monitored and regulated by fisheries control officers in the Fishing Authority, this might look like an agreement that allows fisheries control officers to access a portion of the VMS data relevant to specific vessels that is passed along under an MOU from the Minister of the Navy to the Undersecretariat of Fisheries Resources. The data is considered to be sensitive information and is extremely confidential.

Finally, data transparency and data privacy have been high-profile topics in Ecuador for the last ten years, and even more so in the past eight months. Ecuador has an Open Data Portal, which is an online database that resulted from a series of laws and agreements issued in 2012–2013 aimed at increasing government transparency in accordance with the Organic Law of Transparency and Access to Public Information.<sup>111</sup> The portal currently houses 128 datasets from 16 different government organizations. Of these 128 datasets, there are no data on the fisheries sector. The

fishing authority does manage some databases that are not public, according to Guerrero. In September of 2019, a data breach originating from an online server based in Miami, Florida, exposed the personal data of all 16.6 million Ecuadorian residents. The data breach led to an arrest and the fast-tracking of new personal data privacy laws in the country. 112

While not directly connected to environmental legislation or fisheries management, general concerns about the government's ability to effectively use and protect data are widespread and may have lingering impacts on the country's ability to pass legislation that makes data sharing more achievable.

#### 2. Legal and Regulatory Frameworks for Fisheries

In this subsection, we summarize and assess the legislation and policies in place regarding fisheries management and VMS data in Ecuador. It is important to note here that in Ecuadorian legislation, the terms "satellite monitoring systems," "satellite positioning system," "ship tracking system," "vessel tracking system," "SMS," and "DMS" all refer to VMS.

#### Organic Fisheries Law

The key regulatory framework for governing fisheries in Ecuador is the Organic Fisheries Law. This legislation, passed in April 2020, amends, modifies, and modernizes Ecuador's legal structure for fisheries management and establishes new regulations for both the industrial and artisanal sectors.

Three of the most notable takeaways from the Organic Fisheries Law are (1) the collaboration between the aquaculture and fisheries authority and the National Defense Authority toward combating IUU fishing; (2) the relatively loose framework established for VMS data regulation and dissemination, and how it interacts with ministerial agreements and resolutions passed years earlier; and (3) the way the law regulated the artisanal fisheries sector, which can give insight into requirements and strategies for open-water fleet management.

The first key takeaway deals with data owners and managers. Chapter VI of the Organic Fisheries Law deals with "Fisheries Monitoring, Control, and Surveillance." Article 159 of the law states that the governing body "will coordinate with the Ecuadorian Navy" on monitoring, control, and surveillance of fisheries activities in aquatic zones. Article 160 further expands the role of the Navy, stating that "the Ecuadorian Navy is empowered to carry out inspections of vessels engaged in fishing activities when they are in fishing operations and to report to the governing body any new developments." From these two articles, we begin to see the bare bones of a partnership between the fisheries authority and the Navy in addressing general fisheries management. In sum, the maritime authority—the Navy—has the ability to board vessels, and fisheries inspectors, as the administrative authority for this sector, must be accompanied by a naval officer to complete

an inspection of a ship; this relationship is important in understanding fisheries management cooperation between the Navy and the fisheries authority beyond just VMS sharing.<sup>113</sup>

Additionally, Article 167 includes provisions that state that the fisheries authority will "coordinate with the governing body of national defense, in charge of the ship tracking system" for the "interconnection that allows obtaining the required information," and that such access will be provided only "upon signing confidentiality agreements." Furthermore, Article 168 makes clear that all "artisanal, recreational, or research fishing vessels that carry out extractive fishing activity, and industry fishing vessels" must have on board at least one tracking device "endorsed by the governing body of national defense."

Read from one perspective, Article 159 might seem to say that the fisheries authority retains ultimate jurisdiction over all fisheries monitoring and control matters, and that the authority will "coordinate with the Ecuadorian Navy." But, Articles 160, 167, and 168 seem to imply that the governing body of national defense maintains more control over monitoring of fishing vessels, particularly in the case of vessel-tracking systems, like AIS and VMS, the management of which are the responsibility of the Navy. From these articles, it can be concluded that the relationship between the fisheries authority and the governing body of national defense is not simply hierarchical, but rather that each agency maintains some degree of responsibility for different aspects of fisheries governance, and so collaboration is necessary.

The second key takeaway from the Organic Fisheries Law is the loose framework regarding satellite monitoring systems (SMS) established by the law. As will be discussed later, more specific legislation regarding SMS was passed in 2007, 2011, and 2018. The 2020 amendments to the general fisheries law do not refer to these earlier ministerial agreements and resolutions, but repeat the language used in these other legal documents when setting requirements for fishing vessels to have onboard SMS. The law clarifies that as long as any new rules are aligned with current standards, earlier rules and regulations are still in effect unless repealed by the competent authorities. The Organic Fisheries Law does not repeal or supersede any earlier legislation.

A third takeaway from the Organic Fisheries Law, important in the context of understanding fisheries management on the whole, is the regulation of VMS for the artisanal fishing sector in Ecuador. The most direct reference made to SMS for the artisanal fleet comes in Chapter II, Section I, paragraph I. This language requires shipowners to install a satellite monitoring device and "guarantee the automatic transmission of the updated geographic position of the vessel."

Prior to this piece of legislation, artisanal vessels in Ecuadorian waters were not required to have a satellite-based monitoring system on board. The artisanal fishing industry, subdivided into two different types of fishers, has expanded in the past 20 years from traditional coastal fishing grounds to operate farther from shore, creating what is now known as an "oceanic-artisanal fishery." Artisanal vessels have been known to operate in regions as far as 1,400 nautical miles from shore, past the Galapagos Archipelago.<sup>114</sup> It is increasingly important, as the fishery expands into open ocean ecosystems, that vessel-tracking systems and data collection on board artisanal

vessels provide a clear picture of the state of the fishery and management practices, the same as with the industrial sector.

#### VMS and Other Satellite-Monitoring Data Legislation

Beyond the general fisheries law amended and passed in April of 2020, there have been a few key policies, regulations, and ministerial agreements that influence the handling and use of VMS data in the fisheries sector in Ecuador.

The earliest mention of an SMS for fisheries management in Ecuador is found in the 2005 Plan of National Action to Prevent, Discourage, and Eliminate Illegal, Undeclared, and Unregulated Fishing by the Republic of Ecuador (PAN-IUU) passed by the Undersecretariat of Fisheries. Section III, Article 8:115

To date, there is no satellite positioning system in operation of ships. The implementation of a system is under study of maritime port management, which will incorporate a module for satellite control of ships.

Section V of the PAN-IUU deals with Ecuador's role as a coastal state in combating IUU fishing, specifically through measures undertaken to comply with international law and national legislation. The measure relevant to VMS data reads as follows:

All industrial fishing vessels in the Tuna fishery must use the VMS system permanently, in accordance with the CIAT agreements, a system that will be implemented in the immediate future.

CIAT (in English IATTC) is a regional management body of which Ecuador is a member, and whose rules and regulations apply to Ecuador's industrial tuna fishing fleet. The mission of the IATTC is to "ensure the long-term conservation and sustainable use of tuna and tuna-like species and other species of fish taken by vessels fishing for tunas and tuna like species in the Eastern Pacific Ocean, in accordance with the relevant rules of international law." <sup>116</sup>

Section VI of the PAN-IUU deals with Ecuador's role as a port state. Section VI, Article 3 refers to control and monitoring practices that the General Directorate of Fisheries and the Maritime Authority employ in managing the entry of foreign-flagged vessels. The first provision of this article reads that "foreign flag ships must accredit their area of operation through the information generated by a satellite positioning system (VMS), which must be referred to the maritime or fisheries authority."

The lack of a national satellite monitoring system, as stated in Section III and Section IV of the PAN-IUU, in conjunction with the requirement for all tuna fishery vessels to operate a VMS device

<sup>115</sup> Subsecretaría de Pesca, República del Ecuador, Plan de Acción Nacional para Prevenir, Desalentar y Eliminar la Pesca Ilegal No Declarada y No Reglamentada (PAN-INDNR) - República del Ecuador (2005).

<sup>116</sup> Food and Agriculture Organization of the United Nations, accessed May 12, 2020, "Inter-American Tropical Tuna Commission (IATTC)," http://www.fao.org/fishery/rfb/iattc/en.

by the IATTC and the requirement by Ecuadorian authorities that all foreign-flagged vessels operate VMS suggests a high level of political activity around data acquisition and monitoring in the fisheries sector at this time. Although it is not yet available, the Ecuadorian government has made clear through the Organic Fisheries Law that it intends to move forward with a more robust satellite monitoring system in the coming years.

Subsequently, in 2007 two major legislative events in the context of VMS regulations in Ecuador occurred.

First, within the Executive Decree No. 254, Ecuador "establish[ed] that the General Directorate of the Merchant Marine and the Littoral (DIGMER, in the maritime field) is responsible for controlling the ships; and, that the ships have a mandatory Satellite Monitoring Device, DMS." DIGMER was the key maritime enforcement authority in Ecuador at the time. Today, it has been replaced by the National Directorate of Aquatic Spaces (DIRNEA), which retains the same functions and powers exercised by DIGMER.<sup>117</sup> To comply with Executive Decree No. 254:

[I]t is necessary to establish the rules that will allow the implementation in the country of a Satellite Monitoring System for Ships in order to permanently know their identification and position.

Second, and shortly after the Executive Decree was adopted, via Resolution No. 054/07 by DIGMER, Ecuador issued "Provisions for the Implementation of a Satellite Monitoring System for Ships—SMS."<sup>118</sup> This document identifies the most clear and strict legal guidelines for satellite-based monitoring systems on fishing vessels to date. Article 2 includes the clearest reference to the privacy of such data generated by DMS and collected by CMS:

The information on the movements and activity of the ships obtained through the Satellite Monitoring System regulated in this resolution, will be strictly confidential, and its sole purpose will be that of the control established by the Maritime Authority and by other organizations of the Ecuadorian State.

Article 4 and Article 7 in Annex I deal with specifications for the satellite communication service and obligations to be fulfilled by the service provider companies, including the use of security algorithms and assurances of confidentiality by the DMS service providers.

Resolution No. 054/07 was repealed in 2011 by Resolution No. 01/11, "Issuing and Provisions for the Implementation of the Satellite Monitoring System in Ships of More Than 20 TRB," which was enacted in order to collect in one regulation all stipulations regarding the satellite monitoring system for vessels. 119 There were no major data privacy-related updates made to the original law

<sup>117</sup> República del Ecuador, Decreto Ejecutivo No. 254 (2007).

<sup>118</sup> Dirección General de la Marina Mercante y del Litoral, República del Ecuador, Resolución No. 054/07, "Expedir Disposiciones para la Implantación de un Sistema de Monitoreo Satelital de Naves-SMS" (2007).

<sup>119</sup> Dirección General de la Marina Mercante y del Litoral, República del Ecuador, Resolución No. 01/11, "Expedir Disposiciones para la Implementación del Sistema de Monitoreo Satelital en Buques de Más de 20 TRB" (2011).

by this updated resolution, but it further solidified the role of the national maritime authority in data management and distribution.

In 2015, the Ministry of National Defense passed Ministerial Resolution No. 36, "Rules Governing the Operation of Ship Monitoring," which clarifies data policy and data sharing for VMS-generated data. Article 2 states:

The information on the movements and activity of the vessels obtained through the Monitoring System regulated in this Resolution, will have a confidential nature, and its sole purpose will be that of the control established by the Maritime Authority and by other Organizations of the Ecuadorian State.

Article 5 further clarifies: "The information from the monitoring of the ships obtained in the Data Center will be confidential, however it may be shared with other State entities that require them according to protocols previously established according to their needs and under the protection of Inter-institutional Cooperation Agreements." This resolution definitively establishes the need for agreements between organizations within the Ecuadorian government before VMS data can be shared by the Ministry of National Defense.

Subsequently, in 2018, the Ministry of Aquaculture and Fisheries passed Agreement No. MAP-SRP-2018-0104-A, "Rules and Regulations for the Operation of Satellite Monitoring Systems Aimed at Fishing Vessels," which reiterates language used in Ministerial Resolution No. 36 by the Ministry of National Defense and narrows the type of vessels for which SMS requirements apply to fishing vessels, specifically. The legislation makes no major amendments to the earlier Resolutions No. 54/07, No. 01/11, or No. 36 and reiterates the role of DIRNEA in authorizing DMS devices. The only specific reference to the ownership, responsibility, and sharing of data reads as follows:

Article 1. The Fishing authority guarantees the inviolability and reservation of the data transmitted by the boat.

Unlike Resolution No. 54/07, Resolution No. 01/11, or Resolution No. 36, Agreement No. MAP-SRP-2018-0104-A uses language that implies that it is the responsibility of the fisheries authority to maintain the confidentiality of the data generated by DMS devices. Additionally, this legislation refrains from using the phrase "confidentiality," and instead refers to data privacy by way of "inviolability and reserve."

To better understand the responsibilities of data owners and producers, as well as the differences between different types of classifications of data under Ecuadorian law, it's necessary to look at Ecuador's data transparency and privacy law, a general piece of legislation passed in 2004 that applies to all information generated by the national government or generated by citizens of the state but in the possession of the public sector.

#### Organic Law of Transparency and Access to Public Information

Passed in 2004, the Organic Law of Transparency and Access to Public Information, hereinafter referred to as Organic Transparency Law, is the active piece of legislation that governs Ecuador's data transparency and defines what information is considered public. Article 1 of said law establishes that all information in government possession is considered public:

All the information that emanates or that is in the possession of the institutions, organisms and entities, legal persons of public or private law who, for the subject matter of the information, have participation of the State or are its concessionaires, in any of its modalities... are subject to transparency principle; therefore, all information they possess is public, with the exceptions established in this Law.

The law continues in Article 4 by clarifying that "all public information belongs to the citizens" but that the government agencies, entities, and producers of such information are to be the administrators and managers of such information, giving them the responsibility for making public information accessible.

Under the Ecuadorian Constitution, private and government sectors that "manage public resources" are subject to the Organic Transparency Law. Article 5 of the Organic Transparency Law maintains that public information includes any document "in any format, which is in the possession of public institutions." The fisheries industry is a government sector, composed of both public and private companies, and so data generated by fisheries vessels is considered to be public information, not private. The fisheries sector is also obligated under the Organic Transparency Law to provide access to all public fisheries information. However, there are a few exceptions to this law that are relevant to understanding the Ecuadorian fisheries data policy, namely the defining of reserved information and its handling, and the protection of reserved information and subsequent process of petitioning for information.

First, it's important to reestablish that based on the language in both the Organic Fisheries Law and the resolutions discussed in the previous section, it is clear that data generated by the VMS systems administered by the governing body of national defense and applicable to the fisheries industry is confidential, reserved, and inviolable. In the context of data sharing, these three terms have slightly different meanings and interpretations under the law.

VMS data is, in the most active legislation, considered confidential. Under Article 6 of the Organic Transparency Law, confidential data is "personal public information... not subject to the principle of transparency." Information that can be classified as confidential is any information that is considered to be personal but enters into the public domain. This type of information cannot be shared without approval and is exempt from the open access requirement of the Organic Transparency Law.

VMS data is also classified as reserved under Agreement No. MAP-SRP-2018-0104-A. Under Article 17, information classified as reserved is often government information related to issues of defense or national security, including most information generated by the governing body of national defense. Article 17 of the Organic Transparency Law further exempts all data that is

either "motivated as reserved by the National Security Council, for reasons of national defense" or "information expressly established as reserved in current laws." Reserved information cannot be shared, except at the discretion of the managing authority and only after it has been declassified as reserved.

Under Agreement No. MAP-SRP-2018-0104-A, VMS data also is considered inviolable. There is no mention of inviolable information in the Organic Transparency Law and little precedent for regulation of inviolable information in other Ecuadorian legislation. The few references to inviolability of information are in the context of protection of home, personal documents, or other personal rights, such as the "inviolability of the domicile." It can then be assumed that the most likely interpretation of "guarantee the inviolability...of the data" would ensure protection of the data from misuse by individuals other than the owner.

The second takeaway from the Organic Transparency Law is that the legislation makes important distinctions regrading declassification and handling of reserved or confidential information. Article 18 protects reserved data by clarifying that information classified as reserved cannot be declassified, except by the managing or producing body, or if fifteen years have passed since its classification. The National Security Council is responsible for classifying and declassifying information classified for reasons of national defense or security.

Article 18 also notes that "the information classified as reserved by the holders of the entities and institutions of the public sector, may be declassified at any time by the National Congress" via a majority vote. In the scope of this research, it has not been determined whether VMS data was reserved explicitly for purposes of national defense or whether it might fall under the category of information classified by institutions in the public sector. A clarification on the reasons for classification could permit the National Congress to declassify the data, thus perhaps allowing more leeway in a legal argument for public sharing of VMS data. Though it seems more likely that by nature of being data generated and held by the Ecuadorian Navy, there would need to be declassification by the National Security Council rather than the National Congress.

The Organic Transparency Law also permits individuals to petition the classification of information, including information classified as confidential or reserved. The process is detailed in Article 22 and states that in order for an informational request to be declined, the producing body must justify the classification of the data as reserved or confidential; additionally, the classification of the data as reserved or confidential cannot occur after the request to view information has been submitted. If the judge determines that the information requested is not justifiably classified as reserved or confidential, then "under the terms of this Law, [the managing body] will provide the delivery of said information to the recurring, within twenty-four hours."

In summary, based on the classification of fisheries VMS data in federal rules and regulations and the framework established by the Organic Transparency Law, we can identify a few main takeaways regarding the governing of satellite data by the Ecuadorian government. First, it is important to note that VMS data is in the public domain, and thus belongs to the citizens of Ecuador. That being said, it also falls under two main categories of data—reserved and confidential—that are

exempted from the transparency laws that would otherwise make this data accessible to the public and permissible to share. These laws also identify the manager of the data as the entity that produces the data—in this case, the governing body of national defense or, more specifically, the Ecuadorian Navy. As the manager of the data, the Navy seems to have the right to share it, but as noted in the Organic Fisheries Law, only with the fisheries authority upon the signing of a confidentiality notice. Furthermore, Resolution No. 36 solidifies the need for interagency agreements before sharing of data can occur.

#### Agreements and Regulations under RFMOs

The final group of legal documents relevant to the governance of satellite monitoring systems in Ecuador exists at the regional level, through the RFMOs that Ecuador is a member of—the IATTC and the SPRFMO. Ecuador is also a member of the Permanent Commission of the South Pacific (CPPS), which is an intergovernmental mechanism for maritime policy cooperation, but whose regulations are not binding. Ecuador is also a cooperating nonmember of the Western and Central Pacific Fisheries Commission (WCPFC). This legislation is most relevant to regional sharing of VMS data.

As a member of the IATTC, Ecuador is required to comply with one VMS-specific regulation, first approved in 2004 and then amended in 2014. Resolution C-04-06, "Resolution on the Establishment of a Vessel Monitoring System (VMS)" required that "each party with tuna-fishing vessels" establish a VMS by January 1, 2005. It also stated, "that any information provided to the Director or the Commission . . . is maintained in strict accordance with the Commission's rules and procedures on confidentiality."

In 2014, the updated Resolution C-14-02, "Resolution (Amended) on the Establishment of a Vessel Monitoring System (VMS)," recognized the lack of a binding agreement that requires all member and cooperating nonmember parties (CPC) to have an operating VMS. The new resolution created such a requirement for "commercial fishing vessels 24 meters or more in length operating in the Eastern Pacific Ocean and harvesting tuna or tuna-like species." This language is a broadening of the initial resolution to include a wider range of marine migratory species, besides tuna, as well as to include industrial longliners from countries that operate long-distance fleets, such as China, Korea, Taiwan, and Japan. The date for compliance was set at January 2016. 121 Article 2 of the resolution clarifies what data should be collected by the VMS and specifies that the generated information be collected "by the land-based Fisheries-Monitoring-Center (FMC) of the flag CPC." Article 4 clarifies that VMS data specified by other IATTC Resolutions should be transmitted to the director. As of now, there are no resolutions requiring active positioning data to be shared between members of the IATTC. IATTC Resolutions C-03-04 and C-03-05 only require such biological data as catch and effort, specifics on tuna captured, and dolphin mortalities, as well as boat operations data (position of fishing gear deployment, captains' logbooks, etc.) to be shared.122

<sup>121</sup> Inter-American Tropical Tuna Commission, Resolution C-04-06, "Resolution on the Establishment of a Vessel Monitoring System (VMS)" (June 2004); Inter-American Tropical Tuna Commission, Resolution C-14-02, "Resolution (Amended) on the Establishment of a Vessel Monitoring System (VMS)" (July 2014).

<sup>122</sup> Inter-American Tropical Tuna Commission, Resolution C-03-04, "Resolution on At-Sea Reporting" (June 2003); Inter-American Tropical Tuna Commission, Resolution C-03-05, "Resolution on Data Provision" (June 2003).

As a member of the SPRFMO, Ecuador is required to comply with four regional regulations relevant to VMS. The first mention of requirements for VMS for countries party to the SPRFMO comes in the 2015 Convention on the Conservation and Management of High Seas Fishery Resources in the South Pacific Ocean. Article 25 of the Convention document requires all flag states to ensure that all fishing vessels "carry and operate equipment sufficient to comply with vessel monitoring system standards and procedures adopted by the Commission." Provision 27.1a refers specifically to the creation of a regional VMS, suggesting that such a system would provide for direct transmission of information between the Commission and the flag state.

CMM 06-2020, "Conservation and Management Measure for the Establishment of the Vessel Monitoring System in the SPRFMO Convention Area," creates the procedures, rules, and regulations for a Commission VMS that will be applicable to "all vessels included in the Commission Record of Vessels Authorized to Fish in the SPRFMO Convention Area." This resolution was adopted in June of 2020. To date, Ecuador has only one vessel registered in the Commission Record: Maria Del Carmen IV, a 2,500-ton oil products tanker registered as "Mothership" in the Commission Record. A second vessel, a fishing liner, is registered as "not active" in the record. Though perhaps applicable to only one Ecuadorian flagged vessel at the moment, the resolution establishes clear requirements for the sharing of Commission VMS data, which is any data generated by "the SPRFMO Vessel Monitoring System that is established under this CMM."

There are a few keys provisions governing the sharing of this VMS data. In summary, the provisions require that Commission VMS data be securely stored and used only by the members and the cooperating nonmember parties (CNCPs). The agreement also sets confidentiality requirements by which use of the data need comply, such as secure communication methods and established boundaries for when written consent is needed for use of another member's data. The Maintenance of Confidentiality section of CMM 02-2020 clarifies and reiterates that confidentiality of data be maintained in the sharing of data for scientific and management purposes. It references some specific "public domain" data, which does not include real-time VMS data. The only reference to VMS is for the purpose of "position verification through vessel monitoring system" for scientific data.

As a cooperating nonmember to the WCPFC, Ecuador is required to comply with rules and regulations adopted by the commission that apply to both members and cooperating nonmembers. Part V of the Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean deals with duties of the flag state. The relevant provision states that all states with vessels fishing in the Convention area require such vessels to use real-time satellite position–fixing transmitters.

Similar to the conventions adopted by SPRFMO, the WCPFC provisions require flag states to share VMS data with the commission. Provisions also "protect the confidentiality of information

<sup>123</sup> South Pacific Regional Fisheries Management Organization, Convention on the Conservation and Management of High Seas Fishery Resources in the South Pacific Ocean (2015).

<sup>124</sup> South Pacific Regional Fisheries Management Organization, CMM 06-2020, "Conservation and Management for the Establishment of the Vessel Monitoring System in the SPRFMO Area" (June 2020).

<sup>125</sup> South Pacific Regional Fisheries Management Organization, CMM 02-2020, "Conservation and Management Measure on Standards for the Collection, Reporting, Verification and Exchange of Data" (February 2020).

received through the vessel monitoring system."<sup>126</sup> All members and cooperating nonmembers with vessels registered to fish in the commission area are required to operate active VMS and report VMS data to the commission while operating in the commission area; Ecuador has seven vessels registered via the WCPFC Vessel List. <sup>127</sup>

#### 3. Coda

While Ecuador's most recent fisheries law is a promising step toward more sustainable management of local and high seas fisheries, the country still has much to do in its efforts to help combat IUU fishing. Namely, increasing transparency in the fishing industry, especially in regard to fisheries data, will support more sustainable use of marine resources. This might be most achievable via requirements regarding the sharing of VMS data at the regional level, among RFMOs, since countries are obligated to comply for membership, and they value the benefits of maintaining those regional partnerships.

There are some obstacles to Ecuador's public sharing of vessel monitoring data on a platform like GFW. First, the lack of clear authority over many aspects of fisheries monitoring and control results in a confusing bureaucracy of data management and ownership. To negotiate agreements between the Ecuadorian government and GFW, it is necessary to understand the relationship between VMS data, the Ecuadorian maritime authority, and the Ecuadorian fisheries authority. Additionally, political will seems to have a big influence on government decision making, but high degrees of skepticism about data sharing have been cited at both the national and regional levels within high-profile fishing companies. Finally, although Ecuador's VMS data is considered to be public information under the law, it is explicitly classified as confidential and reserved information, which prohibits its sharing until declassification by either the National Security Council or the National Congress. At this point, there are still strict regulations around VMS data sharing even within the national government, which makes public sharing on a platform like GFW's seem like a distant goal.

# E. Insights and Conclusions

# 1. Generating Political Will

It's clear that amassing political will, as amorphous a concept as that is, matters significantly for achieving VMS data sharing. In all three case study countries, support from industry and political leaders controlled whether data sharing occurred.

In Chile and Peru, reversing industrial opposition to data transparency was the tipping point for new laws. After initial opposition, industry players in Chile have now been advocates for VMS data transparency for many years, and industrial fishers have even taken it upon themselves to share data themselves via their platform. In Peru, political support from both industry and government

<sup>126</sup> Western and Central Pacific Fisheries Commission, Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean (September 2000).

<sup>127</sup> Western and Central Pacific Fisheries Commission, accessed May 27, 2020, "Vessel Monitoring System: Background," https://www.wcpfc.int/vessel-monitoring-system.

leaders was critical to combating IUU fishing and overfishing. This was supported by frequent cross-employment between the private and public sectors. Savvy Peruvian political leaders even decided to obtain consent from industry leaders to share VMS data publicly, as a courtesy, to preserve good relations with the industry. Political will is a difficult asset to obtain and an easy asset to lose—cooperation between powerful stakeholders and the Peruvian government will likely be necessary to combat illegal fishing and associated problems to realize the 1992 General Fishing Law's refrain of preserving Peru's oceans for future generations.

In Ecuador, on the other hand, there does not seem to be industrial or governmental appetite for broader-scale VMS data transparency just yet; the fishing industry still has a vice grip on Ecuadorian fishing policy. One of our interviewees suggested that the Ecuadorian fisheries sector and adjacent companies seem to have a greater sway in government decision making than that of Peru or Chile. But the headwinds may be changing. The EU yellow card issued against Ecuador has hit the country's pocketbook and may inspire reform. Nevertheless, considering recent data breaches in Ecuador, data privacy is both an extremely visible and potentially controversial issue at the moment.

Combating IUU fishing will require that international NGOs and governments work cooperatively to push forward legislation that supports global fisheries policy while understanding the political realities on the ground in each country. In some cases, as in Peru or Chile, there was a political tipping point among industry leaders where the stance shifted in favor of transparency. In other cases, as in Ecuador, more work may have to go into convincing industry and government leaders that data transparency is the right step.

# 2. Legal Form and Barriers

Even if a country generated the political will for VMS data transparency, existing legal frameworks may pose barriers to immediate data sharing with a group like GFW.

In Chile, legislation was enacted to undo the confidential nature of VMS data, and this facilitated a rather straightforward agreement to share data with GFW and the public. However, this piece of legislation was specifically necessary, as the previous version of the law explicitly prohibited the sharing of VMS data outside of the country. Depending on their data laws, other countries may also maintain on the public-facing platform the confidential nature of data such as vessel identification.

Also crucial in Peru's effort to share VMS data publicly was resolving questions related to data rights. Ships produce data through onboard VMS equipment, but the fact that ships produce the data does not necessarily mean the ships have rights to the data. Peru's data rights framework here is somewhat confusing. Certain regulations in Peru vest in a ship owner the right to

"You need to create the incentive from the industry's perspective.
You need to show them the benefits of global sharing. We must find the common denominator that unites the industry."



Pablo Guerrero, WWF

access that ship's data after it is transmitted and stored with the Ministry of Production. Peru's regulations also identify VMS data as "reserved and confidential," but the same regulations grant the government distribution authority over the data. Peru's Constitutional Court cleared the confusion in 2009, concluding that the Peruvian government could constitutionally disseminate the aggregated VMS dataset from Peruvian ships. As a consequence, VMS data could be used by the government without obtaining consent from individual vessel owners (although, as described above, the Peruvian government nevertheless cooperated with industry leaders in order to maintain a good working relationship).

Another issue area that is ripe for dispute is data privacy and data ownership. Such conflicts will need to be resolved before dissemination of VMS data is possible. In both Chile and Peru, VMS data are or were termed reserved and confidential. That seems to imply that individual vessel owners own the data. But changes in law had to occur before an arrangement like an MOU with GFW could occur. In Chile, legislation made the country's VMS data public. In Peru, a regulation gave the fisheries agency discretion to share data in its possession, and a 2009 Constitutional Court case ruled that such sharing did not violate companies' or individuals' privacy rights.

In Ecuador, the Navy and governing body of national defense appear to have ultimate discretion over what happens to the VMS data in their possession. Ecuador's new fisheries law is still in its nascence, but the law also contains a provision making VMS data reserved. Beyond this, the regulatory framework governing data sharing in Ecuador gets more complex. There exist multiple references to VMS data in active legislation, as well as regulations and agreements regarding satellite monitoring of vessels under RFMOs to which Ecuador is a member. Our understanding of the legal barriers to sharing comes from a collection of different legal sources, perhaps the most important of which includes Resolution No. 36, issued by the Minister of National Defense, and the Organic Transparency Law. The major difference between the case studies of Chile, Peru, and Ecuador is the presence of legislative language that classifies VMS data as confidential in Ecuador even though it is legally considered public, rather than private, information. The confidential classification makes sharing of VMS data extremely hard. Because of this, a law or lawsuit explicitly declassifying VMS data, which is already in the public domain, might be necessary before moving forward with any international data-sharing agreements.

For Ecuador to move forward into the arena of sustainable fisheries and become a leader on data transparency in the region, the government must clarify specifically the legal frameworks around VMS data sharing. There is potential via the new Organic Law for the Development of Aquaculture and Fisheries for more substantial data management regulations, specifically on the subject of between-country sharing of data, providing an opportunity for local and international organizations to focus on pushing for sustainable fisheries policy change.

# 3. Scope of Data Sharing

Finally, countries must decide how much data to share. The countries currently making VMS data available on the GFW platform each share data differently, some with delays in publication and some with varying obfuscation in identifying information.

For example, Peru has the longest delay out of the countries on the GFW platform: a 10-day delay between government receipt and public data sharing. Vessel-identifying information is also

redacted. On the other hand, Chile is unique in the completely public and unredacted nature of its VMS data. Unredacted information on the platform (vessel identification, gear type, and so on) may prove to be a stronger deterrent to IUU activity than a censored or anonymized dataset. The only references to permitted data sharing of VMS information in Ecuadorian law suggest that the data owners have full authority over how much and in what capacity data is shared. For data to be shared with an agency, an organization, or a country outside of the original owner, specific MOUs must be signed clarifying the intention behind the use of the data and for how long it will be shared. If Ecuador were to ever share VMS data more publicly, it seems that very particular MOUs would be required for each sharing agreement or that new regulations would need to be passed that streamlined the process for data sharing, as well as explicit declassification of the information by the National Security Council.

While each of these three case study countries are in a different stage of public VMS data sharing, they all provide valuable insights into the process by which policy and legislation can promote transparency in the fishing industry. It is important to remember, however, that a country's specific sociopolitical and economic context will determine the speed at which legislation supporting public data is passed, the type of data-sharing agreements that result, and the accuracy and usability of the publicized data.

# III. EXPEDITED ENTRY PORT SYSTEM: A Proposal for the Implementation of a Voluntary Compliance-Based Structure to Reduce Global IUU Fishing

Laura Anderson, Sadie Cwikiel, Josheena Naggea

# **Abstract**

Illegal, unreported, and unregulated (IUU) fishing accounts for nearly 20% of the world catch and has widespread and well-recognized negative effects on the environment, economies, and human rights. Enforcement efforts to penalize vessels engaged in IUU fishing can be costly, given the vastness of the ocean. Developing innovative solutions that look beyond the traditional enforcement model may provide new pathways to combat IUU fishing. A compliance-based system could shift the burden of demonstrating compliance to vessels such that port authorities would have more capacity for inspecting noncompliant vessels. This research evaluates the requirements to operationalize an Expedited Entry Port System (EEPS) for fishing vessels at ports. The research examines the possibilities and constraints of a proposed EEPS by delving into current Port State control measures in two island states, the Republic of the Marshall Islands and the Republic of Mauritius. To develop the proposed system, the researchers used analogous systems and interviews for reference. From this work, a series of recommendations emerged, including the need for a more integrated approach at port level to incorporate different Regional Fisheries Management Organizations (RFMOs) and fishery types, regional support for more effective implementation of EEPS, and expanded electronic reporting systems (ERS) to facilitate efficient communication among port authorities, government agencies, and RFMOs, all while recognizing that physical inspections cannot be fully exempt for a system to work effectively.

#### **Contents**

A. INTRODUCTION	45
1. IUU Fishing	45
2. Policy Context	
3. Objectives	46
B. METHODOLOGY	47
C. FINDINGS	48
1. Related Models	48
2. Monitoring and Data Considerations	50
3. Proposed Expedited Entry Port System Model (EEPS)	51
4. Key Actor and Perspectives	
5. Comparative Regional Case Studies	60
D. DISCUSSION	67
E. CONCLUSION	72
E NEVE CEEDS	79

# A. Introduction

# 1. IUU Fishing

IUU fishing is an issue prevalent around the globe. Accounting for nearly 20% of the world's catch,¹ IUU fishing has widespread and well-recognized negative effects on the environment, economies, and human rights.

Millions of people around the world depend on fisheries for food and livelihood. An estimated 17% of the world's population relies on fish as their main source of animal protein,² but those fish stocks are at risk of depletion. The losses due to IUU fishing worldwide represent 11–26 million tonnes of fish every year.³ There are also significant economic costs to IUU fishing, with a yearly estimate of more than \$US15 billion in economic losses to nations and communities.⁴ Vessels engaging in IUU fishing have large economic incentives and participate in a low-risk, high-gain activity, while legal fishers experience negative economic impacts and reduced fish stocks. With increasingly thin economic margins for legal fishing and decreasing fish populations, IUU fishing may become increasingly more appealing and further negatively impact legal fishers.⁵ Climate change may also decrease fish stocks and increase pressure on fishing communities and the fishing industry.⁶ Depleted fish stocks and fishing practices like bottom trawling, cyanide fishing, dynamite fishing, purse seine fishing, using fish aggregating devices (FADs), and longlining can have a damaging impact on marine ecosystems, the fishing industry, and nations around the world.

# 2. Policy Context

Given the vastness of the ocean, there has been an increased focus on port control efforts and policies as a more cost-effective way to tackle IUU fishing. Implementing Port State measures (PSM) to increase the security of fishing ports and reduce the landing of illegal fish has the potential to significantly reduce the amount of IUU fishing that occurs globally.

Due to the complexity and the scale of IUU fishing, a comprehensive global system consisting of enforcement and voluntary compliance is essential. So far even though numerous efforts to deter IUU fishing are international and regional (through RFMOs), national governments must initiate much of the action. This includes regulating their respective coastal fisheries, enacting

- 1 David J. Agnew et al., "Estimating the Worldwide Extent of Illegal Fishing," PLoS ONE 4, no. 2 (2009), https://doi.org/10.1371/journal.pone.0004570.
- 2 Food and Agriculture Organization of the United Nations, The State of World Fisheries and Aquaculture 2016: Contributing to Food Security and Nutrition for All (Rome: United Nations, 2016), http://www.fao.org/3/a-i5555e.pdf.
- 3 Supra, note 1.
- 4 Xuechan Ma, "An Economic and Legal Analysis of Trade Measures against Illegal, Unreported and Unregulated Fishing," *Marine Policy* 117 (July 2020), 103980, https://doi.org/10.1016/j.marpol.2020.103980.
- 5 Sjarief Widjaja et al., Illegal, Unreported and Unregulated Fishing and Associated Drivers (Washington, DC: World Resources Institute, 2019), https://www.oceanpanel.org/blue-papers/illegal-unreported-and-unregulated-fishing-and-associated-drivers.
- 6 Julie M. Roessig et al., "Effects of Global Climate Change on Marine and Estuarine Fishes and Fisheries." Reviews in Fish Biology and Fisheries 14, no. 2 (2004): 251–75, https://doi.org/10.1007/s11160-004-6749-0.

regulations at ports of entry, ratifying international agreements, and making use of new tracking and transparency technologies.<sup>7</sup>

One key regulation that has made strides toward the ambitious international goal of combating IUU by implementing controls at national ports is the Port State Measures Agreement (PSMA).8 The PSMA builds on multiple legal frameworks (for example, the 1982 United Nations Convention on the Law of the Sea [UNCLOS] and the 2005 Rome Declaration on Illegal, Unreported and Unregulated Fishing) and sets minimum standards and processes that ports need to apply when foreign vessels seek entry. It also denies access to suspicious vessels that are linked to malpractices. Our proposal seeks to support the PSMA by rewarding "good vessels" and expediting their entry into ports.

#### 3. Objectives

While the PSMA, which engages port states and RFMOs, aims to penalize blacklisted and suspicious vessels engaged in IUU, the agreement lacks incentives to reward highly compliant vessels. These vessels will be incentivized by market preference for strong PSM in the long term<sup>9</sup> and can be negatively impacted by IUU fishing actions by other vessels. Developing incentives for these "good actors" could encourage greater transparency and recognize and reward these compliant vessels. The more time a vessel spends at port for checks, the fewer profits it makes. For instance, the average time an Australian tooth fishing vessel that meets all requirements spends at a port is seven days. An appealing incentive for fishing vessels would be to spend at least 20% less time at ports.<sup>10</sup>

A voluntary compliance-based system could also shift the burden of demonstrating compliance to vessels such that port authorities have more capacity for inspecting noncompliant vessels. Along with the positive implications of such a system, it will be important to consider any potential disincentives for port states. The less time fishing vessels spend at ports, the less revenue is generated for port states. Understanding and mitigating that revenue loss through other incentive structures is important for a successful system.

The objective of this policy memo is to explore and lay out a proposal to operationalize an EEPS for port state implementation. The system we recommend takes into account insights from fisheries policy and legal, industry, and agency experts around the world, as well as in-depth case study research in the Pacific Islands and the Indian Ocean. We aim to answer the following research questions: What are the possibilities and constraints to developing a voluntary compliance-based system for expedited entry of fishing vessels for port inspections? How might port states operationalize an expedited entry system?

<sup>7</sup> Supra, note 5.

<sup>8</sup> Food and Agriculture Organization of the United Nations, "Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing," opened for signature November 22, 2009, 129 Stat. 664 (entered into force June 5, 2016), http://www.fao.org/iuu-fishing/international-framework/psma/en/.

<sup>9</sup> Dawn Borg Costanzi, personal communication, May 15, 2020.

<sup>10</sup> Rhys Arangio, personal communication, May 12, 2020.

<sup>11</sup> Jeromine Fanjanirina, personal communication, May 18, 2020.

# B. Methodology

We conducted 18 semi-structured interviews using a snowball sampling approach with experts from the IUU policy and regulatory level, port states, industry actors, and fishing vessel operators. We iteratively analyzed and distilled more than 90 transcript pages from the interviews using an inductive approach.

To propose a system to operationalize the EEPS, we used the 2018 NOAA Fisheries Commerce Trusted Trader Program (CTTP),<sup>12</sup> the Environmental Justice Foundation report on improving transparency in global fisheries,<sup>13</sup> and the PSMA<sup>14</sup> as reference points. We also incorporated insights from other technical reports and from interviews.

Our research team used a comparative case study approach to understand possibilities and constraints and capture the nuances of port state operationalization. We focused on the Pacific region and the Indian Ocean region. In the Pacific, the Republic of the Marshall Islands (RMI) has pioneered a system of assessing vessel risk before its entry at the port of Majuro, without having yet ratified the PSMA. In the Indian Ocean, we focused on the Republic of Mauritius, a small island nation with one of the busiest ports in the region, which has ratified the PSMA.



Figure 1. Case Study Locations

Both RMI and Mauritius are large, important ports regionally with high numbers of transshipments, and high numbers of visits from foreign fishing vessels with large hold sizes. They are both members of several regional fisheries bodies, and both have some form of ERS. The main difference in terms of fisheries policy between the two nations is that RMI has not ratified the PSMA while Mauritius has (see Table 1).

<sup>12</sup> U.S. Department of Commerce, National Oceanic and Atmospheric Administration, "Proposed Rule: Commerce Trusted Trader Program," 2018, https://www.regulations.gov/document?D=NOAA-NMFS-2016-0165-0001.

<sup>13</sup> Environmental Justice Foundation, Out of the Shadows: Improving Transparency in Global Fisheries to Stop Illegal, Unreported and Unregulated Fishing (October 23, 2018).

<sup>14</sup> Supra, note 8.

Table 1. Comparisons between the Fisheries Systems in RMI and Mauritius

	Republic of the Marshall Islands	Republic of Mauritius
Foreign Vessel Visits	1168	957
Foreign Fishing Vessel Hold Size	943,000 m <sup>3</sup>	319,985 m <sup>3</sup>
Regional Fishery Bodies	Pacific Islands Forum Fisheries Agency (FFA); The Pacific Community; Western and Central Pacific Fisheries Commission (WCPFC); Parties of the Nauru Agreement (PNA)	Indian Ocean Tuna Commission (IOTC); Southern Indian Ocean Fisheries Agreement (SIOFA); Southwest Indian Ocean Fisheries Commission (SWIOFC); Commission for the Conservation of Antarctic Marine Living resources (CCAMLR)
PSMA Ratification	No	Yes
Electronic Reporting System	Yes	Yes

# C. Findings

#### 1. Related Models

We explored related port entry and risk assessment models around the world to develop an understanding of port-entry procedures and create a more informed EEPS proposal. These related models (see Table 2) were highlighted by our interviews with experts and recommendations for further exploration.

These models and insights from our interviews generated an overview of essential elements of an EEPS. First, as previously stated, fishing operators must demonstrate complete transparency to be granted expedited entry into a port. Second, port authorities must be able to efficiently and effectively process the information they need to verify vessel compliance, such as in the electronic Food and Agriculture Organization of the United Nations (FAO) Catch Documentation Scheme (CDS) guidelines.<sup>15</sup> Third, system stakeholders must feel incentivized to participate in the EEPS, balancing the benefits with any potential costs. And finally, the key incentive lies in that the entry system is more efficient for all key actors involved.

Table 2. Related Models for an EEPS

Model	Background	Indicators	Insights
Port State Risk Scores	Based on a peer-reviewed study <sup>16</sup> supported by the Pew Charitable Trusts and mentioned by multiple respondents Attempts to show which states are most at risk of having illegally caught fish passing through their ports	AIS-derived and public domain data PSMA ratification status or other strong PSM RFMO compliance reports Flag of convenience states	Using a broad suite of indicators could create a more robust risk assessment system
FAO Catch ocumentation Scheme (CDS) <sup>17</sup>	The CDS is a market- related supply-chain management measure The FAO guidelines assist actors (e.g., states, RFMOs) looking to develop or improve CDS systems	Risk scores based on catch certificates Electronic information systems (e.g., sharing vessel identity information or tracking)	Electronic-based systems can help expedite processes An overarching framework assisting regional design is an example to consider for implementation
2018 U.S. National Marine Fisheries Service CTTP <sup>18</sup>	Importers can volunteer to adhere to certain requirements and become Commerce Trusted Traders (CTTs)	Establish a secure supply chain (free of IUU fish or fish product and falsely labeled seafood product) over at least a five-year history Submit to yearly third-party audits	Comparable proposed system/idea in a major state Incentives of streamlined entry and flexibility on certain documentation-heavy recordkeeping requirements
2017 Global Dialogue on Seafood Traceability <sup>19</sup>	Seafood industry forum working to "advance a unified framework for interoperable seafood traceability practices" Dialogue guidelines released in March 2020	"Key Data Elements" Data verification Data sharing and regulatory alignment	Established vessel data standards relevant to our EEPS proposal

Gilles Hosch et al., "Any Port in a Storm: Vessel Activity and the Risk of IUU-Caught Fish Passing through the World's Most Important Fishing Ports," Journal of Ocean and Coastal Economics 6, no. 1 (March 2019), https://doi.org/10.15351/2373-8456.1097.

<sup>17</sup> Food and Agriculture Organization of the United Nations, Voluntary Guidelines for Catch Documentation Schemes (Rome: United Nations, 2017), http://www.fao.org/3/a-i8076e.pdf.

<sup>18</sup> Supra note 12

<sup>19</sup> Global Dialogue on Seafood Traceability, Standards and Guidelines for Interoperable Seafood Traceability Systems – Technical Implementation Guidance (Version 1.0) (February 2020), https://traceability-dialogue.org/wp-content/uploads/2020/03/2020.03.11\_GDST1.0TechnicalImplementationGuidancefinalMAR13.pdf.

#### 2. Monitoring and Data Considerations

Global Fishing Watch (GFW) and other platforms have tracked global fishing operations from more than 60,000 vessels using open-source automatic identification system (AIS) data. Each year, an estimated 10–30% more vessels broadcast AIS data.<sup>20</sup> These tracking data have been used to digitize numerous systems in the shipping industry and share real-time positioning patterns used to combat illegal fishing.<sup>21</sup> Yet, there is no global mandate for vessels to have AIS transponders and to share AIS data. AIS transponders can also be turned off or tampered with, including manipulating vessel identity.<sup>22</sup>

A different tracking system that can be effective for combating IUU fishing uses Vessel Monitoring System (VMS) data. This satellite-based proprietary system is used by management authorities to monitor vessel activity and is highly reliable. However, not all countries operate a VMS system, and there are varying levels of data sharing related to VMS.<sup>23</sup> Certain policy measures like the PSMA and cooperation among members of RFMOs create pathways for VMS data sharing, including data sharing between member states and/or through arrangements with a secretariat. Still, the flag state in question may restrict access to VMS data because there are specific agreements between flag states and fishing vessels with regard to VMS data sharing. Agreements between flag states and port states are critical in these negotiations.

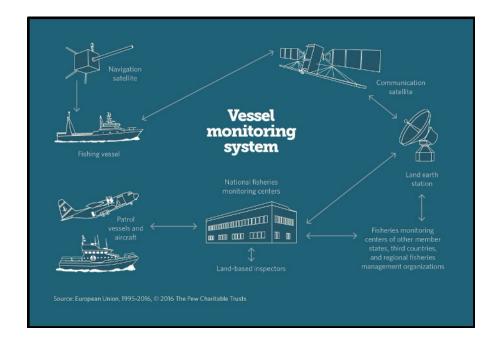


Figure 2. Vessel Monitoring System Overview 24

<sup>20</sup> Marc Taconet, David Kroodsma, and Jose A. Fernandes, Global Atlas of AIS-Based Fishing Activity – Challenges and Opportunities (Rome: FAO, 2019).

<sup>21</sup> Dong Yang et al., "How Big Data Enriches Maritime Research - A Critical Review of Automatic Identification System (AIS) Data Applications," Transport Reviews 39, no. 6 (2019): 755-73, DOI: 10.1080/01441647.2019.1649315.

<sup>22</sup> Supra, note 5.

<sup>23</sup> Ibid.

<sup>24</sup> The Pew Charitable Trusts, "Tracking Fishing Vessels Around the Globe," 2016, https://www.pewtrusts.org/-/media/assets/2016/05/tracking-fishing-vessels.pdf.

Interviews with key actors yielded multiple perspectives related to monitoring systems and data requirements. For several experts, accessing vessel VMS data was a central component of tracking and verification efforts. International, regional, and bilateral agreements and collaborations were highlighted as pathways for VMS data sharing. Agreements like the PSMA and the Convention for the Conservation of Antarctic Marine Living Resources (CCAMLR) set standards for participating states regarding VMS capacity and transparency. Regional bodies like the Pacific Islands Forum Fisheries Agency (FFA) and the Indian Ocean Tuna Commission (IOTC) provide guidance in their respective regional waters to support PSM policies and implementation among member states. Agreements for data sharing between flag states and port states are critical in this context because many vessels are highly protective of VMS positions due to protecting intellectual property, preserving competitive fishing locations, and minimizing risk of IUU fishing.<sup>25</sup>

#### 3. EEPS

The EEPS will require vessels to provide the necessary data and information to demonstrate compliance with fishing laws and regulations. It will be consistent with the PSMA and is meant to provide an added incentive for vessel compliance as well as a way to make ports more efficient and effective. If a vessel can demonstrate its compliance, with the support of its flag state it will be given expedited entry into port to land its catch. One estimate was that a fishing vessel loses around \$US10,000 each day it is in port instead of fishing.<sup>26</sup> Given the potential cost of delays, expedited entry to land fish will be a significant incentive for vessel compliance.

#### A Proposed Model for an Expedited Entry Port System:

Forty-eight to seventy-two hours (depending on location and existing national requirements) before a fishing vessel<sup>27</sup> intends to enter a port, the vessel must provide the following information to the port authority in addition to the port's other entrance application requirements.

Level 1: Vessel Data

Electronic Reporting System
48-72 hours

Level 2: Trip Data

Real-Time VMS Data Sharing

Previous Records

Expedited
Entry

Figure 3. EEPS Level System Overview

<sup>25</sup> Supra, note 10.

<sup>26</sup> Francisco Blaha, personal communication, April 28, 2020.

<sup>27</sup> Based on personal interviewee feedback, the EEPS could apply to fishing, carrier, supply, and support vessels.

If a vessel can provide or receive validation of all three levels of data and there is no evidence of noncompliance, the vessel will receive expedited entry. Table 3 specifies the data required by each level to prove compliance.

By shifting the burden of proof onto fishing vessels during port inspections, EEPS aims to reward proactively transparent and compliant vessels that meet three levels of information checks.



Table 3. Data Required to Receive Expedited Entry

Level One:	Level Two:	Level Three:
Vessel Data	Trip Data	Historical Data
<ul> <li>Name of vessel</li> <li>International Maritime Organization (IMO) number</li> <li>Type of vessel</li> <li>Flag of vessel</li> <li>Size and tonnage of vessel</li> <li>Registration number and date</li> <li>Name and address of license holder</li> <li>License or permit number and dates</li> <li>Contact details</li> <li>Registration number of any aircraft associated with the vessel; name and address of operator of the aircraft</li> <li>Vessel catch log since last port of entry</li> <li>Coastal or flag state method and species authorizations to fish</li> <li>Reports of contact with other vessels</li> <li>Full reports on transshipping, including the time, port, and areas that were authorized for transshipment</li> <li>Report, clear marking, and identification of any FADs used by the vessel</li> </ul>	• VMS data since last port of entry or VMS compliance verification from the flag state	<ul> <li>Historical VMS (or, if unavailable, AIS) track analysis where previous inspection outcomes could be stored to inform port authorities</li> <li>Previous IUU violations</li> <li>FAO Global Record status or good standing on a relevant regional or industry vessel register</li> <li>Membership in industry compliance organizations</li> <li>Observer reports</li> <li>Flag state risk</li> </ul>

**Level One: Vessel Data** includes data already required by ports around the world. The list above is adapted from the FFA Minimum Terms and Conditions (MTCs).<sup>28</sup> In cases where not all of these pieces of information are required by a port, the vessel must include the additional information to be eligible for expedited entry.

Level Two: Trip Data is the location data of the vessel since the last port of entry. This must be in the form of VMS data because this cannot be tampered with, unlike AIS data. Real-time VMS data sharing is ideal for proving compliance, but this data does not necessarily need to be public for this proposed system to work. Analysis of this location data in comparison to the vessel catch log, transshipping reports, and so on will ultimately determine the compliance of a vessel. This analysis would show if the vessel was fishing, stationary, motoring, or transshipping where they reported they were. Any inconsistencies between the logs or reports and the location data could indicate noncompliance and would be reason to investigate the vessel more thoroughly and not immediately give the vessel expedited entry. Currently, there is not enough capacity in most ports to be able to analyze all of the real-time location data, so a major priority moving forward with EEPS is to improve the analysis technology and ability of VMS data.

A port state does not necessarily have access to a vessel's VMS data, and the vessel might not even have access to its own VMS data; instead, it may be automatically shared with its flag state. Data sharing often involves agreements between the port state and the flag state. In many ports currently, a vessel's VMS location data is verified through a port access letter (PAL) from the flag state to the port state rather than the vessel sharing VMS data directly with the port state. Using flag state verification in the form of a PAL would not be as ideal as directly sharing VMS data to be analyzed by the port state, but it could also be a legitimate way a vessel could prove compliance. PAL systems are already in place in many ports, so for EEPS to be most realistically integrated into ports, the tradeoffs involved and the credibility of the PAL and the flag state issuing the PAL would need to be explored.

It is important to note that certain legal barriers for vessels from specific flag states or those from states that do not require their vessels to have VMS/AIS on board will be at a disadvantage from this system. Without support from the flag state, the vessel itself may not have the resources or the ability to meet the requirements of the EEPS.

Level Three: Historical Data aggregates historical data about a vessel's compliance, as well as the role of its flag state in reducing IUU fishing, into one holistic historical compliance score (HCS). The HCS will be a scale from 1.0 (completely noncompliant) to 5.0 (completely compliant). The HCS will take into account numerous historical data and information, averaging each category into a total score that informs the port state of that vessel's historical compliance and subsequent IUU fishing risk. The HCS will take into account data up to five years in the past. More recent data will be given more weight when calculating the weighted average compliance score. An HCS database will be available to ports online, providing accessible real-time information about the likelihood of compliance and risk of IUU fishing activity.

While there is no current algorithm or streamlined way to analyze historical location data, this score would attempt to merge past offenses that would hopefully be analyzable in the future with current activity and compliance. The HCS database could be developed and maintained by a collection of RFMOs or other governmental agencies in collaboration with the FAO, or by a third-party organization such as GFW. Such operationalization would need to be explored in future research efforts. Additionally, observer reports, if available, would be included in the HCS. The rigor of the flag state's IUU regulations would be taken into account when analyzing whether a vessel is awarded expedited entry. A flag state would be scored based on their national IUU regulations, enforcement, levels of corruption, and rigor and legitimacy of inspections.

In this proposed EEPS, if a vessel can provide all of the necessary Level One, Level Two, and Level Three data and shows no evidence of IUU activity, the vessel is eligible for expedited entry into the port to unload its catch. If the vessel fails to do so, the port state may request more information from the flag state and/or the vessel, and the vessel may be inspected by a port authority. The port may also choose to automatically deny entry to the vessel if they do not provide the necessary data or have an HCS of 1 or 2.

#### 4. Key Actor Perspectives

Interviews with key actors produced a range of feedback and insights. While overarchingly actors were interested in initiatives that could increase transparency, expedite systems, and reduce IUU fishing, there was a range of concerns that would need to be addressed or negotiated for effective implementation.

**Table 4. Key Actor Interview Perspectives** 

Actor	Insights
Vessel Operators Expedited entry could be an effective incentive, but there were concerns about public VMS data sharing.	Current State:  Boats try to get in and out of port in 5–7 days Relationships with port authorities are central to efficiency at port Use a port access letter from their flag state for transparency requirements  Potential Implementation: Expedited entry (EE) enough of an incentive because any potential holdups at port are very costly Interested in industry incentives  Concerns: Concerns: Any increased data-sharing requirements would need to include data confidentiality agreements
Monitoring, Control and Surveillance (MCS) Professionals Port states determine what is required for compliance, and agreements with flag states are the predominant method of VMS data sharing.	Current State:  Data-sharing agreements between port and flag states are the most common method of VMS data sharing  In some cases, vessels can provide own VMS track to port state  Port states ultimately determine whether AIS or VMS data is a sufficient demonstration of compliance  Potential Implementation:  EE could occur by making it incumbent upon the vessel itself to provide tracking data and last track since port of call  An AIS track combined with multiple other lines of documentation for verification could be sufficient based on the capacity for data analysis and automated systems  Concerns:  Historical vessel tracks are not typically accessible without a port-flag state agreement  AIS tracking is not recognized as an MCS system by many states

Actor	Insights
Industry Buyers An industry focus on traceability is different depending on species type. Interest in improving speed and transparency but concerns about credibility of flag and port states.	Current State:  Reputational risk drives a focus on traceability along the supply chain  Increased attention on sourcing has sparked several industry alliances (such as the International Seafood Sustainability Foundation [ISSF] and the Global Tuna Alliance)  Potential Implementation:  EE would need a significant improvement on the speed of delivering catch and reduced administrative red tape  Different fish species involve different levels of industry action and coordination  Tuna industry has stronger coalitions and alliances  Non-tuna supply chains may need to rely more heavily on risk-based assessments  EEPS may need to be tailored to both regional and species contexts to be most effective, though that would reduce scalability and uptake  Buyers can drive further incentive structures for vessels and port states, but the incentives of transparency, economic gain, and efficiency must trigger one another  Concerns:  Some companies may be worried about increased exposure based on reduced inspections  System dependent on the credibility of the flag and port state

#### Actor Insights Current State: Policy *Implementation* Not all ports are implementing the control measures of the PSMA FAO Global Record of vessels (a 10-year project still in progress) will provide most feasible at a one-stop shop for official and unofficial (but credible) information about port-state level with regional vessels leadership to avoid • The tuna industry (and tuna RFMOs) tend to be more influential for creating competition and and maintaining incentives varying standards. Industry pressure Potential Implementation: EEPS should complement the PSMA is important for maintaining • Should happen at port-state level with regional leadership to avoid competition with neighboring ports incentive • Should be some global or regional guidelines like the FAO voluntary CDS so structures. that each country does not have a different version of EEPS • Need to maintain industry pressure so that the entire supply chain is incentivized to be compliant • Denying entry to noncompliant vessels can benefit port states in the long run because industry actors do not want to purchase fish from suspicious ports Compliant vessels will favor strong ports, which can create greater market access in the long term Concerns: Creating an HCS based solely on RFMO vessel lists would not be feasible because those lists are not always updated • One challenge to EEPS is engaging non-tuna vessels, which tend to have lower levels of transparency and traceability

Actor	Insights
Regional Partnership (FFA/ IOC) Need to standardize protocols on a regional level. Physical inspections cannot be entirely exempt.	<ul> <li>Current State:</li> <li>FFA is working on regional PSM and risk assessments</li> <li>Nature of IUU fishing has changed from unregulated to unreported and illegal fishing</li> <li>Potential Implementation:</li> <li>Port states make money from vessels entering port and would rather attract vessels with EE than deny entry</li> <li>Need to standardize protocols at a regional level to increase reporting compliance</li> <li>Standardized protocols decrease competition between port states</li> <li>EEPS needs to build on existing national legislation and regional frameworks to expedite the implementation process</li> </ul>
	<ul> <li>Concerns:</li> <li>Physical inspections cannot be exempt, because multiple verifications based on national port requirements need to happen to look into other malpractices, such as forced labor and drug trafficking</li> <li>Identifying other areas of delay in the inspection process could target major delays, allow for these necessary checks, and still provide the incentive of faster port entry and exit</li> </ul>

#### Actor Insights Port State Current State: ERS are effective ERS are highly effective in ensuring transparency and fast communication and could expedite between RFMO and port state inspectors the system. EEPS needs to Potential Implementation: • The PSMA requires interagency collaboration, which could be a strong factor factor in thirdparty agents and facilitating the implementation of EEPS brokers. Physical • Different fisheries have different ERS (for example, multiple government inspections cannot approvals are needed for species like toothfish) and could be combined to create more efficiency be exempt in EEPS, · Advantage of placing vessels on a good standing list. The flag state has a and the system responsibility to communicate that good standing to the regional body (RFMO should target other or otherwise) delays. • Fisheries specific checks include physical logbook examinations and VMS tracking, which could be done using an ERS Concerns: Third-party agents and brokers are critical to the system • Fishing agents submit all paperwork on behalf of fishing vessels, often before vessels enter port • In the case of malpractice, both the vessel owner and the fishing agent are liable for penalties • Independent brokers provide services for refueling and the purchase of food and medical supplies while the vessel is in port • Physical inspections cannot be entirely exempt in the EEPS

#### 5. Comparative Regional Case Studies

Even though the PSMA is a global treaty, implementation happens at the national level, supported by regional bodies such as RFMOs and NGOs providing support for collaboration, data sharing, and capacity building. Port system culture, governance structure, and bilateral agreements with flag states highly influence how agreements like the PSMA are implemented. We anticipate some overlapping hurdles and considerations with the EEPS, which we are conceptualizing to complement the PSMA and build on national legislation. Social norms around efficiency and transparency differ from port to port, which needs to be considered when operationalizing this system.

The small island states in the Pacific Ocean and Indian Ocean regions rely heavily on the oceans, and today fishing is one of their primary sources of economic well-being and food security. Distant water fishing nations pay small island states for access to fish in their extensive exclusive economic zone (EEZ).<sup>29</sup> We investigated two case studies in RMI and Mauritius to understand how an EEPS can build on existing systems of controls and enforcement at port level.

# The Republic of the Marshall Islands in the Pacific Ocean Region

RMI has implemented strong PSM even though they have not ratified the PSMA. Majuro is one of the most important ports in the Pacific region for transshipment and tuna fishery in general. They have more than 400 transshipments each year, and the port has the second-highest number of foreign vessel visits in the Pacific (1,168 annual visits) and the highest total volume of foreign fishing vessel hold size.<sup>30</sup>

RMI is a leading nation in the FFA, an agency founded in 1979 by 16 island nations in the Pacific Ocean. The FFA acts as a forum for harmonizing and coordinating fisheries policies of its member states, and they negotiate arrangements with distant water fishing nations. FFA member countries have a small fleet of surveillance vessels. The FFA coordinates surveillance missions among the countries, navies, and air forces of France, the United States, Australia, and New Zealand. However, this sort of enforcement is expensive, and the FFA has been a large supporter/implementer of PSM.<sup>31</sup> The FFA has been a regional and global leader in combating IUU fishing. Although the majority of their member states have not ratified the PSMA, they provide strong support and resources to help nations tailor and implement a regional PSM framework. One such system is harmonized MTCs for access by fishing vessels. The MTCs require vessels to provide ports with comprehensive information about the vessel's specifications, ownership, and licenses, as well as details about any transshipments that may have occurred since the last port of entry.

Ships must also have a VMS unit on board—either an automatic location communicator (ALC) or a mobile transceiver unit (MTU)—that is FFA-approved if they want to be included on the FFA Vessel Register. The location data from these devices must transmit to the FFA VMS consistently

<sup>29</sup> Quentin Hanich and Martin Tsamenyi, "Managing Fisheries and Corruption in the Pacific Islands Region," Marine Policy 33, no. 2 (2009): 386–92, https://doi.org/10.1016/j.marpol.2008.08.006.

<sup>30</sup> The Pew Charitable Trusts, Study Measures Countries' Exposure to Illegal Catch, Actions to Keep It from Markets (July 2019), https://www.pewtrusts.org/-/media/assets/2019/12/psma\_brief\_round2\_v3.pdf.

<sup>31</sup> Supra, note 26

and automatically at all times during the period of a license.<sup>32</sup> Data sharing in the FFA is bilateral between the member nation and the FFA. The FFA has access to all regional VMS for vessels within EEZs, and if they are licensed under the regional Parties to the Nauru Agreement (PNA) arrangement, then they have access to vessel records, including location data and catch logs.<sup>33</sup> FFA members can track and monitor fishing activities across the region through the satellite-based system that monitors the position, speed, and direction of registered fishing vessels and is accessible to all FFA member countries.<sup>34</sup> PNA members are required to share vessel-location information, but this only happens on a country-to-country basis and is not uniform throughout the Pacific Islands.

In large part, the FFA has implemented measures that require vessels to provide all of the necessary information to demonstrate compliance with fishing regulations. The EEPS would help provide the incentive to vessels to be able to readily provide detailed information, and it would also provide a more universal way to convey historical compliance in addition to the latest trip data. Vessels and flag states may be more likely to comply and share data with the strong incentive that EEPS creates. Given the strong policies the FFA already has in place, the addition of EEPS would be manageable and would help ensure that some of the world's most vital fisheries are not further depleted.

The FFA Regional Monitoring and Control Strategy includes data sharing and management, various legal frameworks, and the Regional Surveillance Picture, which integrates and analyzes multiple datasets for real-time risk assessment and compliance monitoring.<sup>35</sup> There is a promising emergence of cost-effective electronic monitoring and reporting tools, and the FFA is working to digitize data and help member states move to e-reporting. Additionally, the FFA regional register compliance indices are used to track the compliance history of each entity on the register (for example, vessels, masters, owners).<sup>36</sup> Our proposed HCS could potentially be integrated or combined with this compliance index.

RMI currently has the highest level of implementation, and there is a lesser risk to the industry in terms of breaking the traceability claims here. The nation has a good reputation when it comes to fighting IUU fishing, although it is somewhat unclear how much data is being shared directly with other nations.<sup>37</sup> Although RMI has not ratified the PSMA, they are committed to upholding the standards of the PSMA. They have developed and implemented a similar system based on risk assessment without the administrative accountability required of parties to the PSMA.<sup>38</sup> RMI has started to implement the PSM system in its major port of Majuro.

Another important actor in the Pacific region is the Western and Central Pacific Fisheries Commission (WCPFC). The WCPFC is an RFMO focused on tuna management, and they have

- 32 F. McEachan, Evaluation of the Regional FFA MCS Framework (Australia: FAWT Group PTY LTD of the ACT, 2016).
- 33 Anonymous FFA personal communication, May 21, 2020.
- 34 Francisco Blaha, personal communication, May 31, 2020.
- 35 Supra, note 32.
- 36 Supra, note 32.
- 37 Supra, note 34.
- 38 Bronwen Golder, personal communication, May 4, 2020.

The key incentive lies in that the entry system is more efficient for all actors involved.



the highest MCS transparency of all RFMOs that overlap with FFA.<sup>39</sup> Around 1,500 vessels are registered with the WCPFC and share VMS data directly with the RFMO. They collaborate with the FFA significantly, and their conservation and management measures are consistent with the FFA MCS. They also have strong MCS arrangements in the high seas. 40 FFA provides VMS services to WCPFC. This means that RMI has access to information about vessels from all 27 WCPFC member countries, 9 participating territories, and 7 cooperating nonmember countries fishing for tuna in the Pacific Ocean. Through a VMS unit, vessels that are members of the WCPFC fishing for tuna must provide information on vessel position, course, and speed 24 hours a day, 365 days a year for compliance, fisheries management, and research.41

In RMI and the Pacific Islands, for effective EEPS, increasing and supporting capacity building is important, especially for data analysis and training inspectors. VMS and other data are available through the FFA and WCPFC, but there is not always enough capacity to analyze the vessel track to check for compliance before the vessel comes to port.<sup>42</sup> There is also a lack of a formalized system between agents and port authorities throughout the FFA even though RMI has started to implement e-reporting, so being able to formalize and digitize throughout the region would be helpful to make EE possible.<sup>43</sup>

# The Republic of Mauritius in the Indian Ocean Region

The Republic of Mauritius is located in the Indian Ocean, 804 kilometers off the east coast of Madagascar. Mauritius has an EEZ extending to more than 2.3 million square kilometers of exploitable marine resources. The national government prioritizes the ocean economy as a pillar in its future development endeavors, with a major focus on the fishing industry, which includes port-related services, seafood processing, and aquaculture. Globally, Port Louis in Mauritius, along with Port Victoria in Seychelles, are among the most frequently visited mid-ocean ports by foreign fishing vessels in terms of visit numbers as well as hold size of both fishing and carrier vessels.<sup>44</sup> Mauritius provides port facilities for landing and transshipment of tuna and other species such as toothfish, thus providing a free trade zone and associated infrastructures, including ship repair facilities, which incentivize Japanese, Taiwanese, and other Asian longliners.

<sup>39</sup> Supra, note 34.

<sup>40</sup> Western and Central Pacific Fisheries Commission, Conservation and Management Measures (CMMs) and Resolutions of the Western Central Pacific Fisheries Commission (WCPFC) (May 28, 2020), https://www.wcpfc.int/system/files/booklets/31/CMM%20and%20Resolutions.pdf.

<sup>41</sup> Supra, note 34.

<sup>42</sup> Supra, note 26.

<sup>43</sup> Supra, note 32.

<sup>44</sup> Supra, note 15.

The main inspection body for monitoring of fishing vessels at ports is the Port State Control Unit (PSCU), under the aegis of the Ministry of Blue Economy, Marine Resources, Fisheries and Shipping. PSCU is part of the MCS/VMS, Port State Control, and Import/Export Division, which is responsible for monitoring IUU in collaboration with the National Coast Guard, which is primarily focused on surveillance at sea in the EEZ of Mauritius. The principal objectives of this division are to implement the conservation and management measures for combating IUU fishing, monitoring licensed fishing vessels in the EEZ of Mauritius using VMS, keeping the port free of illegal fishing vessels, controlling the import and export of fish and fish products, and ensuring that only legally caught fish are traded. 45 National, regional, and international tools are followed, such as the Fisheries and Marine Resources Act 2007 and its associated regulations, the National Plan of Action to Combat IUU Fishing, the PSMA, ERS, UNCLOS, the Code of Conduct for Responsible Fishing, Resolutions of the IOTC, and Conservation measures of CCAMLR.<sup>46</sup> The focal activities carried out by the MCS unit and PSCU that can support EEPS are online processing of Advance Request for Entry into Port (AREP) through e-PSM (IOTC), boarding and inspection of fishing boats/vessels (both local and foreign); authorization for the landing of fish to all fishing vessels calling in the port; issuance of catch certificates for fish caught legally by the local fishing vessels; monitoring of unloading of fish (for example, Patagonian toothfish, which is reported to CCAMLR); and submitting reports and statistics to RFMOs such as IOTC and CCAMLR.

At the regional level, following IOTC requirements, the division is also involved in the national state scientific fisheries observer program, whereby Mauritian observers are deployed in Mauritian flagged vessels to monitor fishing activities and to collect data.<sup>47</sup> There were previously joint fisheries surveillance missions under the Regional Plan for Fisheries Surveillance.<sup>48</sup> The Geo-Maritime Information System (SIGMA) and the Regional Web Database Standardized Real Time Fisheries Information System Hub (StaRFISh) (outlined in Appendix C-II) have been two critical systems launched by IOC in 2014 to aggregate multiple information sources across countries and enable regional collaboration.<sup>49</sup> These two initiatives have run out of funding, but because they were influential in identifying IUU vessels, these systems will be incorporated into the upcoming Ecofish Program.<sup>50</sup> The Ecofish Program, funded by the European Union, involves support to joint regional MCS action plans, notably to deter IUU fishing, and implementation of conservation measures based on scientific evidence.<sup>51</sup> Systems like SIGMA and StaRFISh, through the Ecofish Program, could help support EEPS.

In terms of VMS tracking, since April 2005 Mauritius has set up a National Fisheries Monitoring Centre (FMC) with VMS tracking capacity to monitor fishing activities of Mauritian licensed

<sup>45</sup> Ministry of Blue Economy, Marine Resources, Fisheries and Shipping, Republic of Mauritius, "MCS\_VMS\_Port State Control and ImportExport Division," accessed April 25, 2020, http://blueconomy.govmu.org/English/Departments/Pages/MCS\_-VMS\_Port-State-Control-and-ImportExport-Division.aspx.

<sup>46</sup> Ibid.

<sup>47</sup> Indian Ocean Tuna Commission, "Resolution 11/04 on a Regional Observer Scheme" (2011), https://iotc.org/cmm/resolution-1104-regional-observer-scheme.

<sup>48</sup> Supra, note 45.

<sup>49</sup> Jeromine Fanjanirina, "The IOC Information Exchange Tools for Fisheries Monitoring Control and Surveillance," Indian Ocean Commission, SmartFiche 37.

<sup>50</sup> Southwest Indian Ocean Fisheries Commission, New Project "ECOFISH", 2019, http://www.fao.org/3/ca6575en/ca6575en.pdf.

<sup>51</sup> Ibid.

fishing vessels.<sup>52</sup> Under the VMS Regulation 2005, these vessels are obligated to share VMS data every two hours to the FMC.<sup>53</sup> In case of any suspicious activity, the officers of the MCS and Port State Control units can check directly with the FMC or vice versa. For fishing vessels with non-Mauritian fishing licenses, flag states and RFMOs are informed of the irregularities and port inspectors also check for VMS data once they board the vessel. This can take longer, highlighting the advantages of real-time VMS data sharing with the port state (Level Two of our proposed EEPS model).

There are two types of ERS by RFMOs that Mauritius follows closely: e-CDS through CCAMLR and e-PSM instituted by IOTC.

#### **CCAMLR system:**

- e-CDS is a user-friendly web-based application to create, validate, and store Dissostichus (toothfish) catch documents, export documents, re-export documents, and specially validated catch documents.
- e-CDS has been implemented to track toothfish from point of landing throughout the trade cycle and aims to include all toothfish landed and traded by CCAMLR participating states. CDS requires participating states to identify the origins and fishing methods of toothfish entering their markets and to determine whether toothfish was harvested in the CCAMLR area and is landed/imported into their territories.<sup>54</sup>
- Along with the e-CDS system, CCAMLR also pioneered the tracking of IUU vessels. Both the CDS and the IUU vessel list have been critical tools for success in curbing IUU fishing within CCAMLR.<sup>55</sup>

#### IOTC system:

- Through this e-PSM system (outlined in Figure 4), a vessel operator/agent submits a request to enter port, the port state receives it and can request more info or contact flag state, and then the port state decides whether to let the vessel enter, the extent of inspections, and so on.
- The e-PSM system by IOTC is completely in line with the PSMA.<sup>56</sup> Information requested through the AREP form in the e-PSM application is included in Appendix C-III.

<sup>52</sup> Ministry of Fisheries and Rodrigues, National Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (2010), http://extwprlegs1.fao.org/docs/pdf/mat165160.pdf.

<sup>53</sup> Ibid

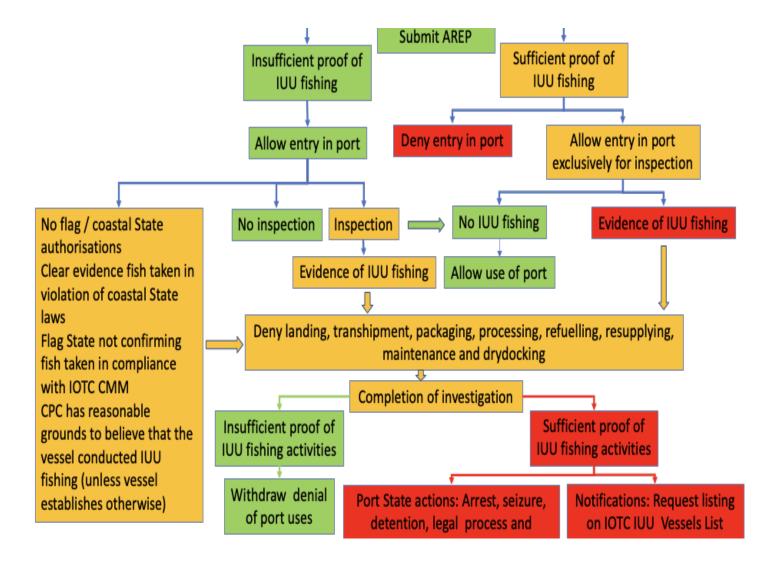
<sup>54</sup> Commission for the Conservation of Antarctic Marine Living Resources, "Catch Documentation Scheme (CDS)," 2017, https://www.ccamlr.org/en/compliance/catch-documentation-scheme.

<sup>55</sup> Lisen Schultz et al., "Adaptive Governance, Ecosystem Management, and Natural Capital," Proceedings of the National Academy of Sciences of the United States of America 112, no. 24 (2015): 7369–74, doi: 10.1073/pnas.1406493112.

<sup>56</sup> Supra, note 9; IOTC Secretariat, personal communication, May 12, 2020.

• A risk assessment tool is incorporated on the e-PSM platform. The purpose of the Risk Assessment Report (RAR) (Appendix C-IV) is to provide assessment of criteria to guide the port state to define a risk score with the criteria in the RAR as well as other criteria the port state has at his disposition. For Port inspectors incorporate their observations following the physical inspection into the RAR. Depending on the level of suspicious activity, legal action is taken according to national legislation. Tools like RAR and the data generated over time could be incorporated into Level Three of our proposed EEPS model.

Figure 4. The Port State Process: From Vessel Advance Request to Enter Port to Port State Decision and Follow-Up Action<sup>58</sup>



<sup>57</sup> IOTC Secretariat, personal communication, May 12, 2020.

As such, e-PSM is the most closely related system to EEPS. Nonetheless, within the Mauritius case study, we have identified a specific scenario whereby all three levels of checks that we identified in our system model (Table 3) occur to a certain extent. For tuna vessels with Mauritian fishing licenses:

- Level One Vessel Data Using ERS: An ERS is already being used to notify inspectors about intention to enter the port through the e-PSM application system. It enables prescreening by port inspectors.
- Level Two Trip Data: There is real-time VMS data tracking, as all vessels with Mauritian fishing licenses have to share VMS tracks with the national FMC (as a requirement under the VMS Regulations 2005). Under this regulation, Mauritian licensed vessels are obligated to share their VMS data with the national FMC, whereas non-Mauritian licensed vessels have no such obligation and share their VMS data through their flag states.<sup>59</sup>
- Level Three Historical Data: The RAR tool on the e-PSM system (Appendix C-IV) provides a guideline to assess vessel risk based on previous violations and current fishing trip. In the Mauritius case study, risk scores are not computed. Port inspectors share their observations on the RAR online system in the Level Three criteria, which helps them decide on action to be undertaken based on national legislation in case of any violations.
  - Note: In terms of incorporating observer data in Level Three of our proposed model, the IOTC observer scheme is scientific in nature. There is no compliance observer scheme in IOTC on fishing vessels like the WCPFC compliance observer scheme. The IOTC Regional Observer Programme monitors transshipment at sea and is included in the RAR.<sup>60</sup> In the future, observer data can also be incorporated into Level Three of our proposed model in the Mauritius case study.

This scenario highlights the essential components and strengths of EEPS: (1) efficient communication and monitoring by port inspector and RFMO, improving transparency in the system of prescreening; (2) real-time VMS data tracking, helping quickly identify anomalies without having to contact flag states. To note, there are still discussions ongoing between IOTC members to adopt a regional VMS system; and (3) regional support of RFMOs, such as IOTC and intergovernmental organizations like the IOC instrumental for capacity building to operationalize EEPS. Expanding this system that combines Level One to Level Three data for tuna fisheries to other fishery types using an integrated approach will be a step toward implementing EEPS.

However, additional considerations have been suggested by our respondents to properly incentivize fishing vessels for EEPS. Physical inspections, when there is no suspicious activity, typically take 1 to 2 hours. 62 In many cases, additional approvals from other government entities and inspections from other authorities can be the source of longer delays. In that sense, the

<sup>59</sup> Supra, note 52.

<sup>60</sup> Supra, note 32.

<sup>61</sup> Ibid.

<sup>62</sup> Supra, note 11.

PSMA guideline of improving interagency collaboration becomes essential to effectively make the system more efficient so that vessels can start offloading more quickly at ports. It is important to note that even in the case of the most compliant vessel, physical inspections at ports will not be able to be completely exempt, as there are many entities beyond fisheries monitoring that need to check the vessels—for example, the Customs Department, Veterinary Services, the Ministry of Health, and the Passport and Immigration Office. Moreover, after the MCS/PSCU units give approval for entry, the order of vessels arriving into port is determined by a different port authority, and sometimes there can be space constraints due to vessels like cruise ships, whereby a fishing vessel must wait outside the harbor until it can have access to a quay. These logistical concerns need to be taken into consideration on a case-by-case basis to ensure that the EEPS system can work effectively.

Building off existing systems, an EEPS that would be valuable in the Mauritian context will (1) include an integrated ERS that will include different fishery types and RFMOs and incorporate electronic logbooks that will minimize time spent during physical inspections; (2) require real-time VMS data sharing to port authorities, irrespective of the country that provided the fishing license; and (3) include a synchronized way of assessing historical compliance of vessels by involving different RFMOs and regional bodies, and a streamlined way of calculating risk scores.

#### D. Discussion

From our case studies, we see multiple instances of strengths that EEPS can build on as well as caveats we need to take into consideration to improve the proposed model. The tuna fisheries example with Mauritius fishing licenses is the most closely related model to the proposed EEPS that satisfies all three levels of data checks we proposed. A key strength highlighted is the advantage of prescreening through ERS in expediting the system. After risk assessments are conducted through RFMO assistance, a port inspector will spend time accordingly on the vessel for boarding and physical inspections: less time is spent on less risky vessels. Online reporting systems such as e-PSM and e-CDS increase transparency between port states and RFMOs, as both have access to information being provided by fishing vessels.

Policy experts have also highlighted that our proposed EEPS can build off and complement the existing PSMA framework. Measures encouraged by the PSMA, such as national interagency collaborations, will greatly benefit our proposed EEPS system by expediting bureaucratic approvals and streamlining inspection procedures.

Regional support of RFMOs and advising bodies like FFA and IOC are instrumental for capacity building to operationalize EEPS. These organizations understand the regional and local contexts best and are well positioned to support port states. Through our research process, multiple respondents have referred to strong regional collaborations through regional bodies as being strong influences to enhancing the strength of control systems at port state levels. In both case study regions, regional organizations are strongly advocating for a shift toward ERS. Capacity building for port inspectors for ERS supported by these regional bodies will be critical to support EEPS.

At present, in the Mauritian case study, VMS checks (for non-Mauritian licensed vessels) and physical logbooks checks are conducted during physical inspections. However, if (1) real-time VMS was looked into at the time of doing risk assessments (at the AREP stage) when the vessels request entry and (2) logbooks were in an electronic format, fisheries inspection could be streamlined. Other checks, such as customs, immigration, and health services, would still have to be conducted by the respective officers.

Currently in the Pacific, there is seemingly a lack of coordination between port states, flag states, and regional bodies, and efforts are disjointed. To be able to grant expedited entry, all of the disparate data and information need to be integrated into a single platform. Additionally, efforts are mainly focused on tuna fisheries because this is the dominant industry in the region. This needs to be considered when insights from RMI are extrapolated to other regions. There are opportunities to harmonize conservation measures and data sharing with adjoining or overlapping RFMOs or other agencies. <sup>63</sup>

# Regional support of RFMOs and advising bodies like FFA and IOC are instrumental for capacity building to operationalize EEPS.



By integrating and consolidating the system of checks regionally with FFA's leadership and strong regional support, adding an expedited entry system to PSM efforts could be possible. Similar observations are made in the Mauritius case study, where efforts seem disjointed: tuna fishing vessels use the e-PSM system, toothfish vessels use the e-CDS system, while other fisheries rely on paperwork submitted by their fishing agents. For effective operationalization of EEPS, an integrated approach needs to be adopted, building off these existing systems of checks and controls. Efforts were made in that direction in the Indian Ocean, whereby there is a module on Port Inspection in StaRFISh (Appendix C-II) to avoid countries entering the same information twice on e-PSM and StaRFISh systems. The objective was to create the link between e-PSM and StaRFISh. Unfortunately, this was not completed due to lack of funding, but the Ecofish Program will potentially take over this component.<sup>64</sup>

Additional considerations include understanding the impact of fishing seasonality. Some months tend to be busier for ports compared to others. Hence, EEPS might provide a greater incentive during the peak seasons. For Levels Two and Three of our data checks, we need to delve further into port state, flag state, and RFMO agreements to understand VMS data sharing regulations.

Lastly, for our proposed HCS system (Level Three), the score system will need to be explored further. At present, we can use the existing vessel lists by regional bodies—for example, the FFA

Vessels Good Standing list and the IOTC vessel list. FAO is also working on a global record of vessels, which could be incorporated into our proposed model. HCS will also benefit from the inclusion of observer assessments on fishing vessels. Efforts to train observers and ensure their security will need to be considered. The HCS is a component of EEPS that would assist the port authority by combining multiple pieces of compliance data into one number that gives a strong indication of the vessel's historical IUU risk. When combined with real-time location data and vessel catch logs, the ports will be able to obtain an adequate picture of a vessel's compliance before it enters the port.

While the EEPS exploration and case study analysis provide a variety of possibilities for system efficiency and potential implementation, it is important to consider and analyze constraints relevant to such a system and how to address them.

Table 5. Evaluation of Constraints and Opportunities for Addressing Constraints (cont. on next page)

Constraint	Details	Addressing Constraint
Port state partnership and collaboration	Potential revenue loss from vessels spending less time physically in port could be a disincentive for EEPS and port state participation  Need to standardize protocols at a regional level to increase reporting compliance	Encourage regional or global guidelines like the FAO voluntary CDS so that each port state does not have a different version of EEPS Implement EEPS and standardize protocols using the leverage of RFMOs and other regional bodies Target key ports that already have strong PSM standards for pilot implementation
VMS data sharing	EEPS will need to guarantee and support secure data sharing and analysis Several actors have expressed discomfort with public VMS data sharing A port access letter stand-in for VMS data sharing relies on negotiations between flag and port state and credibility not verifiable by the EEPS In Mauritius, there is a specific VMS Regulation 2005 in the legal framework, and authorities are comfortable sharing data only with other government entities nationally and in the IOC region In RMI, given that VMS data is already available through FFA (Level Two of our proposed model) and FFA has a list of vessels of Good Standing (Level Three of our proposed model), more support is needed to analyze the existing sources of data efficiently to detect anomalies	Capacity building for data analysis capability among port states and port inspectors Regional collaboration and system support for secure VMS data sharing among participating port states with ERS (for example, SIGMA and StaRFISh systems)

Constraint	Details	Addressing Constraint
Physical port inspections cannot be completely waived	National governments have a set of regulations to follow before allowing offloading of fish; these regulations need to be respected (police checks, customs, immigration, health services, veterinary services)	Streamlined and efficient system for inspections Move from physical to electronic logbooks, so that logbooks can be prescreened, which can reduce duration of physical inspections Potential for an online platform where all approvals by different entities can be viewed by all relevant stakeholders (for example, Mauritius TradeNet system which is used in seafood export) <sup>65</sup>
Bureaucratic delays	While physical inspections can take from one to two hours up to one day,66 transferring paperwork and getting approvals from multiple government agencies can take multiple days depending on the season and other factors	Prescreening where port inspectors and RFMO officers can use the same online portal to monitor progress on inspections and share information As mentioned, in regard to RMI, there is a need to support ERS capacity for Level One to Level Three data to enhance the efficiency of the system for fully transparent vessels

 $<sup>\</sup>label{lem:main_main_main} Mauritius\ Network\ Services, Mauritius\ Tradelink\ (MFISH)\ (April\ 2018), \ http://servicesmns.mu/forms/SW/TradeLink\ (MFISH)\%20Import\%20Permit\%20-\%20QuickStepsGuide\ (ver2.0)\%20for\%20Applicant.pdf.$ 65

#### E. Conclusion

IUU fishing is an elusive problem to solve given the scope and complexity of the issue and potential solutions. An EEPS could provide a relatively inexpensive and effective way to reduce IUU fishing compared to open ocean enforcement methods. By shifting the burden of proof onto fishing vessels during port inspections, EEPS aims to reward proactively transparent and compliant vessels that meet three levels of information checks. EEPS adds a strong incentive to existing PSM being implemented by fisheries agencies around the world. This proposal lays out a potential model for a general system that could be implemented at a port-state level and tailored to the specific needs and existing structures of the port.

Based on our exploration we have a several key recommendations:

- While implemented at a port-state level, EEPS would need strong regional leadership from RFMOs or other fisheries and regional agencies to effectively integrate different nations and fisheries types and navigate VMS data-sharing agreements.
- An ERS could expedite bureaucratic processes, as physical inspections cannot be fully exempt.
- Expanded ERS could facilitate efficient communication among port authorities, government agencies, and RFMOs, further expediting a port-entry procedure.

Further research and negotiations will be needed to reinforce and tailor the levels of assessments we have proposed in this report.

# F. Next Steps

Following this exploratory analysis of a potential EEPS, there are numerous next steps to consider when moving forward:

- **Understanding and operationalizing an HCS** to develop a system of weighting factors and prioritizing certain compliance indicators. This investigation should explore which historical VMS data would be sufficient to verify compliance and which indicators and analyses would allow a determination of whether a vessel had fished illegally in the past. Operationalizing an HCS would also require an understanding of which body would host and manage the HCS database or online platform.
- Exploring frameworks like the FAO Voluntary Guidelines for CDS to understand how EEPS guidelines might be operationalized. Such guidelines would provide consistency across regions so that each port state does not have a different version of EEPS.
- Identifying pilot ports that supply key markets (for example, EU, US, Japan, China) and hold strong PSM standards to support a preliminary implementation of the EEPS based on either a FAO CDS guideline framework or another model.

- Exploring the feasibility of a port access letter standing in for real-time VMS data sharing in the EEPS. While this letter is currently used as a method to verify VMS data based on an agreement between a flag state and a port state, ensuring credibility and compliance in these agreements is critical should it suffice as a replacement for data sharing. Analyzing the tradeoffs of credibility and efficiency could assist in consideration of this port access letter.
- Conducting a more in-depth regional comparative case study between port states within one region and investigating specific port and flag state agreements. There is a need to understand collaborations between port states and the feasibility of ERS among port states in the same region.
- Conducting an economic analysis to understand the financial incentive of the EEPS for fishing vessels and any potential losses for port states if vessels spend less time at port. This analysis would help develop a system that factors in economic costs and benefits and foresees unintended negative consequences of expedited entry.
- Interviewing third-party agents/brokers and coastal states actors to include a broader range of perspectives. This could assist system assessments and highlight the nuances relevant to port-entry procedures in regions around the world.



75 The Outlaw Ocean

# **FORCED LABOR**

#### I. INTRODUCTION

In the preceding part of this report, we addressed facets of illegal, unreported, and unregulated (IUU) fishing. In this part of the report, we address a problem that frequently exists alongside IUU fishing—forced labor and human rights abuses aboard fishing vessels. The clients for this research were the Stanford Center for Human Rights and International Justice and the Stanford Center for Ocean Solutions.

In recent years, labor and human rights violations aboard vessels have received renewed attention from the news media and non-governmental organizations (NGOs). Increased overfishing—caused in part by IUU activity—leads to declining fisheries yields, which can then prompt fishing vessels to cut costs in one of the few other variable expenses of their business—human labor. In addition, IUU operators have increasingly recruited crew from outside their home countries, opting for laborers from lower-income communities abroad. This practice has made an already challenging workplace climate even more complex. Thanks to language barriers and looser regulation, these recruited crews face precarious job security and little transparency in their employment terms.

Fishermen work long, irregular hours, and they take on significant risks of injury and illness while working to haul in the day's catch. But they also face risks below deck as well, sometimes in the form of physical and sexual abuse. In such cases, there are often no mechanisms to report abuse aboard vessels—and if there are, victims' concerns about losing jobs or work visas may deter them from voicing a complaint. Across the board, labor monitoring efforts are poor. The labor cases that do attract media and government scrutiny typically involve dead or missing crew members—people who it is tragically too late to protect. What's more, the transnational nature of the industry means that protection efforts that do exist are not consistent across borders.

The International Labour Organization's (ILO) Work in Fishing Convention (C188) was developed to address many of these issues. But the convention has not yet been widely ratified by states. Among the countries that have ratified it, many have yet to implement or enter the convention into force. The Port State Measures Agreement (PSMA) requires port authorities to identify vessels that have been engaged in IUU fishing and prevent them from landing their catch. There are no clear guidelines on how these port authorities might, in the course of their investigations, also identify and address issues of forced labor. The forced labor component of this report examines policy approaches to addressing forced labor in IUU fisheries, with a special focus on two case study countries, Fiji and Indonesia. For more detailed background on and a definition of forced labor, please see Shalini Iyengar's piece, titled "Forced Labor and Fisheries: Corporate Liability for Human Rights Abuses in the Fisheries Sector", in the Supplemental Research section of the report.

# II. POLICY APPROACHES TO ADDRESSING FORCED LABOR IN FISHERIES: Case Studies in Fiji and Indonesia

Natasha Batista, Katelyn Masket, Trudie Grattan, Nahla Achi

#### **Abstract**

Although inherently difficult to track, forced labor is widespread in many sectors of the global economy. In a 2017 report, the International Labour Organization (ILO) estimated that on any given day, 25 million people around the world were victims of forced labor. Tackling this issue presents particular challenges in the fishing industry, as workers are often confined to vessels for extended periods of time in remote areas, making it difficult to communicate with or express concerns to authorities on land. While out at sea, these vessels and all those on board lie largely beyond the reach of national jurisdictions or feasible monitoring, inspection, and enforcement. This research explores legislative and policy efforts to implement fair labor practices in fisheries, with a specific focus on two case studies: Fiji and Indonesia. The memo dives deep into these two countries and seeks to understand the way national policy and political contexts interact with international legal frameworks built to address forced labor in fisheries. Through desk research and expert interviews, the project examined the strengths and weaknesses of each country's approach, including the promising points of intervention and challenges to implementation, with an eye toward learnings that could be applied more broadly to the sector.

#### **Contents**

A. INTRODUCTION	77
B. METHODOLOGY	78
C. BACKGROUND	78
D. SUMMARY OF FINDINGS	82
E. CASE STUDY I: FIJI	96
1. Forced Labor in Fiji	
2. The Legal Context in Fiji	98
3. The Forum Fisheries Agency: A Regional Approach in the Pacific	
4. Why a Regional Approach?	102
5. Do the FFM MTCs Provide a Replicable Model?	103
F. CASE STUDY II: INDONESIA	104
1. Forced Labor in Indonesia	104
2. The Legal Context in Indonesia	107
3. Indonesia Country Findings	111
G. CONCLUSION	113
H. AREAS FOR FUTURE RESEARCH	114

#### A. Introduction

Although inherently difficult to track, forced labor is widespread in many sectors of the global economy.¹ The ILO's most recent analysis also estimates that forced labor generates annual profits upwards of \$US150 billion globally.² Tackling this issue presents particular challenges in the fishing industry, as workers are often confined to vessels for extended periods of time inremote areas, making it difficult to communicate with or express concerns to authorities on land. While out at sea, these vessels and all those on board lie largely beyond the reach of national jurisdictions or feasible monitoring, inspection, and enforcement. The work on fishing vessels is grueling, with long hours, tough physical demands, and high rates of injuries and fatalities. Therefore, fishing jobs are often filled by vulnerable populations with few other alternatives. These workers are often recruited through deceptive, private manning agencies and lack the means to report abuses and the leverage to assert their rights. For migrant workers, language barriers only further complicate these issues.

Forced labor in fisheries is further exacerbated by weak governance regimes, the use of flags of convenience (FOC),<sup>3</sup> and common fishing practices like transshipment.<sup>4</sup> <sup>5</sup> Illegal, unreported, and unregulated (IUU) fishing, which accounts for up to 30% of the catch in some regions, also serves as a key driver of forced labor in the industry.<sup>6</sup> Although the issues themselves are distinct, pervasive IUU fishing has resulted in declining fish stocks and increasing fuel costs for vessels as they travel farther from the coastline to fish; in order to compensate, vessel owners look to cut their only variable cost: labor.<sup>7</sup> Market forces including declining revenues and growing demand for cheap seafood further amplify these issues.

In this report, we explore legislative and policy efforts to implement fair labor practices in fisheries, with a specific focus on two case studies: Fiji and Indonesia. Through desk research and expert interviews, we inquired into the strengths and weaknesses of each country's approach, including the promising points of intervention and challenges to implementation, with an eye toward learnings that could be applied more broadly to the sector at large. First, we briefly discuss the current international legal framework in place to address forced labor in fisheries, with an emphasis on the ILO's Work in Fishing Convention 2007 (C188). We then highlight key structural aspects of the problem at hand before turning to the high-level findings we have drawn from our review of the existing literature and interviews with relevant experts. While these findings have not been more rigorously tested, we hope they will serve as promising avenues for further research. Finally, we present our case studies on Fiji and Indonesia, which dive into each state's

<sup>1</sup> International Labour Organization and Walk Free Foundation, Global Estimates of Modern Slavery: Forced Labor and Forced Marriage (2017), 5, https://www.ilo.org/wcmsp5/groups/public/@dgreports/@dcomm/documents/publication/wcms\_575479.pdf.

<sup>2 &</sup>quot;Statistics on Forced Labor, Modern Slavery and Human Trafficking," International Labour Organization, accessed June 4, 2020, https://www.ilo.org/global/topics/forced-labour/statistics/lang--en/index.htm.

<sup>3</sup> A flag of a country under which a ship is registered in order to avoid financial charges or restrictive regulations in the owner's country.

<sup>4</sup> The transfer of seafood, crew, fuel, or supplies between fishing boats and refrigerated cargo ships at sea, allowing fishing boats to remain at sea fishing for months to years at a time while getting their market catch.

<sup>5</sup> Environmental Justice Foundation, Blood and Water: Human Rights Abuse in the Global Seafood Industry (2019), 4, https://ejfoundation.org/resources/downloads/Blood-water-06-2019-final.pdf.

<sup>6</sup> Ibid.

<sup>7</sup> Ibid.

experience with forced labor in fishing, the attempts each has made to address the issue, and the gaps that remain.

# B. Methodology

This policy memo takes a case study approach to identify key weaknesses and leverage points in policy approaches to addressing the issue of forced labor in fisheries. The memo dives deep into the cases of Indonesia and Fiji and seeks to understand the way national policy and political contexts in these two countries interact with international legal frameworks built to address forced labor in fisheries. Research for the memo involved both a review of existing literature and available reports on the topic and interviews with experts across a range of fields and geographies (see Appendix B for a full list of interviewees). We conducted interviews with experts from human rights and environmental organizations, environmental and social responsibility consultants, former government officials, lawyers, academics, and representatives from the private sector. We note that our interviewees are not fully representative of all stakeholders involved in this issue, including crew members and non-governmental organizations (NGOs) working on the ground.

We decided to focus on Indonesia and Fiji because of characteristics that make them instructive case study countries. Indonesia has the second largest wild capture fishery output in the world<sup>8</sup> and, based on reports over the last decade, a high prevalence of forced labor in fisheries in domestic waters and in distant water fleets.<sup>9</sup> <sup>10</sup> Given Indonesia's strong stance against IUU fishing and its ratification of the Port State Measures Agreement (PSMA), the fact that it has not ratified C188 can shed light on some of the limitations of this international convention. Similarly, Fiji, which is one of the top five transit states for fishers<sup>11</sup> and a top port state for Chinese, Taiwanese, and Korean vessels,<sup>12</sup> has ratified the PSMA but not C188. However, as a member of the Pacific Islands Forum Fisheries Agency (FFA), Fiji has adopted the Minimum Terms and Conditions (MTCs) related to crewing and employment conditions on fishing vessels. Exploring the Pacific Islands' decision to adopt their own regional approach through FFA's MTCs will help us to better understand the feasibility and effectiveness of alternatives or supplements to C188.

# C. Background

The term "Outlaw Ocean" came about for a reason; the international frameworks meant to regulate our oceans and especially the high seas are undoubtedly lacking, and those most impacted are the workers who are exploited on almost every fishing fleet in the world.<sup>13</sup> Although the United Nations Convention on the Law of the Sea (UNCLOS) assigns jurisdiction over fishing vessels

- 8 Food and Agriculture Organization of the United Nations, The State of World Fisheries and Aquaculture (2018), 9, http://www.fao.org/3/i9540en/j9540en.pdf.
- 9 International Organization for Migration, Report on Human Trafficking, Forced Labor and Fisheries Crime in the Indonesian Fishing Industry (2016), 41-50, https://www.iom.int/sites/default/files/country/docs/indonesia/Human-Trafficking-Forced-Labour-and-Fisheries-Crime-in-the-Indonesian-Fishing-Industry-IOM.pdf.
- $\label{thm:content-up-loads/2019} Greenpeace, Seabound: The \textit{Journey to Modern Slavery on the High Seas (2019)}, 3, \\ \text{https://www.greenpeace.org/usa/wp-content/up-loads/2019/12/c4f6f6b4-greenpeace-seabound-b.pdf}.$
- 11 Irina Bukharin, "Who Can Combat Forced Labor at Sea?," 2020, https://c4ads.org/blogposts/forced-labor-at-sea.
- 12 Ibid.
- 13 Ame Sagiv, personal communication, May 7, 2020.

to flag states and coastal states,<sup>14</sup> the reality is that, to date, no country in the world has the capacity to effectively monitor and manage its exclusive economic zone (EEZ), let alone its flag ships operating on the high seas or in foreign waters. Thus, although international agreements exist to address human trafficking and forced labor, such as the ILO's Forced Labor Convention (No. 29),<sup>15</sup> the Abolition of Forced Labor Convention (No. 105),<sup>16</sup> and the UN Palermo Protocols to supplement the 2000 Convention against Transnational Crime,<sup>17</sup> effective implementation of these frameworks within our world's oceans is almost entirely lacking. Because they operate on the water, fishing vessels are difficult to reach with traditional enforcement mechanisms, such as policing. This difficulty combined with the fact that forced labor is, by nature, an invisible crime makes forced labor in the fishing sector all the more complex to address; too often, crew members in exploitative working conditions are ignored or forgotten. The ILO's C188 and the International Maritime Organization's (IMO) Cape Town Agreement (CTA) on vessel safety are meant to address this gap. However, as this policy memo outlines, countries need continued efforts to effectively address forced labor in the fishing industry.

C188 was adopted by the ILO in 2007 and came into force on November 16, 2017.18 To date, this convention is the most comprehensive international agreement addressing forced labor in fisheries and has been ratified by 18 countries.<sup>19</sup> The objective of C188 is to ensure that fishers have decent conditions of work on board fishing vessels with regard to (1) minimum requirements for work on board; (2) conditions of service; (3) accommodations and food; (4) occupational safety and health protection; and (5) medical care and social security. 20 C188 works in conjunction with other ILO conventions (drawing from their language, the rights they outline, and their implementing mechanisms), notably the Forced Labor Convention (No. 29), the Freedom of Association and Protection of the Right to Organize Convention (No. 87), the Right to Organize and Collective Bargaining Convention (No. 98), the Equal Remuneration Convention (No. 100), the Abolition of Forced Labor Convention (No. 105), the Discrimination (Employment and Occupation) Convention (No. 111), the Minimum Age Convention (No. 138), the Private Employment Agencies Convention (No. 181), and the Worst Forms of Child Labor Convention (No. 182). 21 Despite C188's potential as a tool to address forced labor in the fishing sector, its low ratification rate limits its effectiveness; however, as we delve into in our findings section, ratification is not necessarily the only metric by which the effectiveness of C188 as an instrument to address forced labor in fisheries should be measured.

<sup>14</sup> United Nations General Assembly, United Nations Convention on the Law of the Sea (December 10, 1982), 1833 U.N.T.S. 397, https://www.un.org/depts/los/convention\_agreements/texts/unclos/unclos\_e.pdf.

<sup>15</sup> International Labour Organization, Forced Labor Convention, C29 (June 28, 1930; entered into force May 1, 1932), 39 U.N.T.S. 55.

<sup>16</sup> International Labour Organization, Abolition of Forced Labor Convention, C105 (June 25, 1957; entered into force January 17, 1959), 320 U.N.T.S. 291.

<sup>17</sup> United Nations General Assembly, Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children (Palermo Protocol) (November 15, 2000; entered into force December 25, 2003), 2237 U.N.T.S. 319.

<sup>18</sup> International Labour Organization, Work in Fishing Convention, C188 (2007; entered into force November 16, 2017), https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100\_ILO\_CODE:C188.

<sup>19</sup> International Labour Organization, "Ratifications of C188 - Work in Fishing Convention, 2007 (no. 188)," accessed June 4, 2020, https://www.ilo.org/dyn/normlex/en/f?p=1000:11300:0::NO:11300:P11300\_INSTRUMENT\_ID:312333.

<sup>20</sup> Supra, note 18.

<sup>21</sup> Ibid.

The CTA was adopted by IMO in 2012 and replaces the Torremolinos Protocol of 1993.<sup>22</sup> The CTA outlines minimum standards on fishing vessels 24 meters or longer that operate on the high seas and includes regulations to protect the safety of crews and observers.<sup>23</sup> This agreement empowers port states to conduct safety inspections and work with fisheries and labor agencies to ensure the transparency of fishing and crew activities.<sup>24</sup> The minimum safety measures of the CTA mirror the 1974 International Convention for the Safety of Life at Sea, an internationally binding treaty on safety for merchant vessels that entered into force in 1980. To enter into force, the CTA requires a minimum of 22 states with a combined 3,600 eligible fishing vessels to ratify or accede.<sup>25</sup> To date, 12 countries have ratified the agreement, and the agreement is expected to enter into force on October 11, 2022.<sup>26</sup> A recent report by C4ADS found that "vessels engaging in IUU fishing also often lack critical safety and health equipment, leading to substandard safety and inhumane working conditions in violation of international requirements."<sup>27</sup> Consequently, CTA has the potential to serve as a powerful legal tool to remedy labor violations, which often occur on fishing vessels that also flout safety regulations. However, like with C188, the effectiveness of CTA is also hampered by a low rate of ratification.

"There's no baseline data anywhere. No one has a good estimate of the extent of forced labor or trafficking in their fishing sector. None of it is quantitative; it's all derived from proxies where it does exist, and there are problems with that itself. And so how are we going to know if our policies, like C188, are working or not?"



Jessica Sparks, University of Nottingham

<sup>22</sup> Luke Duggleby, "The Cape Town Agreement Explained," Pew Charitable Trusts, October 5, 2018, https://www.pewtrusts.org/en/re-search-and-analysis/issue-briefs/2018/10/the-cape-town-agreement-explained.

<sup>23</sup> Caterine Benson Wahlen, "48 States Commit to Ratify Cape Town Agreement," IISD SDG Knowledge Hub, October 24, 2019, https://sdg.iisd. org/news/48-states-commit-to-ratify-cape-town-agreement.

<sup>24</sup> Supra, note 22.

<sup>25</sup> Ibid.

<sup>26</sup> Supra, note 23.

<sup>27</sup> Austin Brush, Strings Attached: Exploring the Onshore Networks Behind Illegal, Unreported, and Unregulated Fishing (C4ADS, 2019), https://static1.squarespace.com/static/566ef8b4d8af107232d5358a/t/5d7022301845f300016ee532/1567629912450/Strings+Attached.pdf.

Table 1. International Instruments to Address Forced Labor in the Fishing Industry

Name	Body	Signed	Entry into Force	Notes
Work in Fishing Convention (C188)	ILO	2007	2017	Most comprehensive international agreement addressing forced labor in fisheries. Sets basic standards for decent work conditions in the commercial fishing industry, including (1) minimum requirements for working on board; (2) conditions of service; (3) accommodations and food; (4) occupational safety and health protection; (5) medical care and social security. To date, C188 has only been ratified by 18 countries.
Cape Town Agreement (CTA)	IMO	2012	TBD	Sets minimum safety standards on fishing vessels 24 meters or longer that operate on the high seas. Includes regulations to protect the safety of crews and observers. The agreement could empower port states to conduct safety inspections aligned with labor agencies to ensure the transparency of fishing and crew activities. To date, 12 states have ratified the agreement. CTA will enter into force once 22 states have ratified with a total of 3,600 fishing vessels 24 meters or longer.
Port States Measures Agreement (PSMA)	FAO	2009	2016	First legally binding international agreement targeting IUU fishing. Requires parties to strengthen and harmonize port controls for foreign-flagged vessels to prevent illegally caught fish from entering the global market. Reduces the incentive for vessels engaged in IUU fishing to continue to operate. Provisions of the PSMA apply to fishing vessels seeking entry into a designated port of a state that is different from their flag state. To date, 66 states have ratified the agreement.
FAO Draft Guidance on Social Responsibility in Fish Value Chains	FAO	2019	n/a	States gave the FAO the mandate to produce this guidance but pushed back when it was officially released because of what they viewed as obligatory and prescriptive language, prompting the FAO to develop a new scoping plan.

# D. Summary of Findings

We have drawn the following trends and observations from our review of the existing literature and interviews with relevant experts. While these findings have not been more rigorously tested, they provide promising avenues for further research.

I. Despite its low ratification rate, the ILO's C188 Work in Fishing Convention provides relevant guidelines for informing regional and national approaches to combating forced labor in the fishing industry.

The low ratification rate of C188 diminishes the effectiveness of the convention, but the number of ratifications is not the only metric of the convention's success. C188's guidelines can be used as a template for national and regional legislation, setting basic standards for decent work conditions on commercial fishing vessels. Countries or regional networks can adapt C188's provisions to fit their legal frameworks and cultural, social, and political context. This method could help standardize the legal language around labor conditions and fishers' rights on fishing vessels, consequently reducing the amount of time countries would have to spend developing new regulations on the issue. Further, smaller or resource-poor countries that have been scared off by potential international scrutiny or onerous reporting and implementation requirements associated with international treaties may be more willing to make these concrete improvements at home.

The ILO's C188 gap analysis reports provide a particularly useful tool to help countries adopt regulations addressing labor rights on fishing vessels. For a given country, the C188 gap analysis compares C188 measures with national legislation to determine which C188 regulations are being addressed. The report further highlights where there is confusion or a lack of clarity in a country's existing legislation, and where there are gaps in protecting labor rights for fishers. The gap analysis also investigates which government administrations are responsible for existing legislation and where overlap or contradictions occur. Suggestions on how each country should proceed are not provided, leaving each state responsible for determining how to use this information.

States may be hesitant to ratify C188 if they cannot effectively implement it upon signing the convention. Despite early advocacy by the ILO and FFA to push C188 in the region, Francisco Blaha, a fisheries consultant in the Pacific, stated that Pacific states were reluctant to sign the treaty due to concerns around international scrutiny. Blaha also indicated that Pacific Island countries have little incentive to sign onto C188 if several powerful distant water fishing nations operating in their waters have not committed to the convention either. Instead, the FFA chose to largely replicate the C188 provisions when drafting their MTCs for labor standards on board fishing vessels. This regional approach to standardizing labor conditions gives FFA members the ability to impose the minimal C188 requirements as a condition of fishing access and licensing, as well as the legal backing to conduct inspections and enforce labor laws on their own terms and time, while supporting the international effort to protect migrant fishermen. This regional

<sup>28</sup> International Labour Organization and Pacific Islands Forum Fisheries Agency, "Providing Decent Employment for Pacific Fishers," accessed June 3, 2020, https://www.ffa.int/system/files/FishersEmploymentbroch.pdf.

<sup>29</sup> Francisco Blaha, personal communication, May 7, 2020.

approach to combating forced labor in the fishing industry has the potential to be adopted in other parts of the world with strong existing regional frameworks.

Adopting C188 measures into national and regional legislation is not an end all to addressing forced labor on fishing vessels. James Sloan from the Fijian Siwatibau & Sloan law firm emphasized that Articles 40–44 of C188³0 place primary responsibility on flag states to ensure compliance with labor standards, but lack of flag state enforcement is already a problem in the system. Port states that are signatories of C188 can exercise port state jurisdiction on vessels from states that have not ratified the convention, but even so the port state must report to and notify the flag state of any measures taken under C188 Article 43. Regulating employment law within national jurisdiction is also a large investment of time and resources.³¹ Jess Sparks, a human rights researcher at the University of Nottingham Rights Lab, notes that several countries are concerned about the cost burden they would incur by signing C188. Sparks is especially concerned that the burden of operator costs may eventually get passed down to the fishers through reduced wages, and notes that countries have varying amounts of resources they can commit to properly enforcing C188 regulations.

Effective implementation of C188 would also require each signatory to decide which of their administrations is responsible for conducting inspections for labor abuses on fishing vessels, and training those enforcement officers on how to properly identify cases of forced labor. Assessing forced labor conditions on fishing vessels would require standardized methodology and investigative approaches akin to anthropological studies. Sloan indicates that with limited resources, it is already difficult to provide officers with adequate training and equipment to enforce fisheries laws to tackle IUU fishing. Even more challenging is requiring a state to evaluate vessel conditions and enforce labor laws on foreign-flagged fishing vessels. Addressing cases of forced labor on foreign-flagged ships and/or with foreign workers is seen as a flag vessel state's responsibility. Since port states are not inclined to spend their resources on foreign workers and vessels, signing C188 could remain an unattractive option.

Sparks further emphasized that there are issues with the C188 provisions themselves. The living conditions on board vessels required by Annex III in C188 Articles are only applicable to new vessels built in a member country after they have ratified the convention,<sup>34</sup> and it is cheaper to exploit labor than to upgrade vessels;<sup>35</sup> therefore, it will take decades for a full fishing fleet to fall under C188 provisions.<sup>36</sup> Furthermore, Sparks and Ame Sagiv, the director of forced labor and human trafficking, note that there is no monitoring and evaluation system in place to determine the efficacy of C188. They both question C188's potential to successfully be implemented and effectively mitigate forced labor if no monitoring structures are in place and the convention initially applies to only a small fraction of vessels.

<sup>30</sup> C188 Article 40 states that flag states are responsible for making their vessels comply with the requirements of this convention.

<sup>31</sup> James Sloan, personal communication, May 15, 2020.

<sup>32</sup> Jess Sparks, personal communication, May 5, 2020.

<sup>33</sup> Supra, note 32.; Shalini Iyengar, personal communication.

<sup>34</sup> Supra, note 18, Annex III(2).

<sup>35</sup> Supra, note 18.

<sup>36</sup> Supra, note 32.

Finally, misconceptions around C188 have also made its implementation unpopular among fishers. Sparks explained that in the United Kingdom (UK), domestic fishers believe that the implementation of C188 would end share fishing<sup>37</sup> management practices tied to their culture and identity. There is confusion among fishers over who C188 applies to, and the dominant narrative is that the convention's regulations protect only foreign migrant workers. This perception builds on existing racist rhetoric and Brexit sentiments, with C188 being seen as a convention being forced on the UK by the European Union (EU).<sup>38</sup>

Opposition to the ratification of C188 also exists among vessel owners in Thailand. Sagiv explained that vessel owners have tried to paint the convention as requiring luxury living standards on vessels, and interest groups opposed to C188 were able to get the media to write about the issue as though fishers themselves were in opposition. Notably, C188 protects fishers who are hired to catch fish, but "fishers" also sometimes refers to vessel owners and captains themselves. Sagiv suggested that it is unlikely for fishers—the vulnerable workers that catch the fish—to be advocating against their own protection, as the media tried to make it appear. Further, there is a large degree of flexibility in C188's labor conditions and requirements.<sup>39</sup>

C188 members can exempt vessels less than 24 meters in length from complying with the protections of this convention. For instance, if the vessel is less than 24 meters in length, C188 Article 10 allows the competent authority to exempt the requirement for fishers to carry valid medical certificates attesting to their fitness to work before boarding a vessel.<sup>40</sup> C188 Article 32 allows exemptions on requiring basic safety training approved by a competent authority if the fisher demonstrates equivalent knowledge and experience. Misconceptions around the provisions of C188 among fishing vessel owners and fishers could make the convention difficult to implement at the ground level.

II. Existing regional arrangements among like-minded and similarly situated states may provide a more promising pathway than international frameworks for states to address forced labor issues in the fishing industry.

Given the slow uptake of international instruments such as the ILO C188, regional cooperation may provide an alternate route to setting and enforcing fair and just labor standards in the fishing industry. This is not to say that international tools are not useful—as noted above, for example, C188 provides an important framework off which other actors can build—or that regional mechanisms should displace these global approaches entirely. But where international tools are failing to gain traction or do not exist, regional arrangements provide a tailored means of addressing the issue of forced labor.

This finding draws largely from our research on the FFA, as discussed in further detail in the following Fiji case study. The FFA aims to help its 17 Pacific Island member states sustainably manage their fisheries resources, which encompass some of the richest tuna stocks in the

<sup>37</sup> A general term for several fishery management strategies that allocates secure harvest rights to a specific area or dedicates a percentage of a fishery's total catch to individual fishermen, cooperatives, or fishing communities for their exclusive use.

<sup>38</sup> Supra, note 32.

<sup>39</sup> Supra, note 13.

<sup>40</sup> Supra, note 13.

world.<sup>41</sup> To do so, the FFA implemented harmonized terms and conditions under which vessels must apply for a license to fish within any Pacific Island country's (PIC's) EEZs. While these MTCs originally focused on protecting fisheries resources, the FFA's May 2019 amendments incorporated minimum standards for labor conditions by which vessels must abide in order to obtain a fishing license. These protections, derived largely from ILO C188, apply to laborers on foreign fishing vessels licensed to fish in FFA member state EEZs.<sup>42</sup> For more information on the history of the FFA and the substance of these MTCs, reference the case study on Fiji.

At the time of writing this report, it is too early to assess the success of these MTCs on the ground. Nonetheless, our interviewees repeatedly emphasized the importance of a regional approach to tackling forced labor in fisheries. In the Pacific Island region, as elsewhere, country EEZs often bump up against each other. Because fish are migratory, easily moving between neighboring state jurisdictions, a coordinated, consistent regional approach is necessary to address most fisheries issues. Critically, regionally consistent standards and enforcement mechanisms can help prevent spatial displacement or leakage of bad actors to more lenient jurisdictions. At the vessel level, regional consistency makes it more difficult for a ship to move to a nearby EEZ with lower labor standards by closing these gaps. From a state perspective, leveling the regulatory playing field similarly ensures competitors in the region are held to the same standard. Greater assurance that neighbors will need to play by the rules may help incentivize states to continue reform of working conditions.

A regional approach also helps states to pool resources, split costs, share learnings, and build technical capacity. In resource-poor areas like the Pacific Islands, no one state has the means to effectively tackle this issue alone, and resource constraints are only further amplified by the size and amount of fishing activity in PIC EEZs. A cooperative framework facilitates cost savings like joint enforcement patrols<sup>48</sup> and shared vessel monitoring system (VMS) infrastructure.<sup>49</sup> The FFA has also provided critical technical assistance—developing and drafting the MTCs, for example—that helps lift the burden off of states with limited bandwidth or capacity. While untested in our initial research, this regional backing may also help small developing states stand up to foreign powers like China, who are causing issues in Pacific EEZs but simultaneously serve as important development partners in the region. For example, if a vessel violates MTC labor standards in one FFA state's EEZ, its license is automatically pulled across all FFA member states, providing each individual country a bigger stick than if they were to work alone. It may be interesting to

- 43 Supra, note 13; Supra, note 29; Supra, note 31; Supra, note 32.
- 44 Supra, note 31.
- 45 Supra, note 32.
- 46 Supra, note 31.
- 47 Supra, note 13.

<sup>41 &</sup>quot;About," Pacific Islands Forum Fisheries Agency, accessed May 25, 2020, https://www.ffa.int/about.

<sup>42</sup> Kevin Chand and James Sloan, "A New Set of Minimum Terms and Conditions for Crewing Employment Conditions in the Pacific," Siwatibau & Sloan Ocean Law Bulletins, Sept. 19, 2019, http://www.sas.com.fj/ocean-law-bulletins/a-new-set-of-minimum-terms-and-conditions-for-crewing-employment-conditions-in-the-pacific.

<sup>48</sup> The Federated States of Micronesia, the Republic of the Marshall Islands, and other Pacific Island countries are exploring opportunities for cooperation on joint enforcement patrols of forced labor and IUU fishing, using both marine conservation officers and labor inspectors. Supra, note 31.

<sup>49</sup> Supra, note 29.

look for concrete evidence of this hypothesis in action once the MTCs are more consistently implemented across all member states.

Additionally, Blaha noted that PICs can be reluctant to sign onto an international agreement like C188 because they fear being judged against other signatories with exponentially more resources, such as the United Kingdom. States may then be more willing to join into agreements with other similarly situated states to avoid international scrutiny to some degree, though not entirely. For such a structure to be effective, however, it is important that the standards regional bodies adopt provide a relatively consistent (and consistently high) level of protection to workers.

Finally, a regional approach can be more closely tailored to the context than its international counterpart. In the FFA's case, the organization was able to pull the substance of the labor standards from international instruments like ILO C188, but then alter their application to better respond to the situation on the ground. ILO C188 emphasizes the role of the flag state in promoting acceptable labor conditions, but PICs like Fiji are more active coastal states (since they do not have the capacity to fish their total allowable catch domestically) than as flag states. By attaching labor standards to foreign vessel licensing requirements, the MTCs capitalize on a stronger leverage point for PICs (access to EEZs) than C188 could. PICs like Fiji also care about the issue of forced labor in fisheries specifically through the lens of providing safe working conditions for Fijian fishers. Because licensing conditions at times require foreign vessels to employ a certain number of local crew, it makes sense to tie labor conditions to licenses in this region. Enforcement mechanisms, such as law enforcement and courts, are often less plentiful and less effective at the international level, so tailoring enforcement policy to the relevant regional and domestic systems may prove useful in this sense.

While a regional approach certainly comes with many benefits, it is not without its challenges. Multilateral strategies more generally can be difficult due to disparities in factors like gross domestic product (GDP) among countries, and existing power imbalances should always be taken into account during negotiations of such agreements. In Southeast Asia, for example, states like Thailand tend to receive a lot of labor, while neighboring states like Indonesia and Myanmar traditionally send labor. These contextual differences mean that states in a less homogenous region may have different incentives and needs to address in any regional or international instrument. Beyond conflicting interests, historical grievances and geopolitical issues may also come into play in such a negotiation. Description of the such a negotiation.

The effectiveness of the FFA's strategy to address forced labor in fisheries remains to be seen and will be an important area to watch in the next couple of years. If successful, the question then becomes, how replicable is this model? When asked, Blaha pointed to the history of the FFA as an important feature in the strategy's potential success. The FFA was founded at a time of unity for PICs, as they gained independence from colonizers, but Blaha is not certain they could build the FFA anew today. The PICs now have 40 years of previous experience working within this regional framework to help smooth over rough patches that may arise during negotiation and implementation. Furthermore, the PICs generally have similar levels of resources and capacity,

<sup>50</sup> Supra, note 31.

<sup>51</sup> Supra, note 32.

<sup>52</sup> Supra, note 29.

and share borders in a way that necessitates cooperation to some extent.<sup>53</sup> Delegations from the Indian Ocean Commission and the Southern African Development Community have come to observe the Pacific approach but have not yet made much progress on creating their own.<sup>54</sup> Blaha suggests there may be more hope for the Indian Ocean Commission in this regard, given more of a common background in the region.

III. Punishment schemes (such as the EU's carding system) have successfully directed international and national attention to forced labor in fisheries and spurred domestic legislation on the topic (for example, in Thailand), but effective implementation has lagged. Positive incentives may provide a useful tool in supplementing/addressing some of these implementation gaps.

Punishment schemes and incentives have historically been used to address IUU fishing. But there is still dispute over whether punishment schemes, such as the EU carding system and the United States (US) Customs and Border Protection (CBP) Withhold Release Orders (WROs), have been effective in tackling IUU fishing and forced labor. Although punishments may have directed international attention to these issues, positive incentives may prove to be more useful in addressing the gaps present with implementation and enforcement.

The EU yellow card system entered into force in 2010 to ensure that non-EU nations that export to the EU meet strict fisheries management standards.<sup>55</sup> The primary goal of the carding system is to deter IUU fishing, and the carding system has since been used to address labor standards in fisheries. All fisheries products entering the EU must be accompanied by an EU catch certificate. According to a meeting of the European Commission in 2015, the experience of third-party countries was positive and incentivized a wide range of reforms and improvements.<sup>56</sup> The system works by first engaging with the country and opening a formal dialogue. If the country is uncooperative, the nation is issued a yellow card, or a "pre-identification."<sup>57</sup> The country is then given a 6-month period to evaluate their system and make reforms as needed. If a country does not address the issues that brought about the yellow card, they are then issued a red card, and all their fisheries products are banned from entering the EU. Before the situation progresses to a red card, countries can make institutional changes, and the pre-identification will be removed. The EU carding system has been used all over the world and has been a controversial method among people in the industry.

The EU decision was seen as a gamechanger on the international scale. Whether positive or negative, international attention has been drawn to addressing IUU fishing and forced labor. According to a popular blog by Francisco Blaha, the strategy has led to countries upgrading their fisheries control systems, which is ultimately beneficial for the fisheries. There is evidence that

<sup>53</sup> Supra, note 32.

<sup>54</sup> Supra, note 29.

<sup>55</sup> European Commission, "The EU Rules to Combat Illegal, Reported, and Unregulated Fishing," accessed June 4, 2020, https://ec.europa.eu/fisheries/cfp/illegal\_fishing\_en.

<sup>56</sup> European Commission, *Understanding the EU's Carding Process to End IUU Fishing* (October 6, 2015), http://www.iuuwatch.eu/wp-content/uploads/2015/07/Conclusions\_Event\_6-October.pdf.

The Pew Charitable Trusts, Environmental Justice Foundation, Oceana, and World Wildlife Fund, Improving Performance in the Fight Against Illegal, Unreported and Unregulated (IUU) Fishing (April 2016), http://www.iuuwatch.eu/wp-content/uploads/2015/06/3rdCountryCardingGuidelinesReport\_FINAL.LOW\_.pdf.

many countries have made growth toward addressing the issue. The EU carding not only shed light on the issues, but it also led to consumers being able to track where their seafood product came from. Lastly, the system in the EU helps countries make changes in their system beyond just informing them of the flaws.

Although countries who received yellow cards might have made legislation changes, Ame Sagiv emphasized that not much was done operationally in terms of implementation and enforcement due to the amount of time it takes to see whether implementation will follow legislative changes and be sustained.<sup>58</sup> Francisco Blaha also echoed this point, using Fiji as an example.<sup>59</sup> When the country was issued a yellow card, Fiji created a law to address IUU fishing in their offshore area, but nothing was done to allocate resources for enforcement. Similar situations have occurred in Papua New Guinea, the Solomon Islands, Tuvalu, Kiribati, and Vanuatu. In addition to lacking implementation and general enforcement, this policy pushes a timeline that is unrealistic for most countries. The carding system gives 6 months to make structural changes that can take years to actually pay for, implement, and enforce. Although 6 months is the period of time given, countries often tend to take years due to the time it takes to implement changes on the ground.

Lastly, some PICs in general have struggled with implementation and enforcement associated with the cards. For example, the Solomon Islands faced the threat of a yellow card because they were unable to improve their fisheries compliance and maintenance. PICs have made progress since addressing the yellow cards; however, Francisco Blaha states that "small island developing states are always playing a "catch up game" when it comes to meeting compliance and market access requirements. The rulebook is being read while playing the game with distant water fishing nations." This analysis done by Blaha on the impacts of the yellow cards in the Pacific, and many other sources emphasize the potential of the states and the system; however, overall the system needs to be much more operationally effective to help end IUU and forced labor practices.

The US CBP has a punishment scheme known as a WRO to specifically tackle products coming from forced or slave labor. The Tariff Act and the US Trade Facilitation and Trade Enforcement Act (TFTEA) prevent goods from entering the US that are found to be produced or manufactured by forced, indentured, or child labor. Products that have been found to be in violation are held at the US border, where the owner of the perishable cargo must choose to export the product from the US or prove that forced labor was not used. In 2019, a Taiwanese-owned, Vanuatu-flagged vessel named the Tunago No. 61 was issued a WRO due to information that the vessel was harvesting tuna with forced labor. This WRO was the first civil enforcement by the CBP alleging

<sup>58</sup> Supra, note 13.

<sup>59</sup> Supra, note 29.

<sup>60</sup> Francisco Blaha, "Impacts of the European Commission Yellow Card in the Pacific," SPC Fisheries Newsletter 148 (September to December 2016), https://spccfpstore1.blob.core.windows.net/digitallibrary-docs/files/cd/cd4005f0cd07bb57894de6cbe10b2bdf.pdf?sv=2015-12-11&s-r=b&sig=q6lz0qsGs70hO%2BMUhZBUd06R0GbAKebKPkBFeJNSHVM%3D&se=2020-11-09T19%3A20%3A18Z&sp=r&rscc=public%2C%20 max-age%3D864000%2C%20max-stale%3D86400&rsct=application%2Fpdf&rscd=inline%3B%20filename%3D%22FishNews148\_34\_Blaha. pdf%22.

<sup>61</sup> Clare Connellan et al., "US CBP Enforces Forced Labor Prohibition in First Action Against Vessel," White and Case, April 8, 2019, https://www.whitecase.com/publications/alert/us-customs-border-protection-enforces-forced-labor-prohibition-first-action.

<sup>62</sup> Steve Bittenbender, "US Customs Claims Vanuatu Tuna Vessel Used Forced Labor," Seafood Source, February 7, 2019, https://www.seafood-source.com/news/supply-trade/us-customs-claims-vanuatu-tuna-vessel-used-forced-labor.

that forced labor was used on board a fishing vessel. Since then, there have been more cases of forced labor found on vessels, including one recently on the Yu Long No. 2. <sup>63</sup>

Despite this method being fairly new, it has shown potential to be used to address forced labor in fisheries specifically. Although it is too early to see the effects orders like these have, the CBP does not assist in helping countries implement reforms or enforcement. Therefore, this method is strictly a punishment scheme that might not entirely solve the problem.

There are potential incentives for vessels and vessel owners who comply with labor and vessel standards. One of these incentives is the FFA Vessel Good Standing List. Vessels that comply with FFA standards are placed on the list and therefore are able to purchase a fishing license to fish in waters of PICs that are members of the FFA. In addition, a vessel found to be in breach of the MTCs loses their place on the list and therefore their fishing license. Due to the highly profitable tuna fishery that is present in the western and central Pacific Ocean, it is in the best interest of countries to abide by the laws and regulations laid out, so they are able to access the fishing grounds.

Although both positive incentives and punishments have been implemented and enforced, there is still debate over which is more effective at addressing forced labor. Jess Sparks believes that it is easier for a bad vessel or country to pretend it is not bad to get off a list. She believes it is harder for a bad vessel or country to create a fake facade to get on a good standing list. <sup>64</sup> Both approaches are needed to help tackle the issue of forced labor in the fishing industry and incentivize transparency along the value chain.

IV. Not only is there an already recognized lack of data on forced labor and, to a heightened degree, on forced labor in fisheries, there is also a gap in the quantification of the economic and social costs of forced labor. Quantifying these costs could help incentivize states to address labor abuses.

The upstream and downstream effects and costs of forced labor are likely enormous. From connections to criminal networks that facilitate sex trafficking, 65 document fraud, and financial fraud 66 to burdens on health services and counseling from religious organizations, 67 68 there is no doubt that forced labor in fisheries imposes huge economic and social costs on countries around the world. Workers in situations of forced labor, some of whom are trapped at sea for years, 69 often suffer mental trauma, which can translate into actions on shore—ranging from costly actions, such as seeking out physical or mental health services, to criminal or nefarious actions, such as soliciting sex workers. Families who think their sons are leaving for a few months' job (often

<sup>63</sup> U.S. Customs and Border Protection, "CBP Issues Detention Order on Seafood Harvested with Forced Labor," May 11, 2020, https://www.cbp.gov/newsroom/national-media-release/cbp-issues-detention-order-seafood-harvested-forced-labor.

<sup>64</sup> Supra, note 32.

<sup>65</sup> Ian Urbina, "Sea Slaves': The Human Misery that Feeds Pets and Livestock," The New York Times, July 27, 2015.

<sup>66</sup> Supra, note 27.

<sup>67</sup> Supra, note 32.

<sup>68</sup> Supra, note 31.

<sup>69</sup> Margie Mason, "Myanmar Fisherman Goes Home After 22 Years as a Slave," Associated Press, July 1, 2015, http://www.ap.org/explore/sea-food-from-slaves/myanmar-fisherman-goes-home-after-22-years-as-a-slave.html.

thinking he will be doing construction or working in the service industry)<sup>70</sup> might not see them for years or even decades, if ever. (Although millions of women are victims of labor exploitation, most victims of forced labor in wild capture fisheries are male.)<sup>71</sup> Through this widespread problem of forced labor in the fishing sector, families who rely on remittances might lose their main source of revenue and be catapulted into cycles of poverty and vulnerability.<sup>72</sup> While we know data on forced labor is sparse because it is, by nature, an invisible crime often involving invisible, vulnerable populations, less attention has been paid to quantifying the upstream and downstream costs of forced labor.<sup>73</sup>

James Sloan suggests that until states truly understand these costs, there will be little incentive and political willingness to go against the status quo. In contrast to forced labor, IUU fishing has clear economic costs. According to our interviews, these clear costs are one of the reasons why states have been much faster and more forceful in their response to IUU fishing than in their response to forced labor. The costs of forced labor will vary from state to state, based on whether labor abuses are happening in their domestic fleets or in their EEZs or involve migrant workers from the state on foreign vessels in distant water. Port states and transit states are also likely bear large costs. Creating centralized data collection points to start quantifying these costs will be crucial for future efforts to create evidence-based policies. Although C188 (as well as the PSMA and CTA) requires inspections of vessels for forced labor abuses, it does not stipulate anything about the collection of data on the downstream effects of forced labor.<sup>74</sup> To quantify these costs, therefore, states will need to create either a national, a regional, or an international framework that outlines a mechanism for data collection and clearly lists which metrics and indicators should be used in the collection process and analysis of the data. Future research should also explore which actors are best placed to access accurate information, as well as incentivized to do so.

Although efforts to address forced labor in other sectors have had some success—for example, in the West African cocoa industry and the palm oil industry in Malaysia and Indonesia<sup>75</sup>—this success has always relied in part on consumer awareness and consumer pressure. From a private sector standpoint, such pressure does have the potential to catalyze change in the fishing sector; evidence from the last few years shows that people around the world are turning their attention to forced labor in different fisheries (shrimp farming in Thailand, jermals in Indonesia, and Chinese vessels on the high seas, among others). With growing media coverage, wealthy consumers in the Global North might start pushing harder for fair-trade seafood. However, as the stories of other industries suggest, consumer pressure and industry initiatives (such as certification schemes) only go so far. The limitations of these efforts are manifold and include, among others, the fact that (1) a large number of consumers do not have the price flexibility to purchase fair-trade

<sup>70</sup> Supra, note 9.

International Labor Office Governance and Tripartism Department - Special Action Programme to Combat Forced Labor, Caught at Sea: Forced Labor and Trafficking in Fisheries (2013), 17, https://www.ilo.org/wcmsp5/groups/public/---ed\_norm/---declaration/documents/publication/wcms\_214472.pdf.

<sup>72</sup> Human Rights Watch, Hidden Chains: Rights Abuses and Forced Labor in Thailand's Fishing Industry (2018), https://www.hrw.org/re-port/2018/01/23/hidden-chains/rights-abuses-and-forced-labor-thailands-fishing-industry.

<sup>73</sup> Supra, note 232.

<sup>74</sup> Supra, note 18.

Joshua Levin et al., Profitability and Sustainability in Palm Oil Production: Analysis of Incremental Financial Costs and Benefits of RSPO Compliance (2012), WWF-US, FMO, and CDC, https://www.worldwildlife.org/publications/profitability-and-sustainability-in-palm-oil-production.

products (and this point would only be amplified with seafood, which is becoming cheaper and cheaper over the years and is less of a luxury item than a product like chocolate); (2) certification schemes are often co-opted by powerful industry actors and lose credibility;<sup>76</sup> and (3) after an initial phase of attention, consumer pressure can wane, and supply chains can return to a status quo of labor exploitation.

These limitations only reinforce the need for a quantification of the costs of forced labor; experiences in other industries suggest private sector changes work most effectively and sustainably if they are undertaken in conjunction with policy levers, which outlast media coverage and consumer outrage. Sometimes incoming administrations have a genuine desire to address forced labor. For instance, Brazilian President Luiz Inácio Lula da Silva wanted to eradicate slavery in Brazil, and his government created a national plan in 2003 to confront forced labor. Once his administration lost power and political willingness to address the issue petered out, however, the plan fell apart.

International instruments such as the Palermo Protocols and C188 can also put pressure on governments to adopt new legislation to tackle forced labor. But, as this policy memo outlines, avoiding international scrutiny and implementing short-term band-aid solutions to forced labor rather than sustained governance solutions is often all too easy for states. Our research suggests that, in the case of labor abuses on fishing vessels, which so often occur out of sight and out of mind, governance bodies need an economic incentive to develop and utilize policy levers. As it stands, especially in emerging economies such as Indonesia, governments might see addressing forced labor as hampering economic growth. Until they are able to see ending forced labor as means of sustaining long-term growth and avoiding costly negative externalities, they will be unlikely to devote extensive resources to genuinely and holistically tackling the problem.

V. While IUU fishing and forced labor are linked, the problems themselves are distinct in that IUU fishing raises environmental concerns while forced labor presents social and human rights issues. There are certainly opportunities for aligned and synergistic solutions in this space, but they must acknowledge and appropriately address this critical distinction.

In a November 2019 testimony to the US House of Representatives Natural Resources Committee, Ame Sagiv of Humanity United said:

Environmental and labor abuses in the seafood industry are intractable, complex problems that mutually enable and reinforce one another—they are inextricably intertwined.... In fact, if we do not deal with these twin issues as two sides of the same coin, we are bound to fail on both counts. We must think of the labor and the environmental issues as one complete package.<sup>78</sup>

<sup>76</sup> Casper van Vark, "Behind the Label: Can We Trust Certification to Give us Fairer Products?," The Guardian, March 10, 2016, https://www.theguardian.com/sustainable-business/2016/mar/10/fairtrade-labels-certification-rainforest-alliance.

<sup>77</sup> Labor Exploitation Accountability Hub, Focus on Labor Exploitation and The Freedom Fund, "Brazil," https://accountabilityhub.org/country/brazil.

<sup>78</sup> Sharla Mittone, "HU Testimony on Illegal, Unreported, and Unregulated Fishing," Humanity United, November 25, 2019, https://humanityunited.org/hu-testimony-on-illegal-unreported-and-unregulated-fishing.

Sagiv's testimony mirrors efforts undertaken over the last few years in the human rights and environmental space to recognize and address IUU fishing and forced labor as linked fisheries issues. While states have paid heed to illegal fishing for decades (although they might not have always referred to it as IUU fishing), the issue of forced labor on fishing vessels really came to international attention only in the last half decade, after a series of investigative journalism reports, including in the Associated Press<sup>79</sup> and The New York Times.<sup>80</sup> Research on the linkage between IUU fishing and forced labor, therefore, remains sparse.

We asked each person we interviewed to comment on this linkage (or lack thereof). Although their answers do not represent data-intensive research, their expertise in the field can help shed light on how governments should think about and create policies to tackle forced labor and IUU fishing. In a recent report probing into the onshore (criminal) networks behind IUU fishing, C4ADS found that human trafficking and forced labor abuses were present in close to 50% of the IUU networks investigated. These preliminary findings suggest IUU and forced labor in fisheries do intersect. At the same, a distinction should be made between illegal fishing, which is an environmental crime, and forced labor, which is an abuse of human rights. Responding to forced labor requires policies that are sensitive to human needs, including mental and physical health. For instance, while Minister Susi's policy of "seize and sink" in Indonesia might have worked as a deterrent to IUU fishing by foreign vessels, it did nothing to address the working conditions of migrant workers on these boats, many of whom were detained by Indonesian authorities after their boats were destroyed. In the same of the properties of the same of the properties of the same o

Research does show that overfishing (which can be either legal or illegal) is linked to forced labor. As fish stocks collapse, vessels have to push farther out to sea or stay out longer to maintain yields. So Given the steady decline in worldwide seafood prices, as vessel owners' fixed costs (for example, fuel and maintenance, which are based on the market) increase, they have to cut costs elsewhere. Because labor is one of the costs that vessel owners can control, in response to narrowing profit margins, some owners start to rely on forced labor. As Jess Sparks outlined in her 2018 dissertation, Social Conflict on the Seas: Links Between Overfishing-Induced Marine Fish Stock Declines and Forced Labor Slavery, consistent with slavery theory, vessel owners use "cheap and/or unpaid labor as an approach to offset increasing costs and continue harvesting fish species at a rate otherwise cost-prohibitive." Sparks, however, cautions against lumping together IUU fishing and forced labor. In her view, IUU fishing is strictly an environmental problem. Most countries are not ready for cross-sectoral legislation, since such legislation likely would not be sensitive enough to effectively address labor abuses. As Sparks puts it, an inspector or observer

- 81 Supra, note 27.
- 82 Supra, note 32.

- 85 Ibid., 9.
- 86 Ibid., ii.
- 87 Supra, note 32.

<sup>79</sup> Associated Press, "An AP Investigation Helps Free Slaves in the 21st Century," 2016, https://www.ap.org/explore/seafood-from-slaves.

<sup>80</sup> Ian Urbina, "The Outlaw Ocean," The New York Times, July 25, 2015, https://www.nytimes.com/interactive/2015/07/24/world/the-outlaw-ocean.html.

<sup>83</sup> Associated Press, "Indonesia Sinks 51 Foreign Boats to Fight Against Poaching," NavyTimes, May 5, 2019, https://www.navytimes.com/news/ your-navy/2019/05/05/indonesia-sinks-51-foreign-boats-to-fight-against-poaching.

<sup>84</sup> Jessica L Sparks, "Social Conflict on the Seas: Links Between Overfishing-Induced Marine Fish Stock Declines and Forced Labor Slavery," (PhD dissertation, University of Denver, 2018), https://digitalcommons.du.edu/cgi/viewcontent.cgi?article=2473&context=etd.

looking for fishing violations does not have the requisite skills to address labor and human rights violations. Sparks advocates for discrete policy approach, which then might be brought together synergistically. Policy approaches to forced labor should not be consolidated with IUU fishing policies; rather, policymakers should seek to "maximize synergies and minimize tradeoffs" where possible.<sup>88</sup>

Another perspective on the intersection of IUU fishing and forced labor focuses on redefining IUU fishing to include labor abuses; given that under both international and national legal frameworks forced labor is illegal, the definition of IUU fishing could be broadened to include fishing conducted using illegal types of labor. None of the experts we interviewed, however, advocate for this position. As it stands, IUU fishing is generally understood to refer to environmental violations and is measured using environmental indicators.89 Redesigning this framework to lump labor abuses into the IUU definition would not be worth it given the distinctions mentioned above. All the experts we interviewed saw IUU fishing and forced labor as intertwined or occurring in parallel. Jess Sparks, however, cautioned against seeing them as intertwined in all geographies; specifically, forced labor can and does occur in certain geographies where there is minimal IUU fishing. Ame Sagiv highlighted the fact that without forced labor, many vessels would be unable to fish as much as they do; by exploiting laborers, vessel owners are able to overfish, which perpetuates the vicious cycle in which overfishing incentivizes forced labor. This cycle, Sagiv explained, is why Humanity United-an organization focused on human rights-has partners in the environmental movement; IUU fishing and forced labor, although they are distinct crimes, must be attacked at the same time, Sagiv argues.

Narrowing in on specific geographies, in the context of the FFA, James Sloan suggests IUU fishing and forced labor should be viewed as linked. Because much of the fishing around small island states in the Pacific is conducted offshore by distant water foreign fleets (which often employ both migrant workers and workers from nations whose EEZ they are fishing in), Pacific Island states have an opportunity to regulate vessels on both environmental and labor metrics. Sloan makes the case that Fiji and other PICs can choose to grant licenses only to those vessels that engage neither in IUU fishing nor in forced labor. Francisco Blaha agrees that the two issues should be tackled in parallel in the Pacific. In his experience as a fisheries consultant, Blaha says, although IUU fishing and forced labor are not automatically paired, vessels engaged in IUU have a high chance of exploiting workers, and vice versa. Accounting for this correlation in policy development, therefore, will be the most effective way to address both issues.

In summary, all of the experts we interviewed cautioned against believing that tackling IUU fishing would solve labor issues in fisheries. Both preliminary data and anecdotal evidence, however, suggest that IUU fishing and forced labor are linked. While some experts argue that this linkage means policymakers should tackle the two issues in parallel, others push for distinct policies that seek synergies, accounting for both the intersections and the distinctions between these two issues. Our research suggests different geographies and contexts call for different policy approaches; the extent to which evidence suggests IUU fishing and forced labor are linked in distinct regions and fisheries should determine what policies are put in place. Government

<sup>88</sup> Ibid.

<sup>89</sup> Supra, note 13.

<sup>90</sup> Supra, note 31.

officials and policymakers, however, should always remain conscientious of the fact that IUU fishing is an environmental problem, which requires science-based management, and forced labor is a human rights problem, which requires trauma-informed, sensitive, human-centered responses.

VI. "If you do the right thing, you lose": current market structures leave suppliers with little choice but to cut labor costs to remain competitive in the market. No strategy for tackling forced labor in fisheries is complete if it does not reform current market structures and incentives.

Despite national and international interventions aimed at forced labor in fisheries, the supply chain itself still presents major structural barriers to success. As Ame Sagiv briefly summed up, "a can of tuna cannot be produced for \$1." No solution to eradicating forced labor in this industry will be complete if it fails to address market structures. Before delving into this section, we would like to note that only the experts mentioned explicitly in this section commented on pricing. The experts not mentioned did not comment on pricing.

Overfishing not only plagues the ocean, but also plagues the people who rely on the ocean for their livelihoods. As overfishing increases and competition for seafood grows, vessels are forced to fish farther out at sea for longer periods of time. Consequently, costs like fuel increase, pushing suppliers and vessel owners to look elsewhere to cut costs. As the largest cost vessel owners control, labor takes this hit. While buyers enjoy more comfortable profit margins, suppliers do not, so they push costs further down the supply chain until they reach fishers, who have no one else to pass off these costs to.

Buyers like Walmart or Costco have been unwilling to increase their prices to account for the true cost of fish on the ground or to institute longer-term contracts with suppliers to incentivize positive reform. Suppliers have little leverage in such situations, because antitrust laws prevent them from organizing to demand fair prices from buyers. Under the current status quo, Francisco Blaha suggests there is little incentive to be a "good actor." "If you do the right thing, you lose," Blaha noted, because competitors will continue to cut labor costs to meet buyer demands. In research done in Thailand, employers worried that the cost of necessary reform would drive them out of business.

To tackle these systemic issues, buyers must do more to allow and incentivize actors earlier in the supply chain to improve their practices. Public commitments to reform remain meaningless if corporate actors do not change their business model, in which primary sourcing decisions are driven by competitive price (as compared to sustainability or working conditions, for

<sup>91</sup> Supra, note 13.

<sup>22</sup> Labor costs can account for up to 60% of total vessel expenses. Supra, note 5.

<sup>93</sup> Supra, note 13; Hannah Boles, Tracking Progress: Assessing Business Responses to Forced Labor and Human Trafficking in the Thai Seafood Industry (Humanity United and The Freedom Fund, 2019), 4, http://www.praxis-labs.com/uploads/2/9/7/0/29709145/09\_hu\_report\_final.pdf.

<sup>94</sup> Supra, note 29.

<sup>95</sup> Hannah Boles, Tracking Progress: Assessing Business Responses to Forced Labor and Human Trafficking in the Thai Seafood Industry (Humanity United and The Freedom Fund, 2019), 11, http://www.praxis-labs.com/uploads/2/9/7/0/29709145/09\_hu\_report\_final.pdf.

example).<sup>96</sup> Buyers must start paying for the true cost of their seafood, accounting for labor and environmental costs in price negotiations with suppliers.<sup>97</sup> These shifts must be reinforced by longer-term contracts with suppliers in order to provide them with the resources to make these improvements.<sup>98</sup> Consumers will need to accept increases in seafood prices; however, the bulk of the responsibility cannot fall on them.<sup>99</sup> First movers in the market, such as Walmart in the US, need to start making these changes in order to allow others to follow suit.<sup>100</sup>

The above private sector reforms must be coupled with public sector mechanisms to hold companies legally accountable. Such instruments can heighten corporate risk, pushing them closer to a tipping point at which they feel increased pressure to reform. 101 France's Duty of Vigilance Law, which mandates that companies implement human rights due diligence measures, may serve as a starting point for designing such instruments, though it is not the gold standard. 102 France's law does go further than both the UK's Modern Slavery Act and California's Transparency in Supply Chains Act. 103 Rather than stopping at disclosure requirements, the French law mandates that companies within its jurisdiction establish and effectively implement due diligence mechanisms to identify and mitigate human rights and environmental risks in their operations. 104 Civil penalties for failure to establish or properly implement such measures were struck from the law, but causes of action remain for civil liability and periodic penalty payments should companies fail to comply. Importantly, any interested party may seek a judicial order requiring company compliance, and any parties injured through a company's inadequate compliance may seek compensation for their damages. Future initiatives can learn from the French law's emphasis on adequate and effective implementation (beyond mere disclosure) and inclusion of judicial enforcement mechanisms; however, those drafting new legislation should consider provisions that impose civil penalties, shift the burden of proof onto companies, and develop mechanisms for official monitoring of implementation.<sup>105</sup>

Interventions targeting market structure will need to account for each link in the supply chain to ensure that costs are not ultimately pushed onto the labor force. Buyers and other private sector actors will have a major role to play in reforming current market structures. Francisco

```
96 Ibid., 4.
```

97 Ibid.

98 Ibid.

99 Supra, note 13.

100 Ibid.

101 Ibid.

102 France Duty of Vigilance Law, No. 2017-399 (March 27, 2017).

Both the UK's Modern Slavery Act and California's Transparency in Supply Chains Act focus on disclosure requirements but do not mandate that companies take corrective measures when issues arise in their supply chains. Under the Modern Slavery Act, large businesses must prepare an annual statement outlining the steps taken during the year to ensure that slavery and human trafficking do not occur in their supply chain or any part of their own businesses. While the act does not include an enforcement provision, the Secretary of State can seek an injunction requiring the organization to comply should they fail to produce a statement (Modern Slavery Act, 2015 §54 [UK]). California's act similarly requires large manufacturers and retailers who do business in California to disclose any steps they have taken to evaluate and address human rights violations in their supply chains. Should a company violate this act, only the Attorney General has the ability to bring an action for injunctive relief (Cal. Civ. Code §1714.43). While both laws mandate that businesses disclose these statements on their websites, they do not require businesses to take any affirmative steps to mitigate risks.

104 Supra, note 301.

<sup>105</sup> Sandra Cossart, "What Lessons Does France's Duty of Vigilance Law Have for Other National Initiatives?" Business & Human Rights Resource Centre, June 27, 2019, https://www.business-humanrights.org/en/what-lessons-does-frances-duty-of-vigilance-law-have-for-other-national-initiatives.

Blaha suggests governing institutions must also be a part of the solution to these private sector challenges.<sup>106</sup> This recommendation comes not from the belief that institutions are superior, but from a pragmatic recognition that long-term, generational change is required, and companies are not built to make generational forecasts. Governments and institutions may not be better, Blaha conceded, but in 50 years, "they will be there in one shape or another."<sup>107</sup>

# E. Case Study I: Fiji

#### 1. Forced Labor in Fiji

Despite Fiji's land mass of only 18,376 square kilometers, the small island nation controls an EEZ spanning 1.29 million square kilometers. Located among some of the most profitable tuna fisheries in the world, Fiji serves as a popular port state for vessels to restock, refuel, and offload catch for export; Chinese, Taiwanese, and Korean vessels represent 94% of fishing fleets visiting Fijian ports. Data also indicates that Fiji is among the top five transit states through which fishers travel on their journey from home to vessel.

Recent reports have implicated Fijian vessels and crew in cases of forced labor. In 2019, Greenpeace published the accounts of 34 Indonesian migrant fishers who filed complaints with the Indonesian Migrant Workers' Union (SBMI) that suggested conditions of forced labor, including abuse of vulnerability, deception, physical and sexual violence, intimidation and threats, retention of identify documents, withholding of wages, debt bondage, abusive working and living conditions, and excessive overtime. Two of 13 vessels listed in these complaints involved Fiji: Hangton No. 112, a Fiji-flagged vessel, and Zhong Da No. 2, a Chinese-owned vessel that was flagged and operated in Fiji. A crew member who worked on Zhong Da No. 2 stated, "I was forced to work without enough rest and food. I was exhausted and could not continue my duty. I saw that others went for a rest. I stopped and went to the galley, but food was not served anymore. My boss came to me and asked, 'What's your problem?' I asked back, 'Don't you know the rules, also I need to rest and eat food, what's my fault?' Zhong Da No. 2 operated in Fiji and sometimes

- 106 Supra, note 29.
- 107 Ibid.
- 108 United Nations Food and Agriculture Organization, "Fishery and Aquaculture Country Profiles: The Republic of Fiji," accessed June 4, 2020, http://www.fao.org/fishery/facp/FJI/en.
- 109 Supra, note 42.
- 110 Supra, note 11.
- 111 For additional case studies on incidents of forced labor involving Fiji, see the following:

  Human Rights at Sea, In Their Own Words: The Killing of Fesaitu Raimkau A Fijian Crewman in Panama (January 2019), https://www.hu-

manrightsatsea.org/wp-content/uploads/2019/01/HRAS\_Case\_Study\_Fiji\_Killing\_of\_Fesaitu\_Raimkau\_Jan\_19-SECURED.pdf;
Human Rights at Sea, A Family Perspective in Their Own Words: Salote Kaisuva, the Widow of Fijian Crewman Mesake, Who Worked on
Taiwanese Longliners (March 2019), https://www.humanrightsatsea.org/wp-content/uploads/2019/03/2019-Case-Study\_Fijian-Fisher-man-Mesake-Kaisuva\_SP-LOCKED.pdf;

Human Rights at Sea, A Family Perspective in Their Own Words: The Story of Josaia and Virisila Cama (May 2019), https://www.humanright-satsea.org/wp-content/uploads/2019/05/2019-HRAS-FIJIAN-FISHER\_ABUSED\_THE-STORY-OF-JOSAIA-AND-VIRISILA-CAMA\_SP\_LOCKED.pdf;

Human Rights at Sea, A Family Perspective: Testimony of Fijian Fishing Widows, Mother and Sister (July 2019), https://www.humanrightsat-sea.org/wp-content/uploads/2019/07/HRAS\_2019\_Case\_Study\_Fiji\_Testimony\_of\_Fijian\_Fishing\_Widows\_Mother\_and\_Sister\_SP\_LOCKED.pdf.

- 112 Supra, note 10, 29.
- 113 Ibid.

fishing close to New Zealand waters too. To my knowledge, this vessel was owned by China, but Fiji-flagged. Quite confusing!"<sup>114</sup> A Human Rights at Sea report also includes accounts of Fijian fishers who were signed off in the Solomon Islands and repatriated to Fiji after complaining of food shortages and unpaid wages in 2012.<sup>115</sup> A subsequent crew member complained of the same issues a few months later and was similarly repatriated to Fiji.

Furthermore, the United States government gave Fiji a Tier 2 Watch List ranking in its 2019 Trafficking in Persons (TIP) report, noting that "[t]raffickers subject workers from South and East Asian countries to forced labor in small and informal farms and factories, construction, and on fishing vessels that transit through Fiji or board fishing vessels (mainly China- and Taiwan-flagged) from Fiji ports and waters." As evidenced by this assessment, human trafficking and forced labor issues in Fiji extend beyond the fishing industry.

Labor abuses on board vessels may also translate to social costs on land once crew arrive in Fiji. Forced labor is often tied to IUU fishing and sex trafficking, and workers in situations of forced labor may seek health or counseling services when they come into a port state. These social costs are particularly relevant in Fiji because its capital serves as a main transit hub for crew members joining or leaving vessels. The US TIP Report briefly mentioned such issues, noting that "crew on foreign fishing vessels. . . have allegedly exploited Fijian women and children in sex trafficking."

Fiji also struggles to enforce labor standards on Chinese vessels in their EEZ, given Chinese influence in the country. While labor inspection standards should prevent bad actors from offloading their illegal catch in the country, the Chinese government is often able to avoid enforcement because most development sites in Fiji are supported by Chinese funding. From 2014 to 2019, it is estimated that a total of 277 Chinese investment projects worth around \$US1 billion were successfully implemented in Fiji. Fiji also acts as an export state for many Chinese longliners in addition to other vessels. This influx of Chinese capital into the country provides China with a lot of influence over Fiji's fishing sector and likely contributes to the subpar enforcement of labor standards on Chinese vessels.

- 114 Ibid., 33.
- 115 Human Rights at Sea, Fisheries Abuses and Related Deaths at Sea in the Pacific Region (December 1, 2017), 6, https://www.business-human-rights.org/sites/default/files/documents/HRAS-Fisheries-Abuse-Investigative-Report-Dec-2017-SECURED.pdf.
- 116 U.S. Department of State, Trafficking in Persons Report (June 2019), 196, https://www.state.gov/wp-content/uploads/2019/06/2019-Trafficking-in-Persons-Report.pdf
- 117 Supra, note 31.
- 118 Supra, note 11.
- 119 Supra, note 116.
- 120 Supra, note 29.
- 121 "Chinese Investments in Fiji: Diversifying, Localizing, Emphasis on Compliance," CGTN, May 7, 2019, https://news.cgtn.com/news/3d3d674d786b444e34457a6333566d54/index.html
- 122 Xinhuanet, "Fiji's Foreign Direct Investment Expected to Increase: Minister," August 7, 2019, http://www.xinhuanet.com/english/2019-08/07/c\_138290820.htm.
- 123 Supra, note 29.
- 124 Supra, note 29.

#### 2. The Legal Context in Fiji

Despite reports of labor abuses, Fiji has yet to ratify the ILO's C188 or the CTA on safety standards for fishing vessels. The country has, however, ratified the FAO PSMA<sup>125</sup> and the UN Fish Stocks Agreement, <sup>126</sup> which are intended to focus more on environmental concerns in the fishing sector, in addition to UNCLOS. <sup>127</sup> In the human rights arena, Fiji has ratified the Convention on the Elimination of All Forms of Racial Discrimination, <sup>128</sup> the Convention on the Elimination of All Forms of Discrimination against Women, <sup>129</sup> the Convention on the Rights of the Child, <sup>130</sup> and the Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment, <sup>131</sup> but noticeably has not signed onto two key treaties that make up the International Bill of Human Rights: the International Covenant on Civil and Political Rights and the International Covenant on Economic, Social, and Cultural Rights.

In a 2019 report on addressing human trafficking and forced labor, Fiji laid out a roadmap for meeting United Nations Sustainable Development Goal 8.7 pertaining to the eradication of forced labor, human trafficking, modern slavery, and child labor. Fiji's action plan for addressing forced labor in fisheries involves ratifying C188 by 2025 and developing methods to screen migrant workers in the fishing industry by 2021. These fishing-related goals are part of a more comprehensive package of reforms to help the country address the issue of forced labor at large.

Beyond the fisheries sector, Fiji has also publicly committed to ending the trafficking of children. Fiji's strategy involves implementing the National Action Plan (NAP) framework and promoting data collaboration and management to address forced labor, human trafficking, and modern slavery. In addition, in 2013, the Fijian government committed itself to a child labor–free society through its Constitution's reformed labor legislation. In 2013, the Fijian government committed itself to a child labor–free society through its Constitution's reformed labor legislation.

Fiji's Constitution was amended in 1999 to include the Fiji Human Rights and Anti-Discrimination Commission (FHRADC) under Section 42.<sup>136</sup> The FHRADC aims to educate the public on human rights, advise the government about compliance with international human rights agreements,

- 125 Ratified 02/13/2019.
- 126 Ratified 12/12/1996.
- 127 Ratified 12/10/1982.
- 128 Ratified 01/11/1973.
- 129 Ratified 08/28/1995.
- 130 Ratified 08/13/1993.
- 131 Ratified 03/14/2018.
- 132 United Nations Sustainable Development Goals Partnerships Platform, "Alliance 8.7," accessed June 4, 2020, https://sustainabledevelopment.un.org/partnership/?p=32967.
- 133 National Strategic Planning Forum, Developing a Joint Roadmap for Fiji as a Pathfinder Country to Achieve SDG Target 8.7 (Fiji, August 22-23, 2019), https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---ilo-suva/documents/publication/wcms\_726134.pdf.
- 134 Ibid.
- 135 Ibid.
- 136 Asia-Pacific Human Rights Commission, "The Fiji Human Rights Commission," accessed June 4, 2020, https://www.hurights.or.jp/archives/focus/section2/2001/12/the-fiji-human-rights-commission.html.

and review complaints received from citizens on human rights violations.<sup>137</sup> Individuals are able to submit complaints to the FHRADC; however, the Constitution prohibits the FHRADC from investigating complaints filed relating to the 2006 coup and the 2009 abrogation of the 1997 Constitution.<sup>138</sup>

#### 3. The Forum Fisheries Agency: A Regional Approach in the Pacific

Fiji has embraced a regional approach to addressing issues in the fishing sector. Rather than signing on to international agreements like ILO C188, Fiji, along with its fellow Pacific Island states, worked through the regional FFA to develop a set of Harmonised Minimum Terms and Conditions relating to crewing and employment conditions on fishing vessels.

#### History of the Forum Fisheries Agency and Its Harmonised Minimum Terms and Conditions

Formed in 1979, the FFA facilitates regional cooperation among its 17 member states to promote sustainable management of fishery resources. The regional advisory body provides technical assistance and expertise to member states but holds no sovereign authority over them. Members include many small-island developing states in the Pacific, in addition to Australia and New Zealand. While the countries themselves may be small, their EEZs encompass large swaths of one of the most profitable tuna fisheries in the world. Consequently, the FFA focuses much of their efforts on the harvesting of tuna in national waters, worth more than \$US20 billion per year. This regional management strategy aims to not only protect Pacific fisheries, but also maximize benefits to the Pacific Island countries themselves.

Because member states traditionally do not have the capacity to fish their total allowable catch, foreign vessels also apply for licenses to access resources within Pacific Island EEZs. To regulate access to their waters, FFA member states developed the Harmonised Minimum Terms and Conditions for Access by Fishing Vessels (MTCs)—a set of standards for fishing license conditions focused around effective management of fisheries resources. While agreed upon regionally, the MTCs must be incorporated into each state's domestic legal system through legislation, regulations, or licensing conditions. These terms and conditions then act as a gatekeeper to the FFA Vessel Register. Vessels must meet these MTCs to be included on the Register's Good Standing List, which is required to obtain a license.<sup>142</sup>

In recent years, the FFA began to discuss options to address labor issues within the waters of its member states. James Sloan, a Fiji-based lawyer, distilled the FFA's incoming approach to

<sup>137</sup> Fiji Human Rights and Anti-Discrimination Commission website, accessed June 4, 2020, http://www.fhradc.org.fj.

<sup>138</sup> U.S. Department of State, Bureau of Democracy, Human Rights and Labor, Fiji 2018 Human Rights Report (2018), 6, https://www.state.gov/wp-content/uploads/2019/03/FIJI-2018.pdf.

<sup>139</sup> Pacific Islands Forum Fisheries Agency, "About FFA," accessed June 4, 2020, https://www.ffa.int/about.

<sup>140</sup> Pacific Island Forum Fisheries Agency, "FFA Members," accessed June 4, 2020, https://www.ffa.int/members#2/-18.6/2.0.

<sup>141</sup> Pew Trusts, "Netting Billions: A Valuation of Tuna in the Western and Central Pacific Ocean," September 23, 2016, https://www.pewtrusts.org/en/research-and-analysis/fact-sheets/2016/09/netting-billions-a-valuation-of-tuna-in-the-western-and-central-pacific-ocean.

<sup>142</sup> Francisco Blaha, "The Use of Minimum Terms and Conditions for Access by Fishing Vessels for Crewing Rights and Welfare," Francisco Blaha Blog, June 1, 2019, http://www.franciscoblaha.info/blog/2019/6/1/the-use-of-harmonised-minimum-terms-amp-conditions-for-access-by-fishing-vessels-for-crewing-rights-and-welfare.

the problem quite simply: "These are our fishing resources. Why can't we control the standards of employment within our own fishing grounds?" Though the Pacific Island states had the sovereign right to explore, exploit, conserve, and manage these resources, employment issues on board vessels traditionally fall under the jurisdiction of the flag state. Unlike Australia and New Zealand, small island states (Fiji included) do not have the resources to completely close their waters to foreign vessels; to meet their allotment, the Pacific Island countries very much need foreign vessels to fish in their EEZs to some degree.

# "These are our fishing resources. Why can't we control the standards of employment within our own fishing grounds?"



James Sloan, Siwatibau & Sloan Law Firm, Fiji

Fiji's (and likely other Pacific Island states') motivation for addressing forced labor in its fisheries also stemmed from its interests in maximizing the economic benefit of local fisheries resources for the local population, ensuring bad actors were not accessing these resources, and providing decent employment opportunities for local crew.<sup>147</sup> Because foreign vessels often must agree to employ a certain number of local crew when obtaining a license, Pacific Island leaders wanted a means to ensure safe and fair employment conditions on these vessels.<sup>148</sup>

In May 2019, the Forum Fisheries Committee (the FFA Governing Council composed of member governments) adopted new MTC provisions to protect human rights and impose minimum labor conditions for crews aboard FFA licensed vessels. This move formally and concretely linked access to extremely profitable fishing resources with crew rights and welfare. The new MTCs provide PICs with a tool to suspend or revoke fishing licenses for breaches of human rights and labor standards. In substance ILO C188 largely influenced these standards, so much so that interviewees described parts of the MTCs as close to a "copy and paste" of the treaty. As discussed above, however, the FFA moved responsibility and enforcement power from the flag state (as is largely the case with C188) to the licensing state, where Pacific Island countries have a great deal more leverage. Specifically, the crewing MTCs address protection of basic human rights

- 143 Supra, note 31.
- 144 ILO C188 and UNCLOS emphasis on flag state responsibility.
- Australia only allows domestic vessels to fish within its waters. New Zealand requires any vessels fishing within its waters to reflag to New Zealand. Supra, note 42.
- 146 Supra, note 31.
- 147 International Labour Organization and Forum Fisheries Agency, Providing Decent Employment for Pacific Fishers (2016), https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---ilo-suva/documents/publication/wcms\_486720.pdf.
- 148 Supra, note 31.
- 149 The Crewing MTCs amended Section 5.2 of Annex 4 and added Annex 6, the Harmonised Minimum Terms and Conditions for Access by Fishing Vessels, Forum Fisheries Agency (as amended May 2019).
- 150 Supra, note 142.
- 151 Supra, note 29.

according to international standards, crew contracts (both language and mandated provisions), health and safety, costs that must be borne by vessel operators, insurance, remuneration, medical care, rest periods, accommodations, and facilities.<sup>152</sup>

Sloan, who was consulted in the development of these conditions, also noted that the arrangement comes with a clear and relatively inexpensive enforcement mechanism—pulling the fishing license. Effective enforcement so often comes down to resources, and Pacific Island states on the whole do not have the resources required to realistically bring bad actors under national jurisdiction and prosecute them under national laws, as is contemplated in frameworks like ILO C188. But under the MTCs, the license of a vessel in breach gets pulled across 15 jurisdictions at once—a potentially powerful tool for states that might otherwise struggle to enforce elements of international law against these foreign vessels.

Nonetheless, these crewing MTCs do not come without their challenges. To begin, the MTCs are derived from ILO C188 provisions, which some activists have critiqued to be too abstract—with more room for states to maneuver, the lowest common denominator may end up setting a subpar standard for the region.<sup>154</sup> The enforcement agencies also still need to determine how frequently vessels must be reassessed to remain in good standing in the register and how to obtain a mass balance of crew to confirm the number of fishers starting and ending the trip. 155 156 Furthermore, the scope of the tool is narrower than the scope of the problem. These licensing requirements do not provide jurisdiction over vessels on the high seas, where instances of forced labor often occur.<sup>157</sup> In fact, vessels tend to congregate in high seas patches just outside of state jurisdiction to fish migratory species like tuna. The high incidence of IUU fishing in these areas, which are under the management jurisdiction of RFMOs rather than FFA states, has proved to be a large point of contention for the PICs. This further emphasizes the reality that any comprehensive strategy to tackle forced labor issues cannot rely entirely on individual, ad hoc tools, but must instead include a toolbox of complementary strategies. Finally, as with most policies, enforcement is far from a given. And because FFA member states implement these provisions through licensing schemes, their authority does not extend beyond granting or denying this license. Therefore, the Pacific Island states cannot mandate that foreign vessels make changes to their labor conditions, but must instead rely on licensing to incentivize good behavior.

### Implementation of MTCs

At the time of writing this report, it is still too early to fully assess the implementation of the FFA's labor-related MTCs. Given the slow nature of policy implementation in general, we were unable to find up-to-date data on MTC enforcement in the Pacific, but interviews did provide some anecdotal evidence on their status. Currently, rates of progress vary across FFA member states because each must incorporate the MTCs domestically through legislation, regulations, or

<sup>152</sup> The Harmonized Minimum Terms and Conditions for Access by Fishing Vessels, Forum Fisheries Agency (as amended May 2019), Annex 4 (Section 5.2), Annex 6.

<sup>153</sup> Supra, note 31.

<sup>154</sup> Supra, note 32.

<sup>155</sup> Ibid.

<sup>156</sup> Supra, note 29.

<sup>157</sup> Ibid.

licensing conditions to provide a basis for enforcement. Sloan views this disparity in timelines and capacity as a big challenge slowing overall implementation, and he reported that Fiji has not moved very quickly on the issue.<sup>158</sup> According to fisheries consultant Francisco Blaha, as of now vessels must provide fisheries documentation and contracts for all crew on board to obtain a fishing license in any of the FFA countries.<sup>159</sup> Blaha noted that "operationally, this approach does a lot more than just signing C188."<sup>160</sup> Systems are not yet in place, however, to continue this oversight as crews change.

Moving forward, the government of New Zealand is tendering a project with the FFA to provide funding and assistance to analyze and support country-by-country implementation of the MTCs, which may provide helpful data points for future research. While the Secretariat of the FFA is supposed to support member nations in integrating the conditions into their regulatory frameworks, we do not have insight on the degree to which this is actually happening on the ground. In any case, the FFA will likely need to provide enforcement agencies across the region with standardized technical training to facilitate enforcement, and encourage information sharing between states to ensure vessels in breach of the MTCs are removed from the Good Standing List. Standard List.

#### 4. Why a Regional Approach?

A regional approach to tackling forced labor in fisheries proved enticing to both Fiji and its neighboring Pacific Island states for numerous reasons. To begin, the Pacific Island countries were more willing to sign on to the MTCs, given reduced risk of international scrutiny as compared to an international agreement. Signing onto C188 presented some uncertainty for PICs that feared they might not be able to meet the same standards as wealthier signatory countries. This precautionary approach to international frameworks is likely also colored by previous experiences in the region. Fiji received a yellow card from the EU for IUU activity; however, the card was waived after Fiji ratified the Offshore Fisheries Act. In reality, Fiji took little action to implement the policy domestically, a common theme in response to EU carding.

Furthermore, the MTCs recognized the individualized needs of Pacific Island states and their position internationally. Most PICs have EEZs that are much larger than their land mass and consequently struggle to patrol this jurisdiction. A regional approach allows the PICs to pool resources and facilitate cost savings through FFA technical assistance, joint enforcement patrols, and shared VMS infrastructure, among other initiatives. And patrolling resources are only part of the problem for PICs; enforcement also involves the state's response once labor violations

- 158 Supra, note 31.
- 159 Supra, note 29.
- 160 Ibid.
- 161 Ibid
- 162 Pacific Islands Forum Fisheries Agency, Annual Report FY 2018-2019 Executive Summary (2019), 7, https://www.ffa.int/system/files/FFA%202018-19%20Director%20General%27s%20Annual%20Report%20HRv3%20%28web%29.pdf.
- 163 Supra, note 42
- 164 Francisco Blaha, "The Impact of the EU Yellow Cards in the Pacific," Francisco Blaha Blog, September 25, 2015, http://www.franciscoblaha.info/blog/2015/9/25/the-impact-of-the-eu-yellow-cards-in-the-pacific.

are identified, including detaining vessels and repatriating crew members. However, resource constraints make it difficult for PICs to take on these efforts to deal with the vessels and crew until situations are resolved. In designing the MTCs, the region was able to account for these shared concerns and include more feasible mechanisms of enforcement. As a result, the FFA MTCs pulled substantive labor standards from international instruments such as ILO C188, but altered the means of intervention to better respond to leverage in the region: controlling fishing licenses for PIC EEZs. This context-specific approach also allows the PICs to ensure better working conditions for local crew who are employed on the foreign vessels fishing within Pacific EEZs—a key priority for the region.

Ultimately, a regional approach is not the only solution to tackling issues of forced labor in the Pacific; however, a regional framework does seem to provide a promising option to engage with the context-specific interests of a group of similarly situated countries.

#### 5. Do the FFA MTCs Provide a Replicable Model?

Should the FFA's approach prove effective, the question becomes: How replicable is this model? Experts working or based in the Pacific Island region pointed to a few key factors:

- Common background: The FFA was founded at a time of great unity following the transition to independence for many Pacific Island states. Because many of the controversial issues that divide states now played a less prominent role at that time, Francisco Blaha questions whether the FFA could be formed in today's political climate. Furthermore, using an existing and trusted body like the FFA may help remove some of the friction involved in regional cooperation.
- Common interests: Shared borders and migratory resources helped align state interests and incentivize cooperation in the Pacific. These countries are also similarly situated in terms of development measures such as GDP, resource constraints, and their role in the fishing sector. Moreover, all states also reap what they see as meaningful benefits—shared costs and resources, protection of their fisheries and people, and a more authoritative voice on the international stage—when they band together.
- Regional relations: Geopolitics in the region and historical grievances between states will play a large role in any effort to facilitate regional cooperation.

Delegates from the Indian Ocean Commission and the Southern African Development Community have visited the region to observe the FFA's approach. Though the goodwill is there, neither

<sup>165</sup> Supra, note 31.

<sup>166</sup> Supra, note 29.

regional body has yet taken concrete steps to replicate it at home. Blaha predicts there may be more hope for the Indian Ocean Commission, given a stronger shared background. Blaha predicts there may be more hope for the Indian Ocean Commission, given a stronger shared background.

# F. Case Study II: Indonesia

#### 1. Forced Labor in Indonesia

With an EEZ of 6,051,529 square kilometers encompassing a marine mega-biodiversity hotspot, Indonesia is the second largest producer of marine wild capture fisheries in the world.<sup>170</sup> Under the former Minister of Marine Affairs and Fisheries Susi Pudjiastuti, Indonesia has made stringent efforts to reduce IUU fishing from foreign vessels. However, there remains a high prevalence of forced labor cases involving migrants on foreign fleets in Indonesia and among Indonesians in distant water fleets. The International Organization for Migration (IOM) in Indonesia identified economic factors as being the primary driver for foreign victims of trafficking (VoT) in Indonesia and Indonesian VoT abroad to migrate for better employment.<sup>171</sup> The Indonesian Ministry of Foreign Affairs states that in the period of 2012–2015, the Indonesian government assisted 2,368 Indonesian fishers abroad who experienced IUU related crimes.<sup>172</sup> Two hundred eighty-seven (12.12%) of these fishers were victims of trafficking, and most were trafficked to South Africa, East Asia and Southeast Asia, the Middle East, and Oceania.<sup>173</sup> From 2011–2015, IOM has assisted more than 1,720 foreign victims of trafficking in Indonesia, with the majority of fishers coming from Myanmar, Cambodia, Thailand, and Lao People's Democratic Republic (Lao PDR).<sup>174</sup>

Indonesia is flagged as a major source of human capital for human trafficking and as a transit country for foreign victims of trafficking. A case of forced labor in fisheries that garnered global attention in 2015 found more than 1,300 fishers, largely from Myanmar, Cambodia, Thailand, and Lao PDR, stranded in Abmon and Benjina, as well as seven other locals across Indonesia. These fishers were trafficked from their home country and brought to Indonesia through Thailand. They were forced to work more than 20 hours per day on boats at sea and had their catch sent back to Thailand. Tree members received minimal provisions and inadequate accommodations, and illegal workers were given false documents to fit Thailand's legal requirement to employ documented crew. Any fisherman considered to be a flight risk was locked up. Interviews conducted by the IOM found that more than 95% of these victims considered themselves to be

- 168 Ibid.
- 169 Ibid
- 170 Food and Agriculture Organization of the United Nations, The State of World Fisheries and Aquaculture (Rome: 2018), 9, http://www.fao. org/3/i9540en/i9540en.pdf.
- 171 Supra, note 206, 41.
- 172 Supra, note 9, 57.
- 173 Supra, note 9, 58.
- 174 Supra, note 9, 48.
- 175 Ambon and Benjina are cities in the province of Maluku, Indonesia.
- 176 Supra, note 9, 3.
- 177 R. McDowell, M. Mason, and M. Mendoza, "AP Investigation: Slaves May Have Bought the Fish You Bought," Associated Press, March 25, 2015, https://www.ap.org/explore/seafood-from-slaves/ap-investigation-slaves-may-have-caught-the-fish-you-bought.html.
- 178 Ibid.

poor and sought better employment in Thailand due to its significantly higher GDP relative to their home countries.<sup>179</sup>

Multiple reports over the last few decades outline the forced labor conditions of Indonesian migrant workers aboard foreign vessels. According to C4ADS, more than 80% of victims of forced labor in distant water fishing vessels are from Indonesia. In the majority of those cases, fishers were recruited by manning agencies based in and regulated in Indonesia. The IOM found that the majority of Indonesian VoT they assisted worked on Taiwanese fishing vessels and were placed on vessels through letter-guaranteed placement. In this system, manning agencies place Indonesian fishers directly onto fishing vessels without the involvement of governments (private to private), and those vessels typically operate in remote locations beyond Taiwanese waters. In comparison, an official placement scheme (government to government) through the National Board for the Placement and Protection of Indonesian Overseas Workers (BNP2TK) places fishers onto Taiwanese vessels that only operate in Taiwanese waters. These Indonesian fishers usually receive alien resident certificates, which guarantee their rights under Taiwanese law, and they are less vulnerable to labor exploitation and abuse.

Cases of Indonesian fishers facing labor abuses continue to make world news. On May 7, 2020, the Indonesia Ocean Justice Initiative (IOJI) published a press release of the allegations of human rights violations of 18 Indonesian migrant workers, 4 of whom died, as crew members aboard the Chinese-flagged fishing vessels Long Xing 629, Long Xing 605, Long Xing 802, and Tian Yu 8. <sup>186</sup> IOJI concluded the surviving crew members experienced various forms of human rights violations in the form of forced labor, unpaid salaries, violence, and inadequate accommodations, food, and drink. Indonesia's Ministry of Foreign Affairs is also currently investigating allegations of the Indonesian crewman whose body was dumped off the waters of Somalia. <sup>187</sup> He died on board the Chinese fishing vessel Luqing Yuan Yu 623 on January 16, 2020. The recruitment agency that hired this man claims to have notified his relatives and the Indonesian authorities about his death, but the foreign ministry, manpower ministry, and national agency for migrant worker protection were never informed. <sup>188</sup>

- 179 Supra, note 9, 41.
- 180 Supra, note 11.
- 181 Supra, note 9, 50-51.
- 182 Supra, note 9, 51.
- 183 The National Board for the Placement and Protection of Indonesian Overseas Workers, which implements regulation operated by the Ministry of Manpower.
- 184 Supra, note 9, 50.
- 185 Ibid.
- Mas A. Santosa, "Allegations of Human Rights Violations Resulted in the Death of indonesian Migrant Workers in Foreign Fishing Vessel: Time for Us to Improve and Strengthen Governance and Protection of Indonesian Migrant Worker Rights," (Jakarta: Indonesia Ocean Justice Initiative, 2020), 1, <a href="https://oceanjusticeinitiative.org/wp-content/uploads/2020/05/IOJI-Press-Release-on-Fishers-Human-Rights-Violations.pdf">https://oceanjusticeinitiative.org/wp-content/uploads/2020/05/IOJI-Press-Release-on-Fishers-Human-Rights-Violations.pdf</a>
- 187 Basten Gokkon, "Indonesia may bar citizens from working on foreign fishing boats after spate of deaths," Mongabay, accessed May 20, 2020, https://news.mongabay.com/2020/05/indonesia-may-bar-citizens-from-working-on-foreign-fishing-boats-after-spate-of-deaths/
- 188 Ibid.

In response to the recent spate of deaths, Indonesia may be issuing a ban preventing citizens from working on board foreign fishing vessels. This work placement moratorium would start in June 2020 and last for six months. The Indonesian government would use this time to streamline the recruitment process of migrant fishers, improve monitoring, weed out unscrupulous recruitment agencies, and ensure that worker's rights can be protected. He same time, the Ministry of Marine Affairs and Fisheries (MMAF) is working to expand Indonesia's domestic fishing fleet to provide locals more incentive to work at home instead of going abroad to follow the promise of a better-paying job. Marine observers support the moratorium and reforming the hiring process of migrant fishers but call for strict law enforcement and criminal charges to be pursued against the placement agencies at home and abroad.

Cases involving forced labor of Indonesian migrant fishers rarely receive attention or are prosecuted unless they involve murder. A recent case involving a Vanuatu-registered, Taiwanese-owned tuna longliner, Tunago No. 61, found that the captain Xie Dingrong was killed by six Indonesian crew members while at sea.<sup>192</sup> <sup>193</sup> These crewmembers were sentenced to 18 years imprisonment by the Vanuatu Supreme Court. The court investigations found that the complicit crewmembers had experienced a wide range of physical and verbal abuse for an extended period of time, leading up to the captain's murder.<sup>194</sup> The numerous human rights abuses and incidences of mistreatment did not amount to a defense of provocation.<sup>195</sup> The Taiwanese authorities did not conduct any formal investigation into the recruitment process or the treatment of the crew on board.<sup>196</sup>

Reports of forced labor and trafficking of Indonesian fishers within Indonesia or migrant workers aboard Indonesian vessels are similarly sparse. However, victims of child labor are among the first reported instances of trafficking into the fishing industry in Indonesia. A 1999 ILO study on wooden fishing platforms known as *jermals* found that about 75% of the labor force on these platforms were young boys under the age of 14.<sup>197</sup> These boys were recruited from villages in Indonesia with the promise of salaries and three months' work on these platforms, yet their conditions were not clearly explained; these boys worked excessive hours under unsanitary working conditions, experienced physical and sometimes sexual abuse, and could not attend school.<sup>198</sup> <sup>199</sup> It is unclear whether the practice continues, and there are no recent reports of child labor on jermals.

```
189 Ibid.
```

<sup>190</sup> Ibid.

<sup>191</sup> Ibid.

<sup>192</sup> Supra, note 5, 26.

Jodie Y. C. Lee, Stephanie Croft, and Tim McKinnel, Misery at Sea: Human Suffering in Taiwan's Distant Water Fishing Fleet (Taipei City: Greenpeace, 2018), 47, https://drive.google.com/file/d/1t34Yxi0dIXAFsdu-4IVk6PcbiyGVpHbA/view.

<sup>194</sup> Ibid.

<sup>195</sup> Ibid.

<sup>196</sup> Supra note 5, 26.

<sup>197</sup> United Nations Office on Drugs and Crime, Transnational Organized Crime in the Fishing Industry (Vienna: 2011), 48, https://www.unodc.org/documents/human-trafficking/Issue\_Paper\_-\_TOC\_in\_the\_Fishing\_Industry.pdf.

<sup>198</sup> Ibid.

<sup>199</sup> Supra, note 9, 35-36.

#### 2. The Legal Context in Indonesia

#### Forced Labor Legislation

Although Indonesia has not ratified C188, it has ratified a number of bilateral and multilateral treaties that pertain to forced labor, including ILO Forced Labor Convention (No. 029), <sup>200</sup> Abolition of Forced Labor Convention (No. 105), <sup>201</sup> and the UN Convention against Transnational Organized Crime (UNTOC19) and adjoining (Palermo) Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children, supplementing the United Nations Convention against Transnational Organized Crime. <sup>202</sup> In 2007, Indonesia enacted the Law of the Republic of Indonesia Number 21 Year 2007 on the Eradication of the Criminal Act of Trafficking in Persons (often referred to as the Indonesian 2007 Anti-TIP Law). <sup>203</sup>

The Anti-TIP Law focuses on in-country forced labor issues. Given that many Indonesian crew members find themselves in situations of forced labor on foreign vessels,<sup>204</sup> laws pertaining to the protection of Indonesian migrant workers are important to consider in the context of forced labor in the fishing industry. Migrant workers on foreign vessels fall (in part) under the jurisdiction of the Ministry of Manpower (MoM).<sup>205</sup> Law Number 18/2017 on the Protection of Indonesian Migrant Workers gives MoM the authority to regulate the placement of crew members on foreign fleets.<sup>206</sup>

#### C188 Gap Analysis

As this memo has outlined, because of the invisibility that being at sea allows, the nature of forced labor in fisheries is unique. And, according to a 2019 ILO gap analysis, Indonesia has a long way to go before achieving compliance with C188.<sup>207</sup> Some of the important gaps in existing Indonesian legislation are that (1) "as a port State, Indonesia does not have clear legislation or policies that enable it to inspect foreign-flagged fishing vessels in its ports in order to assess living and working conditions on board";<sup>208</sup> (2) MMAF regulations exempt "cases where the fishing vessel owner is the captain of the vessel, regardless of the size of the vessel itself"; (3) recruiters, vessel owners, and captains "do not have clearly delineated responsibilities";<sup>209</sup> and (4) regulations on hours of rest, medical care, and occupational safety and health are below C188 standards for certain types of vessels.<sup>210</sup> The most significant gaps in Indonesian legislation, however, are the

```
200 Ratified on June 12, 1950.
```

- 204 Ibid.
- 205 Ibid.

- 208 Ibid., 4.
- 209 Ibid., 7.
- 210 Ibid., 7.

<sup>201</sup> Ratified on June 7, 1999.

<sup>202</sup> Ratified on September 28, 2009.

<sup>203</sup> Supra, note 9, 26.

<sup>206</sup> Law of the Republic of Indonesia Number 18 of 2017 on Protection of Indonesian Migrant Workers, 2017, https://asean.org/stor-age/2016/05/Law-of-Indonesia-No-18-of-2017-on-Protection-of-Indonesian-Migrant-Workers.pdf.

<sup>207</sup> International Labour Organization, Indonesia and the Work in Fishing Convention, 2007 (no. 188): A Comparative Analysis (2019), https://ilo.userservices.exlibrisgroup.com/discovery/delivery/4IILO\_INST:4IILO\_V2/1267878900002676.

overlap and contradictions between different ministries and regulations on the topic of forced labor in fisheries; this problem is discussed in more depth below.

#### Overlaps and Contradictions in Authority and Regulation

Overlaps and contradictions allow Indonesian workers to fall through the cracks as they try to navigate the convoluted set of regulations and as recruitment agencies seek shortcuts to avoid jumping through seemingly endless bureaucratic hoops, which creates an environment that is highly susceptible to forced labor.<sup>211</sup> As it stands, the protection of Indonesian fishers (be they working domestically or employed as migrants on foreign fleets) falls under the jurisdiction of four different ministries and agencies: the Ministry of Transportation (MoT), MMAF, MoM, and BNP2TKI (see Tables 2 and 3).<sup>212</sup> The next few paragraphs delve more deeply into some of the ways in which these agencies overlap or contradict each other, outlining why these overlaps and contradictions are problematic.

Table 2. Governance Bodies with Authority over Fishers in Indonesia

Name	Notes
Ministry of Transportation (MoT)	Issues regulation on transportation, which includes fishing activities.
Ministry of Manpower (MoM)	Issues regulation on labor migration and monitors training centers for overseas workers owned by private recruitment agencies through its Directorate of Employment Observation.
Ministry of Maritime Affairs and Fisheries (MMAF, sometimes referred to as KKP)	Develops marine affairs and fisheries policy and supervises fisheries activity. Provides technical support at national and regional level.
Presidential Task Force to Combat Illegal Fishing (Task Force 115)	Led by former Maritime Affairs and Fisheries Minister Susi Pudjiastuti. Implements operations to fight IUU fishing and coordinate data collection needed for law enforcement. Uses operational equipment from, among others, the Ministry of Maritime Affairs and Fisheries, the Indonesian Air Force, the Indonesian National Police, the Attorney General Office, and the Maritime Security Board.
National Board for the Placement and Protection of Indonesian Overseas Workers (BNP2TKI)	Implements regulations created by the Ministry of Manpower.
Directorate General of Sea Transportation	Enacts regulation on sea transportation, including fishing.

An increase in the number of Indonesian fishers found to be in exploitative working conditions on foreign fishing vessels between 2011 and 2015 led BNP2TKI to put in place Regulation No. 3/2013 on the Management of Placement and Protection of Indonesian Fisherman in Foreign Vessels. BNP2TKI Regulation No. 3/2013 outlines the procedure for the placement of Indonesian workers on foreign fishing vessels. The law stipulates that placement must occur through the Indonesian Fisherman Placement Agency (P4TKI). Moreover, to ensure monitoring by BNP2TKI, Regulation No. 3/2013 requires that Indonesian workers on foreign fishing vessels apply for an Indonesian Migrant Worker Card (KTKLN). Technically, the MoM creates policy on the placement and protection of migrant workers and BNP2TKI implements these policies. In practice, however, the jurisdictional separation is vague, which leads to legal uncertainty. Government Regulation (Presidential Regulation) Number 7 Year 2000 on Seamanship, which regulates the occupational protection for seafarers, only adds to the confusion.

The MoT's Ministerial Regulation No. 84/2013 on the Recruitment and Placement of Seafarers directly overlaps with and in certain respects contradicts BNP2TKI Regulation No. 3/2013.<sup>219</sup> For instance, MoT Regulation No. 84/2013 requires a seafarer candidate to prepare a Seaman's Book and Seafarer Identity Document but not a KTKLN.<sup>220</sup> The MoT regulation also stipulates that recruitment agencies need a license from the MoT in addition to the license already required by BNP2TKI.<sup>221</sup> The Directorate General of Sea Transportation, which falls under MoT, also has the authority to enact policies on sea transportation, which includes fishing.<sup>222</sup> Both of these BNP2TKI and MoT regulations also overlap with the MoM, which technically has the authority to regulate seafarers, who are considered migrant workers under Law No. 18/2017 (previously Law No. 39/2004).<sup>223</sup> To complicate the situation further, all three of these overlap with the MMAF, which has the authority to regulate fishers.<sup>224</sup> While MMAF requires fishers to complete a Basic Security Training for Fisherman (BST-F), MoT also requires fishers to complete a more general Basic Security Training (BST).<sup>225</sup>

In summary, as outlined in a joint report by IOM, MMAF, and Coventry University, "overlapping Indonesian government legislation and regulations has created confusion over the responsibilities of key government bodies responsible for the oversight of worker recruitment, conditions,

- 213 Ibid. 104.
- 214 Ibid. 104.
- 215 Ibid. 104.
- 216 Ibid. 106.
- 217 Ibid. 106.
- 218 International Labour Organization, Government Regulation on Seamanship (no. 7/2000) (2000), https://www.ilo.org/dyn/natlex/natlex4. detail?p\_lang=en&p\_isn=56626&p\_country=IDN&p\_count=611&p\_classification=18&p\_classcount=7.
- 219 Supra, note 9, 108.
- 220 "Regulation of the Minister of Transportation Number PM 84 2013," 2013, https://www.global-regulation.com/translation/indone-sia/7204772/regulation-of-the-minister-of-transportation-number-pm-84-2013.html.
- 221 Supra, note 9, 105.
- 222 Ibid., 106.
- 223 Government of Indonesia, Initial Report of the Republic of Indonesia on the Implementation of the International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families Pursuant to the Simplified Reporting Procedure (2017), https://tbinternet.ohchr.org/Treaties/CMW/Shared%20Documents/IDN/CMW\_C\_IDN\_1\_6902\_E.pdf.
- 224 Supra, note 9.
- 225 Ibid., 105.

and monitoring of fishing companies, manning agencies, and fishing vessels."<sup>226</sup> If Indonesia were to ratify C188, it would need to account for this confusion, clarifying the authority of different ministries and redesigning or updating obsolete, contradictory, or overlapping policies. Additionally, the Indonesian government should implement policies that recognize that Indonesian fishers can end up in situations of forced labor in domestic fleets as well as in foreign fleets. Moreover, to be in compliance with C188, the government will also need to enact legislation that protects non-Indonesian workers on foreign and Indonesian boats fishing in the Indonesian EEZ and on Indonesian boats fishing in the high seas or in foreign waters. On a hopeful note, Indonesia works closely with ILO on a host of other issues,<sup>227</sup> and collaboration on C188 might be more likely after the recent coverage mentioned above of Indonesian workers in situations of forced labor on Chinese vessels.<sup>228</sup>

Table 3. National Legislation Pertaining to Work in Fishing Indonesia

Regulation	Governing Body
Law of the Republic of Indonesia Number 21 Year 2007 on the Eradication of the Criminal Act of Trafficking in Persons (Indonesian 2007 Anti-TIP Law)	GOI
Law Number 18/2017 on Protection of Indonesian Migrant Workers (Law No. 18/2017)	MoM
Government Regulation (Presidential Regulation) Number 7 Year 2000 on Seamanship	GOI
Ministerial Regulation (Ministry of Transportation) Number 84 Year 2013 on Mechanisms of the Recruitment of Seafarer	МоТ
Head of BNP2TKI Regulation Number 03/KA/1/2013 on the Mechanism of Placement and Protection of Indonesian Fishers on Foreign Fishing Vessel	BNP2TKI
Head of BNP2TKI Regulation Number 12/KA/IV/2013 on the Mechanism of Recruitment and Placement and Protection of the Seafarer on Foreign Vessel	BNP2TKI
Minister of Marine Affairs and Fisheries Regulation Number 35-year 2015 on the Fisheries Human Rights System and Certification	MMAF

<sup>226</sup> Ibid., xii.

<sup>227</sup> Supra, note 13.

<sup>228</sup> For further information regarding Indonesian workers in situation of forced labor on Chinese vessels, please see Dian Septiari, "Sailors' Deaths Highlight Lack of Legal Protections for Migrant Workers," *The Jakarta* Post, May 10, 2020, https://www.thejakartapost.com/news/2020/05/10/sailors-deaths-highlight-lack-of-legal-protections-for-migrant-workers.html.

## 3. Indonesia Country Findings

## IUU Fishing and Forced Labor: Task Force 115

Since ratifying the PSMA in 2016,<sup>229</sup> Indonesia has taken a strong stance against IUU fishing by foreign vessels in its EEZ. Some of the policies the MMAF put in place to address IUU fishing had spillover effects on forced labor. For instance, former Minister of Maritime Affairs and Fisheries Susi Pudjiastuti instituted the Task Force to Combat Illegal Fishing (Task Force 115). Although the task force was created to address IUU fishing, on July 2016 members of Task Force 115 apprehended perpetrators of human trafficking on board a Chinese fishing boat operating in Iran.

Moreover, before the end of her tenure, Minister Susi sought to implement MMAF Ministerial Regulation No. 35/PERMEN-KP/2015 on System and Certification of Human Rights in the Fishing Industry. The goal of this regulation is to make compliance with human rights protection standards—which include on work health and safety, recruitment, and security<sup>230</sup>—a prerequisite for obtaining a fishing business permit and fish capture permit.<sup>231</sup> Regulation No. 35/PERMEN-KP/2015 aims to "ensure respect for human rights in the fisheries sector of the parties associated with the fishery business activities, including the crew of fisheries and public interest."<sup>232</sup> Although nominally implemented in 2017, its implementation and effectiveness in practice are limited, according to NGO comments in a Seafish Insight report.<sup>233</sup> In 2016, MMAF also drafted a regulation on work agreements aimed at standardizing work contracts for Indonesian fishers working on both domestic and foreign fishing vessels in Indonesian and international waters. Implementation of this regulation, however, also appears to be limited.

## Political Atmosphere: Economic Growth at All Costs

Part of the reason for the lagging implementation of these regulations is Indonesia's transition to a new administration, which, under the leadership of President Joko Widodo, has had a strong focus on economic growth.<sup>234</sup> This focus on economic growth has overshadowed many other goals to protect marine ecosystems and coastal communities, especially if these goals might threaten or hamper development. Given that trying to increase protection of Indonesian migrant workers or trying to curb forced labor in Indonesian fleets might hamper the productivity of the fishing sector, President Widodo's administration has moved away from some of the work Minister Susi began during her tenure.

<sup>229</sup> PSMA ratification progress information from Pew Charitable Trusts [database online], https://www.pewtrusts.org/en/research-and-anal-ysis/data-visualizations/2014/psma.

<sup>230</sup> U.S. Department of State, 2018 Trafficking in Persons Report: Indonesia (2018), https://www.state.gov/reports/2018-trafficking-in-persons-report/indonesia.

<sup>231</sup> Supra, note 9, iv.

<sup>232</sup> Ministry of Maritime Affairs and Fisheries, "Ministerial Regulation No. 35/PERMEN-KP/2015 on System and Certification of Human Rights in the Fishing Industry," 2015, https://www.ecolex.org/details/legislation/ministerial-regulation-no-35permen-kp2015-on-system-and-certification-of-human-rights-in-the-fishing-industry-lex-faoc165178.

<sup>233</sup> Seafish Insight, Analysis of Fishing References in 2019 Trafficking in Persons (TIP) Report (2019), 5, https://seafish.org/media/Publications/SeafishInsight\_TIP2019\_FishingReferences.pdf.

<sup>234</sup> Basten Gokkon, "Indonesia' Ex-Fisheries Minister Susi Pudjiastuti Leaves Big Shoes to Fill," Mongabay, October 24, 2019, https://news.mongabay.com/2019/10/indonesias-ex-fisheries-minister-susi-pudjiastuti-leaves-big-shoes-to-fill.

In particular, President Widodo's proposed omnibus laws would replace 82 laws that previously hampered business in an effort to improve the investment climate and create jobs in Indonesia. This omnibus bill would ease environmental and labor regulations, allowing for greater resource exploitation and foreign workers from select professions to enter Indonesia without a permit. Further, requirements on outsourcing employees and adhering to minimum wages in labor-intensive industries would be relaxed. The omnibus laws are largely protested against by labor unions, students, and activists, stating the bill could potentially reduce their rights, remuneration, and job security. President Widodo aims to have the omnibus bill pass next year. Security 238

Even during Minister Susi's tenure, MMAF focused mostly on IUU fishing and forced labor issues on foreign vessels fishing in Indonesian waters.<sup>239</sup> It seems there was a general reluctance within the Indonesian government to address forced labor (and IUU fishing) in its own fleet, which faces almost no regulation at all within the Indonesian EEZ because of Indonesia's de facto policy of open access fisheries.<sup>240</sup> Although no research has been done on this topic, given the link between overfishing and forced labor, the Government of Indonesia's (GOI) lack of regulation of its own fleets might actually exacerbate the issue of forced labor in the long term due to declining fish stocks.

#### Capacity and Resource Limitations

Finally, although it seems there is some political willingness and public pressure to better protect Indonesian migrant workers, including fishers, capacity and resource limitations have hampered the GOI's efforts to address these issues.<sup>241</sup> The recent coverage of the 18 Indonesian migrant workers on Chinese-flagged vessels offered hope that the GOI might mobilize on the issue of protecting migrant fishers.<sup>242</sup> Prior to its announcement of a potential moratorium on migrant workers crewing on foreign vessels and a plan to reexamine the whole recruitment system (which, if these announcements actually translate into action, provide some hope for positive change), the GOI's response so far has been to begin investigations into the deaths and allegations of human rights violations and claim that if it is found that violations were committed, the GOI will ask the Chinese government to take prosecutorial action.<sup>243</sup> Given that China, at least given its record thus far, does not seem to care about forced labor issues in its fisheries, GOI will need to do more if it truly wishes to protect its workers in the future.

- Gayatri Suroyo, "Explainer: Indonesia Bets on 'Omnibus Laws' to Fix Investment Climate," Reuters, December 12, 2019, https://www.reuters.com/article/us-indonesia-economy-laws-explainer/explainer-indonesia-bets-on-omnibus-laws-to-fix-investment-climate-idUSKB-N1YG15Y.
- 236 Esther Samboh, "Guide to Omnibus Bill on Job Creation: 1,028 Pages in 10 Minutes," The Jakarta Post, February 21, 2020, https://www.theja-kartapost.com/news/2020/02/21/guide-to-omnibus-bill-on-job-creation-1028-pages-in-8-minutes.html.
- 237 Ibid.
- 238 Ibid.
- 239 Supra, note 13.
- 240 California Environmental Associates, Trends in Marine Resources and Fisheries Management in Indonesia (San Francisco: 2018), 9, https://www.ceaconsulting.com/wp-content/uploads/Indonesia-Report-Executive-Summ-6.26-1.pdf.
- 241 Supra, note 9
- 242 Ratu Ayu Asih Kusuma Putri, "The Factors Behind the Disturbing 'Burial at Sea' of Indonesian Migrant Fishers," The Diplomat, May 11, 2020, https://thediplomat.com/2020/05/the-factors-behind-the-disturbing-burial-at-sea-of-indonesian-migrant-fishers.
- 243 Ibid.

#### G. Conclusion

Both Fiji and Indonesia grapple with a high prevalence of forced labor in their waters and among their citizens on board distant water fishing vessels. Indonesia is the largest source state for fishers, and Fiji is one of the top five transit states for fishing crews. Their enormous EEZs and highly productive fishing grounds make them target locations for distant water fishing vessels. Neither country has ratified C188, but both seek to address forced labor in fisheries through national or regional approaches. Within the last year, Fiji enacted the FFA's Crewing MTCs to ensure that vessels fishing within its EEZ abide by minimum labor standards. These provisions also protect Fijian crew employed on these foreign and domestic fleets. While local officials seem eager to address this issue, it is still too early to assess how effectively Fiji actually implements these provisions. Indonesia is focused on protecting Indonesian fishers on board foreign fishing fleets and assisting migrant workers on foreign-flagged ships within its waters. However, gaps in the national legislation on required working and living conditions for fishers, overlapping roles from relevant ministries, and the current administration's focus on economic development have limited Indonesia's progress in effectively addressing this issue.

This report builds a foundation for scoping out the depth and breadth of the problem in each country, exploring what methods have or have not been effective for addressing forced labor in fisheries and identifying emerging trends between Fiji and Indonesia. Our first three findings highlight strategies undertaken with some effect or potential, and the latter three focus on gaps in existing research. Our research has explored how policy levers have been or could be pulled at the domestic, regional, and international levels to address forced labor in fisheries. While not sufficient to solve the issue on their own, legal and policy frameworks are certainly necessary. As other factors such as market structures and public awareness start to align and the system begins to work, legal mechanisms must exist to effectively hold people accountable.

To end, we would like to highlight the fact that this report (and this research space in general) is missing the voices of workers. As mentioned previously, data on forced labor in the fishing industry is already scarce. Worker voices are even more so, in part due to remoteness of the jobs, language barriers, and a general lack of representation. Throughout our research, we were not able to talk to any individuals working in this industry and we must acknowledge that our findings are lacking their perspective.

"Slavery is a harsh reality that our better angels would like to think ended two centuries ago when many countries passed laws against such bondage within their borders. But this sort of bondage is a global blind spot, because governments, companies, and consumers either don't know it occurs or, when they do, prefer to look the other way."



Ian Urbina, author of The Outlaw Ocean

#### H. Areas for Future Research

#### 1. South Africa

South Africa would be an interesting country to study further because of its importance as a port state. South Africa does not have a large distant water fishing fleet. Most of its fishing happens in its own EEZ and is highly regulated. In 2019, their fisheries produced \$US500 million in exports, a relatively small sum when compared to countries like China or Taiwan. However, alongside China and Taiwan, South Africa is one of the top three most important port states in the world. Over the last few decades, the South African government has tightly monitored and managed its fisheries to protect declining fish stocks. They are deliberate in their distribution of fishing licenses and have only a few bilateral fishing agreements. Moreover, they have ratified C188, Other PSMA, Other and CTA. Still, there have been instances of forced labor within their EEZ.

Moreover, Cape Town is an important transit port for migrant fishers. In 2019, South Africa received a Tier 2 Watchlist rating on the US TIP Report, in part due to the fact that an estimated 10 to 15 victims of labor trafficking on fishing vessels disembark in the port of Cape Town each month.<sup>249</sup> Moreover, there were reports of abuse among the more than 7,000 Indonesian fishers who sign in and out of foreign fishing vessels in Cape Town each year.<sup>250</sup> Understanding how South Africa is harnessing C188 and CTA and implementing national legislation to address these issues would be informative. In addition, it seems South Africa is leading the charge in terms of fisheries management on the African continent; delving into whether this is the case with forced labor issues too would be interesting.

#### 2. Taiwan

Taiwan will present an interesting case study for future research because of its status among other states and international organizations. Due to relations with China, Taiwan is not a member of the United Nations and has no representation within UN bodies. Despite having little to no voice in the international system, Taiwan has the second largest distant water fishing fleet in the world with more than 2,000 vessels. Reports have also documented issues of forced labor and IUU fishing on these Taiwanese-flagged vessels. In 2020, US Customs and Border Protection issued a WRO against seafood products from the Yu Long No. 2, a Taiwanese-flagged fishing

- 244 List of importing markets for a product exported by South Africa; product: 03 fish and crustaceans, mollusks and other aquatic invertebrates in International Trade Center [database online], 2019, trademap.org.
- 245 Supra, note 11.
- 246 Ratified on 6/20/2013.
- 247 Ratified on 2/16/2016.
- 248 Ratified on 8/19/2016, with 151 vessels.
- 249 Seafish Insight, Analysis of Fishing References in 2019 Trafficking in Persons (TIP) Report (2019), 5, https://seafish.org/media/Publications/ SeafishInsight\_TIP2019\_FishingReferences.pdf.
- 250 Ibid
- 251 Taiwan Fisheries Agency, "Overview of the Fisheries," 2015, https://www.fa.gov.tw/en/FisheriesoROC/content.aspx?id=2&chk=05d9ffd2-65 1d-4686-a2d1-a44413152366&param=pn%3D1#:~:text=Having%20a%20fleet%20of%20more,of%20some%2026%20coastal%20countries.

vessel.<sup>252</sup> Any merchandise made wholly or partially with fish harvested from this vessel will be detained at the border. This withhold release comes after evidence of forced labor aboard this fishing vessel. Taiwan also received an EU yellow card in 2015 for evidence of IUU fishing.<sup>253</sup> Trade restrictions like this have been used before to address IUU fishing; however, there is now potential for a similar strategy to be used to address forced labor issues.

The Fuh Sheng No. 11, another Taiwanese-flagged vessel, was also detained by the South African Maritime Safety Authority after labor abuses were reported by the Indonesian consulate. This ship is the first to be detained under C188; however, the ship was released shortly after.<sup>254</sup> In response, the Taiwanese government issued a fine and a 5-month suspension of the vessel's fishing license. More research into Taiwan is needed to understand whether they are operationally responding to crimes on their distant water fishing fleets and how domestic changes could potentially crack down on forced labor.

<sup>252</sup> U.S. Customs and Border Protection, "CBP Issues Detention Order on Seafood Harvested with Forced Labor," May 11, 2020, https://www.cbp.gov/newsroom/national-media-release/cbp-issues-detention-order-seafood-harvested-forced-labor.

<sup>253</sup> Sean Murphy, "EU Gives Yellow Card to Taiwan," Seafood Source, October 1, 2015, https://www.seafoodsource.com/news/environment-sustainability/eu-gives-yellow-card-to-taiwan.

<sup>254</sup> World Fishing and Aquaculture, "Illegal Activity on Taiwanese Vessel Highlighted," September 17, 2018, https://www.worldfishing.net/news101/industry-news/illegal-activity-on-taiwanese-vessel-dismissed.



117 The Outlaw Ocean

# SUPPLEMENTAL RESEARCH

#### I. INTRODUCTION

In preparation for the Outlaw Ocean course, during the Winter Quarter 2020, three students conducted directed research on key topics in maritime law, illegal fishing, and human rights. Their research helped the teaching team work with the clients to identify the research questions for the course. Their papers are included in this section.

Xiao Wang researched the history of China's distant water fishing fleet from industry emergence to present day. He investigated the policies, laws, and enforcement structures developed to manage such a profitable and expansive industry, paying particular focus to recent anti-IUU measures and potential reasons for policy reform.

Hai Jin Park explored issues of data-sharing as a means of combatting IUU fishing through a case study on South Korea. Her research investigates the restrictions placed on sharing of location-monitoring data in the fisheries sector, as well as South Korea's policy interests that have the potential to lead to more transparency in the industry.

Shalini Iyengar investigated two possible business-side approaches to the challenge of forced labor. Her first paper is an exploration of corporate liability for human rights abuses in the fisheries sector; the second is a brief note on ways that the insurance system can help to regulate fishing vessel owners and companies.

## II. DISTANT WATER FISHING IN CHINA

Xiao Wang

#### **Contents**

A. INTRODUCTION	
B. EVOLUTION OF CHINA'S DISTANT WATER FIS	SHING INDUSTRY118
C. POSSIBLE REASONS BEHIND THE POLICY SH	IIFT125
D. ONGOING REFORMS	128
E. CONCLUSION	133

## A. Introduction

China has the largest and most productive distant water fishing fleet in the world. The sheer size of China's distant water fishing industry and the magnitude of its environmental impacts have drawn global attention. Numerous media reports have blamed Chinese distant water fishing vessels for depleting fisheries resources of coastal countries and the high seas. In contrast, there is a lack of understanding about the development of this industry and China's policies and legal regimes to manage it. This article is intended to fill up the lacuna. For this purpose, the article is structured as follows: in the first step, I will analyse the development of the industry from the founding of the People's Republic of China to the present and identify the policy shift in recent years; in the second step, I will discuss potential reasons for this policy shift; and in the last part, I will shed light on fishing measures intended to combat illegal, unreported, and unregulated (IUU) fishing in the ongoing reform incurred by the policy shift.

# B. Evolution of China's Distant Water Fishing Industry

After suffering from one century of foreign invasions and three decades of brutal civil war, China was one of the most impoverished countries in 1949. In the following seven decades, China has been transformed to a global economic and political superpower. During this transition, China's fishing industry also has undergone significant changes. Scholars have already reviewed and summarized the evolution of China's management practices of its domestic marine fishing industry. Nevertheless, because of its international nature and technical characteristics, the distant water fishing industry is distinct from its domestic counterpart. Moreover, due to limited availability of information regarding the industry, it remains unknown to the outside world. Therefore, this sub-section aims to provide a comprehensive review of the industry's evolution in the past seven decades.

<sup>1</sup> Shu Su et al., "Evolution of Marine Fisheries Management in China from 1949 to 2019: How Did China Get There and Where Does China Go Next?," Fish and Fisheries 21, no. 2 (2019), 435-51.

#### 1. Nonexistence from 1949 to 1971

Since the establishment of the People's Republic of China, recovery and development of the economy became a national priority.<sup>2</sup> Driven by the economic concern, the Agricultural Ministry instructed local governments to promptly organize fishing activities and increase the supply of seafood to meet the basic food needs of the Chinese people.<sup>3</sup> Because China's rivers and offshore waters had abundant fisheries resources at that time and exploitation of such resources did not require high-level fishing skills, large monetary investments, and advanced fishing vessels, domestic fisheries were the focus.<sup>4</sup> China's distant water fishing industry was non-existent during this period.

#### 2. The Preparation Phase from 1972 to 1984

After the first two decades of exploitation of offshore fisheries, China's marine catch reached 2.658 million metric tons in 1972. Additionally, during the last period, Japanese motorized fishing vessels entered China's waters to conduct fishing activities. Fishing activities undertaken by Chinese and Japanese vessels resulted in the decline of some of China's offshore fisheries. Accordingly, a fishing license system was introduced in 1979 to restrict access to and conserve China's offshore fisheries. Also in 1979, China realized that distant water fishing would be an effective way to complement offshore fishing and obtain high-value seafood products. In 1980, China sent its first delegation to Australia, New Zealand, Kiribati, and the Solomon Islands with the purpose of learning distant water fishing vessels' operation in these countries' waters and establishing fishery cooperation relations. In 1984, China signed the first fishery agreement with Guinea-Bissau, which provided the legal basis for Chinese fishing vessels to enter West African waters.

<sup>2</sup> Yu Liu, "Mao Zedong and Recovery and Development of National Economy at the Early Stage of the People's Republic of China," *Inheritance and Innovation* 10, no. 59 (2009), 4-5. [in Chinese].

<sup>3</sup> Xiaohua Zhou and Mingshuang Li, "Recount the Past Sixty Years of China's Fisheries," China Fisheries 10, (2009), 4 [in Chinese].

<sup>4</sup> Zifei Liu et al., "Research on China's Conservation Policy for Offshore Fisheries in the New Era," Journal of Agricultural Science and Technology 20, no. 12 (2018), 2 [in Chinese].

<sup>5</sup> Supra, note 1, 438.

<sup>6</sup> Fucheng Bai et al., "Analysis of Sino-Japanese Fishery Resources Disputes and Cooperation Based on the Evolutionary Game Theory," World Agriculture 454, no. 2 (2017), 100-101 [in Chinese].

<sup>7</sup> Supra, note 1, 441.

<sup>8</sup> Shuolin Huang and Yuru He, "Management of China's Fisheries: Review and Prospect," Aquaculture and Fisheries 4, no. 5 (2019): 174.

<sup>9 1972</sup> Report by Agricultural Ministry to the State Council [in Chinese].

Huimin Shen, "The Fishery Report on Australia, New Zealand, Kiribati and Solomon Islands," Fisheries Science and Technology Information 6, (1980), 4-6 [in Chinese].

<sup>11 &</sup>quot;China and Guinea-Bissau Agreement on Co-operation in Fishing," signed August 28, 1984, UNTS 24822.

#### 3. The Initial Stage from 1985 to 1990

On March 10, 1985, the first Chinese distant water fishing fleet consisting of twelve fishing vessels and one reefer vessel began its voyage to West Africa.<sup>12</sup> At the end of this initial stage, the distant water marine catch reached 100,000 metric tons, the majority of which was from the West African waters.<sup>13</sup> Nevertheless, compared to 5.5 million metric tons of domestic marine catch, the scale of China's distant water fishing industry was still negligible.<sup>14</sup> During this period, China established fishery cooperation relations with twenty countries and sent nearly one hundred fishing vessels to foreign waters and high seas.<sup>15</sup> Moreover, China continued to strengthen its fishery management and conservation measures. In 1986, China enacted its first Fisheries Law, which established a basic fishery governance framework. Also, beginning in 1987, China implemented the Single Control Policy, which imposes a cap on the total horsepower of all marine fishing vessels.<sup>16</sup>

## 4. Rapid Development from 1991 to 1997

In 1991, China's distant water catch was 320,000 metric tons.<sup>17</sup> The number grew exponentially and reached 1.037 million metric tons in 1997.<sup>18</sup> At this stage, the majority of China's distant water vessels fished in foreign waters, and bottom trawling was the main fishing practice. Additional fishery cooperation relations were established between Mauritania, Morocco, the Marshall Islands, Papua New Guinea, Myanmar, and China. China began to explore the feasibility of fishing squid and tuna on the high seas. In 1993, China undertook its first expedition for squid resources in the northern Pacific Ocean and discovered the great potential of squid fishing.<sup>19</sup> In 1996, China decided to devote more resources to research on tuna fishing and started to negotiate with other countries to obtain more permits for China's vessels.<sup>20</sup> Moreover, the presence of China in international fishery governance became more visible. In 1996, China acceded to the International Convention for the Conservation of Atlantic Tunas and joined ICCAT, the regional fisheries management organization (RFMO) under the Convention.<sup>21</sup> In the same year, the UN Fish Stocks Agreement was signed by China.<sup>22</sup>

Meanwhile, to further conserve offshore fisheries, the Single Control Policy was replaced by the Double Control Policy, which mandated a limitation on both the total horsepower and the

- 12 Mingshuang Li, "Major Events of Distant Water Fishing from 1985-2015," China Fisheries 3, (2015), 19 [in Chinese].
- 13 Ibid.
- 14 Ibid.
- 15 Ibid.
- 16 Supra, note 1, 441.
- 17 The Fishery Bureau, 1991 China Fishery Yearbook (China Agriculture Press, 1991), 1 [in Chinese].
- 18 The Fishery Bureau, 1997 China Fishery Yearbook (China Agriculture Press, 1997), 2 [in Chinese].
- 19 Supra, note 12, 21.
- 20 Ibid.
- 21 "The International Convention for the Conservation of Atlantic Tunas," acceded to by the People's Republic of China on October 24, 1996, UNTS 673.
- 22 "The Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks," signed by the People's Republic of China on November 6, 1996, UNTS 2167.

number of motorized marine fishing vessels.<sup>23</sup> China sought to relieve unemployment pressure from the restriction of offshore fishing through distant water fishing.<sup>24</sup> Consequently, a license system was introduced for distant water fishing companies, and heavy subsidies and preferential tax treatment applied to licensed companies to encourage further development.<sup>25</sup>

#### 5. Restructuring from 1998 to 2016

Three characteristics defined the period from 1998 to 2016. First, China faced mounting economic pressure from restriction of offshore marine catch. With the entry into force of the United Nations Convention on the Law of the Sea (UNCLOS), overlapping claims of exclusive economic zones were created between China and neighboring countries. To prevent fishery disputes and to establish a new fishery order for stable exploitation and management of marine living resources, China undertook negotiations with Japan, Korea, and Vietnam. Under China-Korea and China-Japan fishery agreements, some traditional Chinese offshore fishery stocks were placed in exclusive economic zones of Japan and Korea. 26 Also, all three agreements imposed more stringent rules on fishing activities in so-called Provisional Measures Zones or Common Fishery Zones.<sup>27</sup> Accordingly, after these agreements took effect, Chinese fishermen's activities were restricted. The economic pressure was escalated by China's domestic marine policy as well. Because of decades of intensive exploitation and marine pollution, almost all of China's offshore fishery stocks collapsed. To tackle the collapse of these stocks, in 1999 China implemented Zero Growth, which requires the total catch by Chinese fishing vessels not to exceed that of the preceding year.<sup>28</sup> Soon afterward, in 2000 China replaced Zero Growth with Negative Growth and required that the annual marine catch should be reduced.<sup>29</sup> The economic pressure forced China's distant water fishing industry to increase its size and target higher-value marine species.

The second characteristic was that catch and its economic value from high sea fishing gradually overtook foreign water fishing and became the cornerstone of China's distant water fishing industry. For instance, in 2015, catch from high sea fishing was 1.557 million metric tons, the value of which reached 13.23 billion Chinese yuan.<sup>30</sup> In contrast, catch from foreign water fishing was only 634,000 metric tons and was worth 7.42 billion Chinese yuan.<sup>31</sup> Although foreign water fishing was negatively impacted by unilateral termination of the fishery agreement by Indonesia in that year, it was undeniable that high sea fishing constituted a new engine for China's distant

- 23 Zhuli Zhang et al., "Effectiveness and Advice Regarding China's Double Control Policy," China Fisheries 4, (2018), 34 [in Chinese]
- 24 Zhidong Liu et al., "Opportunities and Challenges Around China Distant Water Fishing Industry," Journal of Anhui Agricultural Sciences 24, (2014), 8474 [in Chinese].
- Tabitha Grace Mallory, "Fisheries Subsidies in China: Quantitative and Qualitative Assessment of Policy Coherence and Effectiveness," Marine Policy 68, (2016), 74-82.
- 26 Qiang Gao et al., "The International Law of the Sea's Impacts on China's Distant Water Fishing," Chinese Fisheries Economics 6, (2008), 81 [in Chinese].
- 27 Masahiro Miyoshi, "New Japan-China Fisheries Agreement, An Evaluation from the Point of View of Dispute Settlement," *Japanese Annual of International Law* 41, (1998), 37-39; Keyuan Zou, "Sino-Vietnamese Fishery Agreement for the Gulf of Tonkin," *The International Journal of Marine and Coastal Law* 17, no. 1 (2002), 134-6. Suk Kyoon Kim, "Illegal Chinese Fishing in the Yellow Sea: A Korean Officer's Perspective," *Journal of East Asia and International Law* 5, (2012), 459-64.
- 28 Supra, note 1, 441.
- 29 Ibid.
- 30 The Fishery Bureau, 2016 Report of China's Distant Water Fishing Industry Development, 4.
- 31 Ibid, 19.

water fishing industry. The success of high sea fishing should be attributed to China's efforts to ratify international fishery agreements and obtain membership of RFMOs. During this period, China acceded to the Agreement for the Establishment of the Indian Ocean Tuna Commission,<sup>32</sup> the Convention for the Establishment for an Inter-American Tropical Tuna Commission,<sup>33</sup> the Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean,<sup>34</sup> the Convention for the Conservation of Antarctic Marine Living Resources,<sup>35</sup> and the Convention on the Conservation and Management of High Seas Fishery Resources in the South Pacific Ocean,<sup>36</sup> and also ratified the Convention on the Conservation and Management of High Seas Fisheries Resources in the North Pacific Ocean.<sup>37</sup> The large-scale fishing fleets and booming seafood market afford China some leverage in negotiations about allocation of catch quotas within these RFMOs.<sup>38</sup> The membership of these RFMOs has opened the door for China to gain fishing quotas for Chinese fishing vessels.

<sup>32 &</sup>quot;The Agreement for the Establishment of the Indian Ocean Tuna Commission," acceded to by China on October 14, 1998, UNTS 1927.

<sup>33 &</sup>quot;The Convention for the Establishment for an Inter-American Tropical Tuna Commission," acceded to by China on November 14, 2003, UNTS 1041.

<sup>34 &</sup>quot;The Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean," acceded to by China on February 11, 2005, UNTS 2275.

<sup>35 &</sup>quot;The Convention for the Conservation of Antarctic Marine Living Resources," acceded to by China on September 8 2006, UNTS 1329.

<sup>36 &</sup>quot;The Convention on the Conservation and Management of High Seas Fishery Resources in the South Pacific Ocean," acceded to by China on July 6, 2013, UNTS 369.

<sup>37 &</sup>quot;The Convention on the Conservation and Management of High Seas Fisheries Resources in the North Pacific Ocean," ratified by China on November 28, 2014.

<sup>38</sup> Seafood Source, "China Increasingly Dominating Fishing Rule-Making," December 13, 2018, https://www.seafoodsource.com/news/sup-ply-trade/china-increasingly-dominating-fishing-rule-making.

Table 1. 2005-2018 Distant Water Fishing Statistics<sup>39</sup>

Year	Total Distant Water Fishing Catch (Metric Tons)	Catch Shipped Back to China (Metric Tons)	Catch Sold Overseas (Metric Tons)
2005	1,438,084	921,802	516,282
2006	1,090,663	608,435	482,228
2007	1,075,151	585,540	487,422
2008	1,083,309	626,069	457,240
2009	977,226	479,413	497,813
2010	1,116,358	605,344	511,014
2011	1,147,809	634,013	513,796
2012	1,223,441	722,406	501,035
2013	1,351,978	809,446	542,532
2014	2,027,318	1,343,327	683,991
2015	2,192,000	1,406,158	785,842
2016	1,987,512	1,103,772	883,740
2017	2,086,200	1,236,247	849,953
2018	2,257,000	1,462,344	795,106

The last characteristic of this period was that the distant water fishing industry, formerly dominated by state-owned companies, has been changed to an industry largely owned by private companies.<sup>40</sup> The majority of licensed distant water fishing companies were private,<sup>41</sup> and 70% of the industry was owned by these companies.<sup>42</sup> An illustrative example of this transformation is the Hong Dong Fishery Corporation, a private company headquartered in Fujian Province, which built China's largest overseas fishing base in Mauritania. The base has 1,400 African employees and 100 fishing vessels.<sup>43</sup> Some state-owned companies continue to play an important role. For instance, China National Agricultural Development Group contributes to nearly 10% of the total annual distant water catch.<sup>44</sup> Nevertheless, China has less control over its distant water fishing

<sup>39</sup> Statistics of each year are from China Fishery Yearbook published in that year.

<sup>40</sup> Tabitha Grace Mallory, "China's Distant Water Fishing Industry: Evolving Policies and Implications," Marine Policy 38, (2013), 101.

<sup>41</sup> Supra, note 31, 69-74.

<sup>42</sup> Supra, note 40.

<sup>43</sup> Fuzhou News, "The Largest Oversea Fishing Base was Made by Fuzhou" December 11, 2016, http://www.taihainet.com/news/fujian/szij/2016-12-11/1922019.html [in Chinese].

<sup>44</sup> The Fishery Bureau, 2017 China Fishery Yearbook (China Agriculture Press, 2017), 46 [in Chinese].

activities because of the burgeoning growth of private companies. Some private companies have directly negotiated with coastal states in West Africa to obtain preferable treatment over local regulations, without the involvement of Chinese government.<sup>45</sup>

By the end of 2016, there were 162 distant water fishing companies and nearly 2,900 distant water fishing vessels, 1,329 of which were high sea fishing vessels.<sup>46</sup> These fishing vessels were engaging in longline, trawling, and purse seine fishing in waters of 42 countries and regions and the Pacific Ocean, the Indian Ocean, and the Atlantic Ocean.<sup>47</sup>

#### 6. Building a Responsible Distant Water Fishing Power from 2017 to the Present

In February 2017, the Agricultural Ministry published the 13th Five-Year Plan of National Fisheries Development from 2016-2020 (the Fisheries Plan).<sup>48</sup> Under the Fisheries Plan, the first fundamental principle governing fisheries development is to "pursue ecological integrity and promote sustainable development," which calls for the change of development focus from growing quantity to improving quality and efficiency of fisheries.<sup>49</sup> Another fundamental principle in the Fisheries Plan is that a Go Global strategy should be adhered to. Based on this principle, China's distant water fishing industry should develop orderly, and bilateral processes, and multilateral fishery cooperation should be strengthened.<sup>50</sup>

In light of the Fisheries Plan, the Agricultural Ministry later issued the 13th Five-Year Plan of Distant Water Fishing Industry from 2016 to 2020 (the Distant Water Plan).<sup>51</sup> Pursuant to the Distant Water Plan, the Chinese distant water fishing industry should balance exploitation of marine living resources with conservation of such resources and should adopt environmentally friendly fishing methods and reduce negative impacts of fishing on the marine environment.<sup>52</sup> Moreover, according to the Distant Water Plan, China should consolidate the regulatory and legal system of distant water fishing and strengthen monitoring and enforcement measures, thereby improving its ability to fulfill international obligations.<sup>53</sup> Finally, under the Distant Water Plan, China hopes to establish itself as a responsible distant water fishing power through the implementation of a Zero Tolerance Policy for (IUU) fishing activities.<sup>54</sup>

- 49 Ibid.
- 50 Ibid.
- 51 Supra, note 46.
- 52 Ibid.
- 53 Ibid.

<sup>45</sup> China Dialogue, "China's Distant Water Fishing Fleet Growing Unsustainably," December 6, 2016, https://chinadialogueocean.net/594-chinadistant-water-fishing-fleet.

<sup>46</sup> The Agricultural Ministry, "The 13th Five-Year Plan of Distant Water Fishing Industry from 2016 to 2020," China Fisheries 1, (2018), 5 [in Chinese].

<sup>47</sup> Ibid.

The Agricultural Ministry, "The 13th Five-Year Plan of National Fisheries Development from 2016 to 2020," February 20, 2017, http://www.moa.gov.cn/nybgb/2017/derq/201712/t20171227\_6131208.htm [in Chinese].

<sup>54</sup> Kangzheng Yu (Vice Minister of Agriculture), "Interpretation of the 13th Five-Year Plan of Distant Water Fishing Industry from 2016 to 2020," China Fisheries 1, (2018), 4 [in Chinese].

Following the two aforementioned guidance documents, China has initiated amendment procedures for its fisheries law and relevant administrative regulations of distant water fishing to solidify the aforementioned fundamental principles. Many anti-IUU fishing policies have been introduced. Section C will delineate the details of China's ongoing reform regarding its distant water fishing activities.

## C. Possible Reasons behind the Policy Shift

China has the largest distant water fishing fleet in the world, and Chinese vessels represent a significant portion of global fishing efforts on the high seas and exclusive economic zones. As a flag state, China has the obligation to effectively exercise its jurisdiction and control over distant water fishing vessels flying the Chinese flag and the responsibility to ensure that its nationals and fishing vessels comply with conservation measures and regulations established by coastal states and RFMOs.<sup>55</sup> Nevertheless, China has been accused of imposing a very low level of oversight on the Chinese-flagged fleet in distant waters to allow its vessels to catch more fish.<sup>56</sup> With the introduction of Building a Responsible Distant Water Fishing Power Policy<sup>57</sup> after 2017, a question arises as to why China is willing to sacrifice its economic interests to protect the marine environment and biodiversity of the high seas and other countries' exclusive economic zones. This part attempts to give an answer to this question.

## 1. Frequent and High-Profile Cases of Illegal Fishing

Although China has significantly improved its cooperation track record after joining several RFMOs ,<sup>58</sup> its distant water fishing vessels have still been found to participate in IUU fishing activities on the high seas. In 2014, two RFMOs, namely the Western and Central Pacific Fisheries Commission (WCPFC) and the International Commission for the Conservation of Atlantic Tunas, reported that China had breached the catch quotas in a number of years.<sup>59</sup> Based on the information provided by the two RFMOs, in the years 2005, 2006, 2007, 2009, 2010, and 2012, the catch of bigeye and yellowfin tuna by Chinese fishing vessels was in excess of the quotas allocated to China.<sup>60</sup>

Chinese distant water fishing vessels have frequently been involved in IUU fishing in foreign waters. According to the data supplied by the Surveillance Operations Coordination Unit of the Sub-Regional Fisheries Commission, in six West African countries' waters (Gambia, Guinea, Guinea-Bissau, Mauritania, Senegal, and Sierra Leone), during the periods from 2000 to 2006 and from 2011 to 2013, there were 183 cases of IUU fishing involving Chinese vessels.<sup>61</sup> Greenpeace's

<sup>55</sup> Valentin Schatz, "Fishing for Interpretation: The ITLOS Advisory Opinion on Flag State Responsibility for Illegal Fishing in the EEZ," Ocean Development & International Law 47, no. 1 (2016), 329-34.

<sup>56</sup> Stimson Center, Shining a Light: The Need for Transparency Across Distant Water Fishing (November 1, 2019), 23-4.

<sup>57</sup> Supra, note 54.

<sup>58</sup> The Directorate General for Internal Policies, The Role of China in World Fisheries (European Parliament, 2012), 13.

<sup>59</sup> China Dialogue, "Chinese Tuna Firm Admits Companies Have Breached Quotas for Years," September 30, 2014, https://www.chinadialogue.net/article/show/single/en/7362-Chinese-tuna-firm-admits-companies-have-breached-quotas-for-years.

<sup>60</sup> Ibid.

<sup>61</sup> Greenpeace, Investigating Chinese Companies' Illegal Fishing Practices in West Africa (May 2015), 16.

investigation in 2014 revealed that an average of one new Chinese IUU fishing case was identified every two days. $^{62}$ 

Besides the frequency, some cases of IUU fishing were very high profile and had profound implications. On August 13, 2017, Fu Yuan Yu Leng 999, a Chinese fishing vessel, was arrested by Ecuadorian authorities in waters near the Galapagos Islands for an illegal catch of 300 metric tons of endangered species, including 6,623 sharks.<sup>63</sup> This incident had global media reach and spurred protests against China in Ecuador.<sup>64</sup> On March 15, 2016, after repeated warnings, the Argentine Coast Guard opened fire on and sank Lu Yan Yuan Yu 010, another Chinese fishing vessel, in Argentina's exclusive economic zone.<sup>65</sup> Argentina claimed that the fishing vessel turned off its AIS while fishing inside Argentina's territorial waters.<sup>66</sup> This rare use of force caught the attention of managers and officials in the global fishing community.

Casualties occasionally occur in conflicts between foreign coastal guardsmen and Chinese fishermen, as was the case in December 2011, when a Chinese fisherman stabbed a Korean coast guardsman to death. Conflicts also sometimes appear between Chinese fishermen and local fishermen when Chinese vessels deplete all local fisheries and force local fishermen out of business. Such conflicts and causalities can result in civilian antagonism and spark diplomatic crisis between China and foreign countries. Because distant water fishing is an important element of the Belt and Road Initiative, a global infrastructure investment strategy adopted by China in 2013, the diplomatic crisis from fishing activities might jeopardize the initiative. Moreover, high-profile cases of IUU fishing have tarnished China's image on the international stage, prompting China to take a tougher stance on IUU fishing.

## 2. Higher Requirements by RFMOs and Coastal States

Based on the UNCLOS, the UN Fish Stocks Agreement requires coastal countries and countries with flagged vessels fishing on the high seas to cooperate to ensure the conservation and optimal sustainable yield of straddling and highly migratory fish stocks. <sup>69</sup> According to the UN Fish Stocks Agreement, RFMOs are the primary mechanisms for countries to cooperate, and conservation measures adopted by RFMOs should be followed by countries. <sup>70</sup> Each RFMO is different because

- 62 Ibid, 19.
- 63 Reuters, "Ecuador Jails Chinese Fishermen Found with 6000 Sharks," August 28, 2017, https://www.reuters.com/article/us-ecuador-environment-galapagos/ecuador-jails-chinese-fishermen-found-with-6000-sharks-idUSKCN1B81TS.
- 64 The Strait Times, "Protests in Ecuador After Chinese Vessel Intercepted with Catch of Endangered Species from Marine Reserve," August 25, 2017, https://www.straitstimes.com/asia/se-asia/protests-in-ecuador-after-chinese-vessel-intercepted-with-catch-of-endangered-species.
- 65 Seafood Source, "Argentina Coast Guard Opens Fire on Chinese Fishing Vessel," March 4, 2019, https://www.seafoodsource.com/news/sup-ply-trade/argentine-coast-guard-opens-fire-on-chinese-fishing-vessel.
- 66 Ibid.
- 67 The New York Times, "Chinese Fisherman Kills South Korean Coast Guardsman," December 13, 2011, https://www.google.com/search?q=chinese+fisherman+stabbed+korean+to+death+civil+agantagins%2C&oq=chinese&aqs=chrome.0.69i59l3j69i57j69i59j69i60l3.6501j0j4&-sourceid=chrome&ie=UTF-8.
- 68 Qingchang Qiu, "Fishery Disputes Between China and Neighboring Countries and Their Impacts on China's Foreign Relations" Socialism Studies 212, no. 6 (2013), 150-151 [in Chinese].
- 69 Supra, note 22, Article 5(a).
- 70 Ibid, Article 8.

variances exist among RFMOs in terms of the species they focus on, the marine areas they cover, and the institutional frameworks they adopt. Nevertheless, all have suffered from one common issue: the lack of effective compliance and enforcement mechanisms.

Fortunately, progress has been made by some RFMOs to improve compliance and effectiveness. In 2010, the WCPFC implemented a compliance monitoring scheme. Under the scheme, every member of the WCPFC provides information regarding performance of its obligations. At the annual meeting of the Technical and Compliance Committee, the Committee reviews information received, identifies compliance issues, and assigns a preliminary compliance status to each member. After taking the Committee's opinions into consideration, the WCPFC adopts a final and public compliance monitoring report, including a compliance status for each member. If a member is assigned a status of priority noncompliant for its actions, such as exceeding agreed catch quotas, the WCPFC can determine necessary responses to address the noncompliance.

Australia, a member of the WCPFC, suggested that such responses should include reduction or removal of catch quotas (how much a vessel is allowed to take) and withdrawal of the member's vessels from the authorized list.<sup>75</sup> While the latest version of the scheme does not confirm the Australia's proposal, the language of the scheme is still vague enough to preserve the possibility that the WCPFC can take harsh measures to tackle priority noncompliance.<sup>76</sup>

The South Pacific Regional Fisheries Management Organization (SPRFMO) adopted a similar compliance monitoring scheme with some revisions.<sup>77</sup> Both the WCPFC and the SPRFMO have found China to be noncompliant in the past. Although no drastic measures have been imposed on China, the threat of losing catch quotas and of negative publicity might promote China to reconsider its distant water policy.

The West African waters have long been regarded as one of the most diverse and fertile fishing zones in the world. Since the first Chinese fishing fleet went to the region, China has been fishing there for 35 years. Traditionally, coastal countries in West Africa have provided Chinese fishing vessels with easy access to their fishery resources. Also, due to local authorities' lack of robust legal frameworks, inadequate inspection, and poor technology, Chinese fishing vessels have frequently participated in IUU fishing activities to reap more economic benefits. However, some changes are taking place. First, according to "The 13th Five-Year Plan of Distant Water Fishing Industry from 2016 to 2020", West African countries are demanding more restrictive

- 72 Ibid, paragraphs 13-15.
- 73 Ibid, paragraphs 17-19.

- Australia, Working Paper on the Proposed Structure for the Western and Central Pacific Fisheries Commission Compliance Monitoring Scheme (September 3, 2010), WCPFC-TCC6-2010/21.
- 76 Western and Central Pacific Fisheries Commission, Conservation and Management Measure for Compliance Monitoring Scheme (December 11, 2019), Annex I 11.

<sup>71</sup> Western and Central Pacific Fisheries Commission, Conservation and Management Measure for Compliance Monitoring Scheme (2010), CMM 2010-03, paragraph 9.

<sup>74</sup> Western and Central Pacific Fisheries Commission, CMM 2015-07, Conservation and Management Measure for Compliance Monitoring Scheme, Annex I Compliance Status Table.

<sup>77</sup> South Pacific Regional Fisheries Management Organisation, Report of the Third Meeting of the Commission of the South Pacific Regional Fisheries Management Organization (February 6, 2015), paragraph 12.

requirements for access to fishery resources. Rhinese vessels now need to comply with more stringent conservation measures, more expensive license fees, and higher technical standards. Second, national and international efforts are devoted to curbing IUU fishing activities in the region. For instance, the Ivory Coast published a new fisheries law to increase criminal and monetary penalties to guarantee protection against IUU fishing activities. With support from Germany, Stop Illegal Fishing, an Africa-based NGO, is cooperating and coordinating with the Food and Agriculture Organization (FAO) to implement port state control measures in selected African countries. Moreover, supported by European Union, the Fisheries Committee for the West Central Gulf of Guinea, made up of six West African countries, is building the capacities of competent national and regional monitoring, control, and surveillance authorities to deter IUU fishing. In light of these new circumstances, China has to update its distant water fishing policy to retain access to fishery resources and avoid penalties for violations in West Africa.

## D. Ongoing Reforms

To realize its transition into a responsible distant water fishing power, China is undergoing a systemic reform of its distant water fishing legal regimes. In July 2019, the Agricultural Ministry solicited comments regarding the draft of new Regulations on the Administration of Distant Water Fishery (Fishery Regulations). Solone month later, China published new Measures on Distant Water Fishing Vessel Monitoring (Monitoring Measures). At the end of August 2019, the draft of new Fisheries Law was issued for public comments. In April 2020, China disclosed a letter regarding new policy about a transshipment system for distant water fishing (Transshipment Letter). The regulations and legislation mentioned above have taken effect or are expected to take effect in the foreseeable future. This part is intended to illustrate new rules pertinent to IUU fishing activities in the ongoing reform.

#### 1. More Severe Penalties

Article 74 of the draft new Fisheries Law lists seven violations of distant water fishing, including the following:

- 78 Supra, note 46.
- 79 JuriAfrica, "Ivory Coast Faces Up to Illegal Fishing," November 27, 2016, https://juriafrique.com/eng/2016/11/27/ivory-coast-faces-up-to-illegal-fishing.
- 80 Stop Illegal Fishing, 2019 Annual Report, 10-26.
- 81 Fisheries Committee for the West Central Gulf of Guinea, "Improving Fisheries Governance in Western Africa," https://fcwc-fish.org/projects/pescao.
- 82 The Agricultural Ministry, "The Notification about Solicitation for Public Comments on Regulations for Administration of Distant Water Fishery (Draft)," July 1, 2019, http://www.moa.gov.cn/hd/zqyj/yfzj/201907/t20190701\_6319950.htm [in Chinese].
- 83 The Agricultural Ministry, "The Notification about Issuance of Measures on Distant Water Fishing Vessels Monitoring," August 19, 2019, http://www.gov.cn/xinwen/2019-08/19/content\_5422285.htm [in Chinese].
- 84 The Agricultural Ministry, "The Notification about Solicitation for Public Comments on Fisheries Law (Draft)," August 29, 2019, http://www.moa.gov.cn/xw/bmdt/20190829\_6326836.htm [in Chinese].
- 85 The Agricultural Ministry, "The Notification about Strengthening Administration of Distant Water Fishing High Sea Transshipment and Transportation," April 14, 2020, https://www.sohu.com/a/388673771\_769126 [in Chinese].

• Fishing in the high seas or foreign waters without license or approval from the Fishery Bureau under the Agricultural Ministry

- Obstructing or refusing enforcement measures taken by Chinese fisheries authorities or coast guards, obstructing or refusing boarding by authorized third parties on the high seas, or obstructing or refusing inspection by port states
- Obstructing or refusing to admit observers designated by China and RFMOs that have jurisdiction, or interfering with observers' work and leaving them unable to complete their tasks
- Failing to accurately report information about distant water fishing activities or failing to keep accurate fishing logs
- Making unauthorized changes of the vessel name or the vessel identifier, or intentionally turning off, removing, or manipulating vessel monitoring systems or automatic identification systems
- Undertaking, supporting, or abetting IUU fishing as discovered by RFMOs that have jurisdiction
- Being involved in major incidents with foreign governments or being in fishing vessel accidents

Compared to the 2013 Fisheries Law, the draft significantly increases penalties for infractions. The maximum monetary penalty has been upgraded from 100,000 yuan to 1,000,000 yuan (\$US145,222). According to Article 74, violations will lead to automatic suspension or revocation of the captain's seafarer certificate. Moreover, depending on the seriousness of violations, distant water fishing projects and company licences can be suspended or revoked, and fishing vessels can be confiscated.

Additionally, Article 74 specifically incorporates a blacklist as a potential penalty for serious violations. The blacklist system was initially introduced in 2017 with nine distant water fishing company managers and six captains on the list. 6 According to Article 34 of the new Fisheries Law, which has taken effect since April 1, 2020, the blacklisted company managers shall not be in charge of any distant water fishing project or company for the next three years, and blacklisted captains shall not be allowed to apply for a seafarer certificate for the following five years. It is nearly impossible for blacklisted captains to regain their seafarer certificate after not being employed in the industry for five years. The Agricultural Ministry added more managers and captains to the blacklist in 2018, including those arrested by Ecuador for catching endangered sharks. 87

The Paper, "The Agricultural Ministry Established Blacklist for Distant Water Fishing Practitioners for the First Time, Already 15 on the List," December 26, 2017, https://www.thepaper.cn/newsDetail\_forward\_1922262 [in Chinese].

<sup>87</sup> The Agricultural Ministry, "The Notification about Administrative Penalties for Violations by Some Distant Water Fishing Companies and Vessels," March 20, 2018, http://www.moa.gov.cn/nybgb/2018/201803/201805/t20180528\_6143244.htm [in Chinese].

Compared to the potential economic benefits, the penalties for violations stipulated by the 2013 Fisheries Law were trivial. However, in the new legislation and regulations, the higher monetary penalty, the disqualification of distant water fishing projects and companies, the confiscation of fishing vessels, and the blacklist system might be severe enough to deter fishermen from engaging in IUU fishing.

#### 2. Port Designation and Port Control

Although China has not yet ratified the Food and Agriculture Organization of the United Nations (FAO) Agreement on Port State Measures, in July 2019 the Agricultural Ministry said that it is working with other ministries to accede to and implement the agreement.<sup>88</sup> At the same time, the Agricultural Ministry has compiled a list of 247 IUU fishing vessels identified by eight RFMOs of which China is a member and has distributed the list to all Chinese ports to deny the entry of IUU fishing vessels.<sup>89</sup> Article 65 of the new Fisheries Law incorporates this port control measure and further requires that the illegal catch of IUU fishing vessels that are already within Chinese ports should be confiscated.

Article 36 of the draft new Fisheries Law also provides that middle-size and large-size fishing vessels shall unload their catch only at designated Chinese ports and that catch traceability systems should be set up at these ports. The Fishery Bureau will publish a list of designated Chinese ports. Fishing ports and non-fishing ports in China have been managed by different authorities, and in most situations foreign fishing vessels have been accepted by non-fishing ports where checks are carried out by customs authorities.<sup>90</sup>

There has been some confusion about which authority should deal with the illegal catches of foreign vessels, and customs authorities might lack the expertise to detect IUU fishing.<sup>91</sup> The port designation measure has the potential to address this issue. Fishing and customs authorities can coordinate and cooperate with each other at designated ports. Moreover, in 2018, China initiated a plan to build ten modern fishing port clusters,<sup>92</sup> which would increase the ability of fishing ports to collect and verify data for distant water fishing. After the construction, more Chinese fishing ports will be capable of enforcing port control measures.

Strong port control measures at designated Chinese ports with facilitates to implement a catch traceability system may be an effective way to preclude illegal catches from entering the booming Chinese seafood market.

<sup>88</sup> The Agricultural Ministry, "Advice of Furthering Curbing IUU Fishing Activities," July 10, 2019, http://www.moa.gov.cn/gk/jyta/201907/t20190710\_6320683.htm [in Chinese].

<sup>89</sup> Ibid

<sup>90</sup> Tiantian Wang and Yi Tang, "Effectiveness of the Port State Measures on Combating IUU Fishing and the Influence of Port State Measures Agreement on China," Journal of Shanghai Ocean University 26 no. 5 (2017), 754-756 [in Chinese].

<sup>91</sup> Ibid

<sup>92</sup> National Development and Reform Commission and the Agricultural Ministry, "National Coastal Fishing Ports Development Plan (2018–2025)," May 3, 2018, http://www.moa.gov.cn/gk/ghjh\_1/201805/t20180503\_6141333.htm.

## 3. Mandatory Installation of Vessel Monitoring Systems

Vessel Monitoring Systems (VMS) enable flag states and coastal states to enhance monitoring, control, and surveillance over distant water fishing activities. <sup>93</sup> More frequent VMS data reporting by distant water fishing vessels can lead to a more accurate determination of their location, direction, and fishing patterns. <sup>94</sup> According to Article 3 of the 2014 Monitoring Measures, installing VMS is a precondition for approval of distant water fishing projects and entitlement to governmental subsidies. <sup>95</sup> Articles 11 and 15 of the 2014 Monitoring Measures prescribe that VMS shall be turned on for 24 hours a day and transmit their data to the China National Distant Water Fishing Association every 4 hours. <sup>96</sup> The Association is a government-funded representative body of the industry. The 2019 Monitoring Measures, effective from August 1, 2019, increase reporting rates and require that distant water fishing vessels should transmit VMS data every hour. Moreover, when entering unauthorized fishing zones or disputed marine areas, VMS should automatically send alerts, and provincial fisheries authorities should launch an investigation into such incidents, with the results reported to the Fishery Bureau.

#### 4. Transparent Transshipment

Far from a Chinese port, a Chinese distant water fishing vessel can offload its catch to a refrigerated vessel through transshipment at sea. This practice can obscure the source of the catch and potentially allow illegal catches to enter the Chinese market in spite of China's port designation and control measures. To tackle the negative consequences resulting from unregulated transshipment, the Agricultural Ministry proposed in the Transshipment Letter a regulatory regime for transshipment. Pursuant to the letter, any vessels providing transportation service to Chinese distant water fishing vessels must be registered before the Agricultural Ministry and relevant RFMOs. Chinese distant water companies must report any transshipment activities to the China National Distant Water Fishing Association at least 72 hours before such activities occur. Then the Association will notify relevant RFMOs in accordance with regulations adopted by these RFMOs.

Moreover, all transport vessels will be subject to inspection by observers appointed by Chinese government. Observers will record all transshipment activities that occur on the high seas. Since 2016, China has provided technical and legal training to observer candidates and established a national talent pool of observers to ensure that observers are capable of carrying out their tasks. The Transshipment Letter is the first move by China to regulate transshipment on the high seas. After constructive input from stakeholders, a final regulatory regime based on the letter might reduce the problem of transshipment as a component of IUU fishing.

<sup>93</sup> The Pew Charitable Trusts, Tracking Fishing Vessels Around the Global (April 2017), 2-4.

<sup>94</sup> Ibid., 9

<sup>95</sup> The Agricultural Ministry, "The Notification Measures on Distant Water Fishing Vessels Monitoring," October 27, 2014, http://www.moa.gov.cn/nybgb/2014/shiyi/201712/t20171219\_6111611.htm [in Chinese].

<sup>96</sup> Ibid

<sup>97</sup> Nathan A. Miller et al., "Identifying Global Patterns of Transshipment Behavior," Frontiers in Marine Science 5, (2018), 240-241.

<sup>98</sup> The Agricultural Ministry, "Regulations on National Observers of Distant Water Fishing," December 1, 2016, http://zsoaf.zhoushan.gov.cn/art/2017/3/14/art\_1563874\_25965714.html [in Chinese].

## 5. International Fisheries Obligations Research Center

On September 23, 2017, with the support from the Fishery Bureau, the China National Distant Water Fishing Association and Shanghai Ocean University jointly established the International Fishery Obligation Research Center.<sup>99</sup> The center's mission is to improve China's ability to fulfill its obligations arising from international, regional, and bilateral fisheries agreements.<sup>100</sup> The center will closely follow the development of fisheries law in the FAO, RFMOs, and coastal countries.<sup>101</sup> Eight working groups have been established to research the eight RFMOs of which China is a member.<sup>102</sup> Based on the center's research, China will promptly incorporate international obligations into its domestic law.<sup>103</sup>

The center offers annual training sessions to managers of distant water fishing companies and crew members to enhance their understanding of international and domestic fisheries law and relevant technical standards. Through these training sessions, practitioners' awareness of compliance is raised, and their technical skills are improved, thereby reducing the likelihood of unintentional violations.

## 6. Closed Seasons for Squid Fishing

Squid fishing constitutes an important part of China's distant water fishing industry. In 2015, squid fishing accounted for 40% of the total distant water catch and 30% of its value. <sup>104</sup> In the past nine years, China has had the largest squid catch in the world. <sup>105</sup> Squid fishery resources spread across a vast amount of marine areas. In some areas on the high seas, there are no RMFOs to manage and conserve squid fishery resources. Overexploitation and climate change have resulted in a plummeting squid catch. In 2016, the global catch decreased by over a million metric tons. <sup>106</sup> From 2007 to 2011, each Chinese fishing vessel in the southwest Atlantic Ocean could catch more than 2,000 metric tons every year. <sup>107</sup> However, in recent years the catch per Chinese vessel has decreased to less than 400 metric tons. <sup>108</sup>

- 99 Shanghai Ocean University, "The Establishment of International Fishery Obligation Research Center," September 26, 2017, https://www.shou.edu.cn/2017/0925/c147a212038/page.htm [in Chinese].
- 100 Ibid.
- 101 Ibid.
- The Agricultural Ministry, "Xianliang Zhang (Head of the Fishery Bureau) Answers Journalists' Questions About the Amendment of Regulations for the Administration of Distant Water Fisheries," March 25, 2020, http://www.moa.gov.cn/xw/bmdt/202003/t20200325\_6339878. htm [in Chinese].
- 103 Ibid.
- 104 Supra, note 31, 1 and 13.
- 105 Shanghai Observer, "China's Distant Water Squid Fishing Catch Has Been the Largest in the World for the Past Nine Consecutive Years," June 6, 2019, https://www.shobserver.com/news/detail?id=155812 [in Chinese].
- 106 Undercurrent News, "Slump in Global Squid Catch Spark Fisheries Management Efforts," July 12, 2018, https://www.undercurrentnews.com/2018/07/12/global-squid-catch-slump-ignites-fisheries-management-efforts.
- 107 Zhoushan Daily, "China Plans to Implement Closed Seasons for the High Sea Squid Fishery Stocks, Zhoushan Has Repeatedly Called China to Do So," April 19, 2020, http://www.zhoushan.cn/newscenter/zsxw/202004/t20200419\_969166.shtml [in Chinese].
- 108 Ibid.

To realize the sustainable development of squid fishery resources on the high seas, the Agricultural Ministry decided in 2020 that between July 1 and September 30 of each year, Chinese fishing vessels should not catch squid in the southwest Atlantic Ocean between 32°S and 44°S and between 48°W and 60°W. 109 Also, between September 1 and November 30 of each year, the ministry prohibits Chinese fishing vessels from catching squid in the eastern Pacific Ocean between 5°N and 5°S and between 110°W and 95°W. 110 This is the first time that China has voluntarily imposed closed seasons on its fishing vessels on the high seas. The two parts of the high seas covered by the closed seasons are believed to be the main spawning grounds of Humboldt squids and Argentine shortfin squids, respectively. 111

Moreover, China will explore the feasibility of establishing a squid catch quota system for its fishing vessels.<sup>112</sup> Also, China will advocate for the establishment of squid RFMOs and promote international closed seasons for squid fishing.<sup>113</sup> In addition to efforts at the government level, China will encourage international cooperation of private sectors and academia to achieve the conservation and sustainable development of squid fishery resources.<sup>114</sup>

#### E. Conclusion

From 1949 to the present, China's distant water fishing industry has grown considerably through six stages. The two most recent stages are particularly important. From 1998 to 2016, faced with economic pressure from conservation of offshore fisheries, China has restructured its distant water fishing industry. High sea fishing has replaced foreign water fishing as the cornerstone of the industry, and private companies have become the backbone of this formerly state-owned industry. Since 2017, China has emphasized ecological integrity and sustainable development and has expressed its desire to be a responsible distant water fishing power by cracking down on IUU fishing.

Two possible reasons might explain this policy shift. First, frequent and high-profile cases of illegal fishing have tarnished China's reputation, and rising tensions with foreign countries because of these violations have the potential to threaten the implementation of the Belt and Road Initiative. Second, RFMOs and coastal countries have enhanced monitoring and enforcement measures, and the requirements for access to fisheries resources have been tightened. China has to remake its policy to retain access and avoid penalties. Since the policy shift, China has initiated systemic legal reform. They have introduced more severe penalties for infractions, port control measures, VMS monitoring, transparent transshipment, and closed seasons for squid fishing. Despite all of these efforts, the effectiveness of these measures remains to be seen in the future.

The Agricultural Ministry, "The Notification about Strengthening the Conservation of High Sea Squid Fishery Resources to Sustainably Develop China's Distant Water Fishing Industry," June 1, 2020, http://www.gov.cn/zhengce/zhengceku/2020-06/03/content\_5516936.htm [in Chinese].

<sup>110</sup> Ibid.

<sup>111</sup> China Dialogue, "China Announces Closed Season on Squid Spawning Grounds," June 18, 2020, https://chinadialogueocean.net/14146-china-announces-closed-season-squid-spawning-grounds.

<sup>112</sup> Supra, note 109.

<sup>113</sup> Ibid.

<sup>114</sup> Ibid.

# III. IUU FISHING AND DATA POLICY: South Korea Case Study

#### Hai Jin Park

#### **Contents**

A. BACKGROUND	134
B. LEGAL FRAMEWORK	136
C. SOUTH KOREA'S POLICY INTERESTS	138
D. CODA	139

## A. Background

When it comes to the ongoing battle against illegal fishing, South Korea is an important flag state as well as a port state. It is one of five countries responsible for 90% of distant water fishing efforts, and it has 221 licensed distant water fishing vessels with an annual export of about 200,000 metric tons per year. Busan, the largest port in South Korea, is the most frequently visited port by foreign vessels with a sizable hold capacity. South Korea was the nineteenth country to ratify the Food and Agriculture Organization of the United Nations Agreement on Port State Measures (PSMA). South Korea is currently a member of a number of regional fisheries management organizations (RFMOs). See Table 1 below.

Table 1. RFMOs and International Fisheries-Related Organizations of Which South Korea Is a Member (cont. on next page)

RFMO	Year of Accession	Mandate
Fishery Committee for the Eastern Central Atlantic (CECAF)	1968	Fisheries resources management in the eastern central Atlantic area
International Commission for the Conservation of Atlantic Tuna (ICCAT)	1980	Conservation and management of Atlantic tuna
Fisheries Committee for the Western and Central Atlantic (WECAFC)	1974	Fisheries resources management in the western and central Atlantic area

<sup>1</sup> Aaron Orlowski, "NGOs Urge Caution Even as They Praise South Korean Fisheries Reform," SeafoodSource, January 17, 2020, https://www.seafoodsource.com/news/environment-sustainability/ngos-urge-caution-even-as-they-praise-south-korean-fisheries-reform.

<sup>2</sup> The Pew Charitable Trusts, "Study Measures Countries' Exposure to Illegal Catch, Actions to Keep It from Markets," July 19, 2019, https://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2019/07/study-measures-countries-exposure-to-illegal-catch-actions-to-keep-it-from-markets.

RFMO	Year of Accession	Mandate
International Whaling Commission (IWC)	1978	Conservation and management of whales and oversight of commercial whaling
Commission for the Conservation and Management of Antarctic Marine Living Resources (CCAMLR)	1985	Conservation and management of Antarctic marine living resources
North Atlantic Fisheries Organization (NAFO)	1993	Fisheries resources management in the North Atlantic area
Central Bering Sea Pollack Commission (CBSPC)	1995	Conservation and management of pollack in the central Bering Sea
Indian Ocean Tuna Commission (IOTC)	1996	Conservation and management of tuna in the Indian Ocean
Commission for the Conservation and Management of Southern Bluefin Tuna (CCSBT)	2001	Conservation and management of southern bluefin tuna
North Pacific Anadromous Fisheries Commission (NPAFC)	2003	Conservation and management of salmon in the North Pacific area
Western and Central Pacific Fisheries Commission (WCPFC)	2004	Conservation and management of tuna in the western and central Pacific area
Inter-American Tropical Tuna Commission (IATTC)	2005	Conservation and management of tuna in the eastern Pacific area
Southeast Atlantic Fisheries Organization (SEAFO)	2011	Optimum utilization of the fisheries resources in the southeast Atlantic area
South Pacific Regional Fisheries Management Organization (SPRFMO)	2012	Non-tuna, pelagic species management in the South Pacific area
South Indian Ocean Fisheries Agreement (SIOFA)	2014	Fisheries resources management in the western and central Atlantic area
North Pacific Fisheries Commission (NPFC)	2015	Bottom fishing and non-tuna pelagic species management in the North Pacific area

## B. Legal Framework

#### 1. General

South Korea's national legislation that supports prevention, deterrence, and elimination of illegal, unreported, and unregulated (IUU) fishing includes the Fisheries Act, the Fishery Resource Management Act, the Distant Water Fisheries Development Act (DWFD Act), the Fishing Vessel Act, the Inland Water Fisheries Act, the Act on the Exercise of Sovereign Rights over the Fishing Activities by Foreign Fishing Vessels in the Exclusive Economic Zone of Korea, and the Wild Fauna and Flora Protection Act. Korean nationals engaged in IUU fishing on high seas or in exclusive economic zones (EEZs) outside of South Korea's jurisdiction are subject to sanctions under the DWFD Act. The DWFD Act also includes a port state inspection scheme that is mostly consistent with the PSMA requirements; it requires prior notification, approval or denial of port entry, and sharing the result of inspections with the flag state of the vessel and relevant RFMOs.<sup>3</sup> In May 2020, the ordinance under the DWFD Act was amended to further align the national law with the PSMA by allowing denial of use of port service to IUU fishing vessels.<sup>4</sup>

#### 2. Installation of VMS and Other Vessel Position Transmitting Devices

Almost all South Korean fishing vessels are required to have a type of vessel position transmitting device on board. The DWFD Act mandates all South Korean-flagged distant water fishing vessels to install a vessel monitoring system (VMS). Moreover, all the fishing vessels operating in South Korea's EEZ should have at least one of the vessel position transmitting devices as prescribed by the Ordinance of the Ministry of Oceans and Fisheries. Fishing vessels larger than 10 metric tons must have automatic identification system (AIS) devices, and those smaller than 10 metric tons but larger than 2 metric tons should have very high frequency digital selective calling (VHF-DSC) devices, while the rest of the fishing vessels are required to install V-Pass devices, which are similar to AIS devices.

- 3 The DWFD Act, Article 14.
- 4 The Ministry of Oceans and Fisheries, press release, May 7, 2020.
- 5 The DWFD Act, Article 15 (Installation of Fishing Vessel Monitoring System).
- (1) A distant water fishery operator shall install a fishing vessel monitoring system on the permitted fishing vessel under Article 6 (1) prior to departing from port.
- (2) An operator of an overseas cargo transportation business who has been registered as a fishery products transportation business pursuant to Article 24 (2) of the Marine Transportation Act shall install a fishing vessel monitoring system.
- (3) Requirements for vessel monitoring systems under paragraphs (1) and (2) and other matters shall be prescribed by Ordinance of the Ministry of Oceans and Fisheries.
- 6 The Fishing Vessels Act, Article 5-2 (Automatic Identification System Equipment for Fishing Vessels)
- (1) In order to ensure the safe navigation of a fishing vessel, the owner of each fishing vessel prescribed by Ordinance of the Ministry of Oceans and Fisheries shall equip his/her fishing vessel with an automatic identification system which automatically provides information about the location of the vessel (hereinafter referred to as "AIS equipment") and operate such AIS equipment in accordance with the criteria set by the Minister of Oceans and Fisheries (...)
- 7 The Fishing Vessels Act, Article 5-2; the Criteria for Fishing Vessels' Equipment, Articles 188 and 191; the Criteria for Structure and Equipment of Fishing Vessels Smaller Than 10 Tons, Article 72.

#### 3. Restrictions on Sharing Information

Under the Fishing Vessels Act Article 5-2, there is an explicit restriction on sharing the location information collected from vessel-location transmission devices, such as AIS, VHF-DSC, or V-Pass. The location information obtained from these devices can be used only for safely navigating the fishing vessel, investigating IUU fishing, investigating marine resources, responding to maritime accidents, and managing entry and departure of the fishing vessel. It should not be provided to a third party without obtaining consent from the owner or captain of the ship.<sup>8</sup>

However, no explicit restriction can be found in the DWFD Act regarding the sharing of VMS data collected from distant water fishing vessels. If the VMS data can be understood as personal information as defined in the Personal Information Protection Act (PIPA), some of the restrictions under the law would be applicable. The term "personal information" under PIPA refers to information relating to a living individual that identifies a particular individual by his or her full name, resident registration number, image, and so on. 9 It also includes information that—even if by itself it does not identify a particular individual—may be easily combined with other information to identify a specific individual. If the VMS data contains any of the personally identifiable information as described above or can be easily combined with additional information to identify the individual, it can be shared with a third party only when consent has been obtained from the data subject or when it is within the scope of purposes for which it was collected. In the collected of the consent has been obtained from the data subject or when it is within the scope of purposes for which it was collected.

Since the VMS installed under the DWFD Act Article 15, §1, needs to be able to automatically report certain information to the Minister of Oceans and Fisheries, international fisheries organizations, or coastal states, 12 sharing the VMS data with RFMOs or coastal states would be understood to fall within the purposes for which the VMS was collected, and therefore additional consent from the affected person would not be necessary. However, sharing the VMS data with third parties other than those listed above, such as Global Fishing Watch, would not be understood as within the purposes for which the VMS was collected and would necessitate consent from the affected person if the VMS data are construed as "personal information" under the PIPA.

<sup>8</sup> The Ordinance of Ministry of Oceans and Fisheries under the Fishing Vessels Act, Article 42-2 (3).

<sup>9</sup> The PIPA, Article 2 (1).

<sup>10</sup> Ibid.

<sup>11</sup> The PIPA, Article 17 (Provision of Personal Information)

<sup>(1)</sup> A personal information controller may provide (or share; hereinafter the same shall apply) the personal information of a data subject to a third party in any of the following circumstances:

<sup>1.</sup> Where the consent is obtained from the data subject;

<sup>2.</sup> Where the personal information is provided within the scope of purposes for which it is collected pursuant to Articles 15 (1) 2, 3 and 5 and 39-3 (2) 2 and 3.

<sup>12</sup> The Ordinance of the Ministry of Oceans and Fisheries under the DWFD Act, Article 24 (1).

## C. South Korea's Policy Interests

#### 1. AIS Data Analysis Platform

In 2018, South Korea's Fisheries Management Center (SK-FMC), which belongs to the East Sea Fisheries Management Service, established an online platform that connects South Korea's Electronic Fishing Monitoring System with satellite-based AIS data to support prevention and monitoring of IUU fishing.<sup>13</sup> The platform finds and stores location information of vessels, expresses the location of the vessels on an electronic map, compare the tracks of multiple vessels, and provide real-time location information of the vessels.<sup>14</sup> This platform includes not only location information of South Korean-flagged distant water fishing vessels, but also that of foreign fishing vessels. The concept of this service is similar to what the Global Fishing Watch is providing, except that it does not employ any algorithms to automatically detect fishing efforts or transshipment using the location information.<sup>15</sup> Instead, they are utilizing experts in the SK-FMC to analyze the location information of South Korean-flagged distant water fishing vessels and foreign vessels that potentially engage in transshipment with South Korean-flagged vessels.<sup>16</sup>

#### 2. Improving Domestic Law in Response to the Threat of Trade Sanctions

The major improvement of the DWFD Act over the last decade came in response to the threat of trade sanctions by the European Union (EU) and the United States (US). In 2013, the EU issued South Korea a yellow card after patterns of serious labor abuse were reported, warning that the country would be subject to trade sanctions if it did not improve fisheries management.<sup>17</sup> In response, South Korea's DWFD Act was amended to increase consistency with international law and regulations, to strengthen control over IUU vessels and South Korean nationals, to mandate VMS installation on fish carriers, to require the prior authorization of any transshipment, and to increase sanctions for violations (including imprisonment).<sup>18</sup> Subsequently, in 2015 the European Commission lifted the threat of trade sanctions.<sup>19</sup>

South Korea has recently amended the DWFD Act and enabled a quicker and more efficient application of sanctions. The improvement came after South Korea was placed on the US preliminary list of countries engaged in illegal fishing in September 2019. Two Korean fishing vessels had allegedly violated conservation measures of the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR). The US National Oceanic and Atmospheric Administration (NOAA) had reported to the US Congress that the fine imposed on South Korean fisheries under

- 13 Personal communication with an official at the East Sea Fisheries Management Service.
- 14 The East Sea Fisheries Management Service, notice, March 12, 2020, http://eastship.mof.go.kr/ko/board.do?menuIdx=264&bbsIdx=5562.
- 15 Supra, note 13.
- 16 Ibid.
- 17 Seafish, Focus on Ethical Issues in Seafood: South Korea Profile (September 2015), https://www.seafish.org/media/Publications/SouthKorea-EthicsProfile\_201509.pdf.
- 18 Ibid.
- 19 Ibid.
- 20 Kyu-won Kim, Korea No Longer Designated as Illegal Fishing Nation by US," Hankyoreh, January 24, 2020, http://english.hani.co.kr/arti/english\_edition/e\_international/925676.html.

the DWFD Act, which diminished profits gained from illegal fishing, was insufficient. After the amendment to the DWFD Act was made to strengthen the sanctions, the US lifted the preliminary designation as an IUU fishing country.

## D. Coda

As both a key port state and a flag state, South Korea has been playing an important role in fighting illegal fishing. Every distant water fishing vessel is required to install VMS on board, and there is no explicit restriction on sharing VMS data with a third party under the DWFD Act. However, insofar as VMS data is construed as personal information, the PIPA prevents the sharing of VMS data with Global Fishing Watch (GFW) without the data subject's consent. This is different from sharing VMS data with RFMOs, which would fall within the scope of the purpose of data collection and thus be allowed under the PIPA. Since South Korea has established its own AIS data platform that tracks not only South Korean fishing vessels but also foreign fishing vessels, it is less likely to appreciate the additional AIS data analysis service the GFW might be able to provide. Moreover, although South Korea has strengthened its control over South Korean nationals and port controls by amending its domestic law in response to the threat of trade sanctions by the EU and the US, it is unclear whether South Korea will voluntarily provide its VMS data to the GFW without such strong incentives.

# IV. FORCED LABOR AND FISHERIES: Corporate Liability for Human Rights Abuses in the Fisheries Sector

Shalini Iyengar

#### **Contents**

A. RE	SEARCH QUESTION	140
B. BA	ACKGROUND	140
C. DE	EFINING FORCED LABOR	143
D. DO	OMESTIC LAWS ON CORPORATE ACCOUNTABILITY	144
E. JU	DICIAL DECISIONS ON CORPORATE LIABILITY	144
F. SU	MMARY OF RECOMMENDATIONS	149
G. RC	OLE OF DIFFERENT STAKEHOLDERS	149
H. FU	JTURE RESEARCH QUESTIONS	150

## A. Research Question

How can forced labor on board fishing vessels be prevented and sanctioned? I am studying corporate accountability for forced labor on board wild-catch fishing vessels to understand how the rights of workers on these vessels can be protected. I hope this research will contribute to understanding the links between human rights violations and illegal, unreported, and unregulated (IUU) fishing and also to addressing the larger and more important question of how to end corporate impunity for human rights violations.

## B. Background

In recent years, numerous reports have highlighted the seemingly endemic nature of human rights violations on board fishing vessels.¹ While by some accounts, this is hardly a new phenomenon,² its prevalence and pervasiveness are a source of significant concern. Investigations have revealed, for instance, that slavery, underage labor, less than minimum wage payments, poor working conditions, and human trafficking are common issues on these vessels. Moreover, reports have emphasized that such violations are especially pronounced in instances of ships conducting IUU

<sup>1</sup> C4ADS, Strings Attached: Exploring the Onshore Networks Behind Illegal, Unreported, and Unregulated Fishing (2019); Environmental Justice Foundation, Blood and Water: Human Rights Abuse in the Global Seafood Industry (2019); Environmental Justice Foundation, Pirates and Slaves: How Overfishing in Thailand Fuels Human Trafficking and the Plundering of Our Oceans (2015); Human Rights Watch, Hidden Chains: Rights Abuses and Forced Labor in Thailand's Fishing Industry (2018); Oceana, Illegal Fishing and Human Rights Abuses at Sea: Using Technology to Highlight Suspicious Behaviors (2019), https://osf.io/juh98, accessed February 17, 2020.

<sup>2</sup> See generally, Ian Urbina, The Outlaw Ocean: Journeys Across the Last Untamed Frontier (2019).

fishing.<sup>3</sup> The scale of the problems is considerable—more than 38.3 million workers are employed on board fishing vessels at sea,<sup>4</sup> and IUU fishing accounts for 11 to 26 million metric tons of seafood<sup>5</sup> valued at between \$US15.5 to \$US36.4 billion.<sup>6</sup>

However, apart from a few highly publicized instances, sanctions for the human rights violators have been few and far between. Notably, this is in spite of the near universal ratification of two of the three International Labour Organization (ILO) Forced Labour Conventions.<sup>7</sup> There are several reasons for this:

- First, the victims are often migrant laborers, who are more vulnerable to abuse and are less willing to report such behavior. Moreover, the reality of fishing practices and migration law means that their documents are held by the ship captains, making these laborers extremely vulnerable to abuse. Additionally, poverty, illiteracy, and the reality of debt bondage mean that fisheries workers may not be aware of their rights and/or might be unable to exercise them effectively.
- Second, the difficulty in monitoring abuses at sea means that it is difficult for third parties to accurately know and report violations.
- Third, the inherently transnational nature of fishing and the fragmented nature of existing legal and governance mechanisms makes it difficult to hold violators accountable. This is true for both the recruitment aspect of the work and the actual performance of the work itself. Recruiters have frequently been implicated in human trafficking and holding fishers in debt bondage situations, while the fact that the work is performed on the high seas on boats that might carry flags of convenience often confounds efforts to impose liability. Moreover, recruiters often work informally, i.e. under the table, making it even more difficult to trace them and their activities.
- Fourth, even in cases where such complaints are made by the ship workers and/or third parties, the complaints are often directed against the ship captains. While this is understandable and wholly justified, it often obscures the fact that conditions on board fishing vessels are due to systemic and endemic issues, the responsibility for which should rest with the ultimate owner of these fishing vessels. Holding owners accountable, however, can bring about serious legal and logistical issues.

Environmental Justice Foundation, Blood and Water: Human Rights Abuse in the Global Seafood Industry (2019), https://ejfoundation.org/resources/downloads/Blood-water-06-2019-final.pdf; C4ADS, Strings Attached: Exploring the Onshore Networks Behind Illegal, Unreported, and Unregulated Fishing (2019), https://static1.squarespace.com/static/566ef8b4d8af107232d5358a/t/5d7022301845f300016ee532/1567629912450/Strings+Attached.pdf.

<sup>4</sup> International Labour Organization, Forced Labour and Human Trafficking in Fisheries (Geneva: 2013), https://www.ilo.org/wcmsp5/groups/public/---ed\_norm/---declaration/documents/publication/wcms\_216003.pdf.

<sup>5</sup> Environmental Justice Foundation, Blood and Water: Human Rights Abuse in the Global Seafood Industry (2019), https://ejfoundation.org/resources/downloads/Blood-water-06-2019-final.pdf.

<sup>6</sup> Ibid

<sup>7</sup> The ILO Forced Labour Convention, 1930 (No. 29), the ILO Abolition of Forced Labour Convention, 1957 (No. 105), and the ILO Work in Fishing Convention, 2007 (No. 188). The first two have been ratified by most of the governments in the world, but the last Convention has only had very few signatories.

• Fifth, the nature of the work lends itself to the potential for abuse. Fishers work long and irregular hours that are often dictated by proximity to fishing grounds. Moreover, fishers tend to spend long periods at sea, thus increasing the potential for being at the mercy of those controlling the ships, since the fishers' freedom of movement is necessarily restricted.

However, there have been some encouraging signs that indicate that corporate violators can no longer escape penalties. On the international stage, the advent of both soft law and treaty instruments has been notable-the 2011 United Nations Guiding Principles on Business and Human Rights, Organisation for Economic Co-operation and Development (OECD) guidelines, and International Organization for Standardization (ISO) standards have all been amended to respond to the need to address corporate human rights abuses. Countries have begun to draft domestic laws incorporating business and human rights obligations for companies within their jurisdictions. Equally significantly, domestic courts have also shown an increasing willingness to hold companies accountable for the human rights violations committed by their subsidiaries. For instance, in the specific case of labor violations on board fishing vessels, courts have begun holding companies accountable for not paying appropriate wages,8 and class action suits have been filed against companies for not ensuring that their supply chain is free from slavery. Finally, although addressed more at states than at individual corporations, the ILO C188 Work in Fishing Convention is also an important step forward in addressing this issue. <sup>10</sup> Similarly, at an interstate level, the European Union (EU) "yellow card" mechanism has also been an important step in curbing forced labor, even though it is technically aimed at issues of IUU fishing.<sup>11</sup>

Taken as a whole, it is arguable that this entire body of international and domestic law and state practice is indicative of an emerging trend toward corporate accountability in the fisheries sector, and that is the subject that this research will explore in more detail.

As an important caveat, rather than focusing on the normative case for curbing forced labor (which I believe is self-evident), I am aiming to focus on the pathways through which the matter

- 8 Asia Times, "Fisherman paid missing wages after three-year legal struggle," November 23, 2018, https://asiatimes.com/2018/11/fishermen-paid-missing-wages-after-three-year-legal-struggle/.
- 9 Associated Press, "More Than 2,000 Enslaved Fishermen Rescued in 6 Months," September 17, 2015, https://www.ap.org/explore/seafood-from-slaves/more-than-2,000-enslaved-fishermen-rescued-in-6-months.html.
- 10 The C188 Convention is a critical international convention that specifically addresses labor conditions in the fisheries sector. It entered into force in 2017 and requires, *inter alia*, that fishermen have safe working conditions and written agreements setting out their terms of employment. Its potential to curb exploitative working conditions became even more clear in July 2018 when South African authorities inspected and detained a Taiwanese fishing vessel after the crew complained about working conditions on board. The authorities required the owner to address and correct the identified issues; International Labour Organization, "First Fishing Vessel Detained under ILO Fishing Convention," July 17, 2018, https://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS\_634680/lang--en/index.htm.
- 11 The EU's IUU Regulation came into force in 2010 and aims to ensure that only fisheries that have been certified as operating within legal parameters may access EU markets. Given that the EU is the world's largest importer of fish and fisheries products, the threat of losing access to this market can provide significant leverage for countries to ensure that their fisheries operate in compliance with legal requirements. If countries do not comply with regulation norms, they can be "carded" yellow cards are issued as a way of warning the country in question that they are not in compliance and marks the beginning of a dialogue. However, if the dialogue is unsuccessful, the countries may be declared as uncooperative and issued a red card. While the EU regulation does not directly address the issue of forced labor, there are likely to be positive impacts from tackling the issue of IUU fishing. For instance, the Commission notes on its website that "the EU IUU Regulation does not specifically address working conditions on-board fishing vessels, neither human trafficking. Nonetheless, improvements in the fisheries control and enforcement system on IUU fishing may have a positive impact in the control of labour conditions in the fisheries sector," and the yellow card issued to Thailand has been credited for the country's steps to address both IUU fishing and labor abuse; European Commission, "Questions and Answers Illegal, Unreported and Unregulated (IUU) Fishing in General and in Thailand," January 8, 2019, https://ec.europa.eu/commission/presscorner/detail/pt/memo\_19\_201.

can be addressed. In this paper, I will specifically focus on the issue of how companies can be held liable for forced labor on shipping vessels. To do this, I will first map the legal state of play, including domestic and international definitions of forced labor and the cases on the specific issue of forced labor and fishing and on the issue of corporate human rights violations more broadly. Second, I will then turn to potential bases under which companies can be held liable for forced labor and slavery, with specific attention paid to the international business and human rights framework and the domestic corporate liability regimes. Finally, I will attempt to outline some important policy recommendations that might assist in addressing the issue of forced labor.

## C. Defining Forced Labour

Forced labor suffers from a multiplicity of definitions at the international and domestic levels. For the purposes of this paper, I have adopted the definition set out in the ILO 1930 Forced Labour Convention, which defined it as "all work or service which is exacted from any person under the threat of a penalty and for which a person the person has not offered himself or herself voluntarily." In addition, international human rights law also offers a useful lens to understand the opposite of forced labor—that is, the definition of "just and favorable" conditions of work. Articles 23 and 24 of the Universal Declaration of Human Rights, Article 7 of the International Covenant on Economic, Social, and Cultural Rights, and CESCR General Comment 23 identify four key elements of the right to just and favorable work:

- I. Fair, equal, and sufficient remuneration
- II. Healthy and safe working conditions
- III. Equal opportunity for promotion
- IV. Rest, leisure, reasonable limitation of working hours, and holidays with pay

Notably, all the above are obligations of states, and recent developments in international law have shown an increasing willingness by governments to hold companies accountable for their human rights impacts. Over the course of the past decade, the United Nations Guiding Principles on Business and Human Rights (UNGP), the OECD Guidelines for Multinational Enterprises, the ILO Tripartite Declaration of Principles Concerning Multinational Enterprises and Social Policy, and the Committee on Economic, Social and Cultural Rights (CESCR) General Comment 23 have all opined on the matter. Most relevantly, as per the UNGP, corporations are required to:<sup>12</sup>

- I. Identify and assess actual and potential adverse human rights impacts
- II. Assign responsibility for addressing these impacts in an integrated manner
- III. Cease or prevent adverse human rights impacts
- IV. Account for how they address their impacts
- V. Provide for remediation

Additionally, as per paragraph 42 of Chapter IV of the OECD Guidelines, companies are mandated to use their "leverage" to address and correct their impacts on human rights both in cases where their own actions are implicated and in cases where the actions of their subsidiaries and business partners are involved with "leverage is considered to exist where the enterprise has the ability to effect change in the practices of an entity that causes adverse human rights impact." Finally, General Comment 23 of the CESCR states that "while only States are parties to the Covenant,

business enterprises [...] have responsibilities to realize the right to just and favorable conditions of work. This is particularly important in the case of occupational safety and health given that the employer's responsibility for the safety and health of workers is a basic principle of labour law, intrinsically related to the employment contract, but it also applies to other elements of the right."

Notably, however, all of the above provisions represent international soft law principles and are not binding on companies. While a draft of a business and human rights treaty is being negotiated, it has often fallen upon domestic jurisdictions to give teeth to these norms and to hold companies accountable for human rights violations. In the sections that follow, we outline how domestic courts and states have dealt with the issue of corporate liability for human rights violations.

# D. Domestic Laws on Corporate Accountability

California Transparency in Supply Chains Act of 2010: This act covers slavery and trafficking and requires every retail seller and manufacturer doing business in California and having worldwide gross receipts that exceed \$US100 million to disclose their efforts to eradicate slavery and human trafficking from their supply chains. The disclosure must be posted on the retail seller's or manufacturer's website.

**UK Modern Slavery Act 2015**: This act is limited to slavery, servitude, and forced or compulsory labor, as well as human trafficking, which are all traditional criminal offenses. Under Part 6, which relates to transparency in supply chains, commercial organizations must prepare a slavery and human trafficking statement. The statement must indicate the steps the organization has taken to ensure that slavery and human trafficking are not taking place in any of its supply chains, nor in any part of its own business.

**European Union Directive 2014/95**: This Directive on disclosure of nonfinancial information requires undertakings that exceed 500 employees to present a nonfinancial statement. The material scope of this directive encompasses human rights in general, including all four core elements of the right to just conditions of work.

**Devoir de vigilance des entreprises donneuses d'ordre**: This 2017 French law makes it compulsory for large French companies to "[e]stablish and implement a diligence plan which should state the measures taken to identify and prevent the occurrence of human rights and environmental risks resulting from their activities, the activities of companies they control and the activities of subcontractors and suppliers on whom they have a significant influence."

# E. Judicial Decisions on Corporate Liability

Domestic cases against companies have taken two primary forms. First, companies have been sued for actions within their supply chains, and second, companies have been sued for the actions of their subsidiaries. We profile some of the most relevant cases below.

#### 1. Cases against Buyers for Actions within Their Supply Chains

#### The Costco Shrimp Case<sup>13</sup>

In 2015, plaintiff Monica Sud and other plaintiffs who bought Costco shrimp sued Costco, Charoen Pokphand Food, PCL, and C.P. Food Products, Inc. under California's Unfair Competition Law (UCL), Business and Professions Code, False Advertising Law (FAL), and Consumers Legal Remedies Act (CLRA), alleging that the defendants had sold farmed shrimp from Southeast Asia "for which the supply chain was tainted by slavery, human trafficking, and other illegal labor practices," with specific reference to the fishmeal used for feeding the shrimp. The plaintiffs alleged that the defendants were aware of the dubious provenance of the fishmeal and that the statements on their website that they had a "supplier code of conduct which prohibits human rights abuses in our supply change" and a "Disclosure Regarding Human Trafficking and Anti-Slavery" were misleading. Moreover, the plaintiffs alleged that Costco had failed to warn customers about these facts. The plaintiffs also alleged that the other defendants were aware of the issues with the prawn fishmeal but had both continued to issue public statements about being "committed to ensure that the supply chain was free from these human rights violations" and failed to inform California consumers, claiming that the company's supplier code of conduct hid the fact that the company was sourcing shrimp from companies with slave labor within their production lines. The district court noted that the case raised "significant ethical concerns" and asked questions that were similar to those asked in previous cases involving child labor in cocoa supply chains and slave labor in pet food14-that is, "whether California law requires corporations to inform customers" of these facts "on their product packaging and point of sale advertising." The court, however, ruled that the plaintiffs lacked the standing to pursue the case against both Costco and the non-Costco defendants.

With respect to Costco, the court accepted the company's argument that it had no duty to disclose the facts in issue to the plaintiffs and that the FAL did not apply to omissions. The court relied on previous decisions, including the cocoa and pet food cases, to note that the plaintiffs' claims under CLRA and UCL had not alleged that "these horrific labor practices" either "posed a safety risk to consumer [or] alleged they were a product defect." Additionally, the plaintiffs were not able to allege that Costco had superior or exclusive knowledge of the labor conditions alleged. Moreover, the court ruled that the plaintiffs were not able to show that they had substantially relied upon the disclosure and the code of conduct or indeed that they had "read or relied" or even that they were aware of these documents prior to making their purchase. While the plaintiffs also alleged that Costco had made "false statements" in its advertising, they were not able to show any particular advertisements they relied upon or even that Costco had engaged in a "long-term advertising campaign" that would allow them to avoid showing particularity. Finally, the court dismissed the plaintiffs' claims under the UCL prongs. The plaintiffs had alleged that the defendants' actions "actively contribute[d] to the use of slave labor in violation of bans on such human trafficking enacted by the U.S., California and by international conventions, including but not limited to the Tariff Act of 1930, [t]he Anti-Trafficking in Persons Act, the UN Declaration on Human Rights, and California Penal Code § 236, § 237 et seq., and the Supply

<sup>13</sup> Sud v. Costco Wholesale Corp., 229 F. Supp. 3d 1075, 1080 (N.D. Cal. 2017).

<sup>14</sup> Cf. McCoy v. Nestle USA, Inc., 173 F.Supp.3d 954, 956 (N.D. Cal. 2016); Hodsdon v. Mars, Inc., 162 F.Supp.3d 1016 (N.D. Cal. 2016); Dana v. The Hershey Company, Inc., 180 F.Supp.3d 652 (N.D. Cal. 2016); Wirth v. Mars Inc., No. SA CV 15–1470–DOC, 2016 WL 471234 (C.D. Cal. Feb. 5, 2016); Barber v. Nestle USA, Inc., 154 F.Supp.3d 954, (C.D. Cal. 2015).

Chains Act." However, the court dismissed these arguments because the plaintiffs were not able to support these allegations. With respect to the unfair prong under the UCL, the court relied upon the previous Mars cocoa case to rule that given that such information was readily available otherwise, its absence on packaging did not pose an issue. Building on the Mars dicta that "Mars's failure to disclose information it had no duty to disclose in the first place is not substantially injurious, immoral, or unethical," the court dismissed this prong of the UCL claim, too. The court also dismissed the case against the non-Costco defendants because they could not establish that the prawns they purchased were sourced by these defendants—thus, the injury they alleged could not be traced to the actions of the defendants. The district court's dismissal was affirmed by the Ninth Circuit.

The court's dismissal is particularly worrying in light of legal developments in July 2020. In 2005, a group of child laborers filed cases against Nestle, Archer Daniels Midland and Cargill alleging that they had been forced to work on the cocoa plantations supplying these companies and that the companies had "aided and abetted violations of international law norms that prohibit slavery, forced labor, child labor, torture; and cruel, inhuman, or degrading treatment". Although the case suffered a series of early losses, in 2018, the 9th US Circuit Court of Appeals called the case "plausible" and allowed it to proceed under the Alien Torts Claims Act (ATCA) on the basis that the companies were alleged to have paid kickbacks to local farmers to "guarantee the cheapest source of cocoa" and had, thus, facilitated child slavery on the cocoa plantations. Cargill and Nestle then appealed to the US Supreme Court and requested that the Court hold that corporations cannot be sued under ATCA. In recent years, courts in the US have significantly attenuated the scope and reach of ATCA but a ruling along the lines requested in this case would ring a death knell for similar human rights cases to be brought in the US.

#### Jabir et al. v. Kik

The Jabir case arose out of a fire that broke out in a Karachi garment factory and caused the deaths of approximately 260 people in 2012. Four Pakistani nationals subsequently filed a case in the Regional Court of Dortmund against KiK Textilien and Non-Food GmbH (KiK) because they were the main buyer associated with Ali Enterprises, the company operating the factory in question. The plaintiffs sought compensation for all families impacted by the fire as well as an apology and a commitment from the company to implement workplace safety measures at all of its outsourced clothing factories. After the case was filed, the ILO facilitated a negotiation, following which KiK paid \$5.15 million that would be used to, *inter alia*, provide pensions to the affected families. The company, however, did not acknowledge any responsibility and alleged that the fire was caused by arson and not due to unsafe working conditions. The case was significant because it was the first claim brought in German courts against a multinational company for human rights violations abroad. The Dortmund court dismissed the case, holding that under Pakistani law the statute of limitations to bring that case had expired. Moreover, the compensation paid by KiK was held to be a one-off payment that was not tantamount to a written admission of liability—the latter would have extended the limitation period. The plaintiffs have appealed the case.

#### Doe I et al. v. Wal-Mart Stores, Inc., 200916

The Wal-Mart case arose out of claims by employees of Wal-Mart suppliers located in Bangladesh, China, Indonesia, Nicaragua, and Swaziland and were based on a code of conduct that Wal-Mart included in its supply contracts. The code laid down minimum labor standards that the suppliers were bound to follow and allowed Wal-Mart to inspect and monitor these factories. The plaintiffs alleged that the emphasis on short deadlines and low prices in the supply contracts ensured that the suppliers were compelled to breach the code to fulfill the contract. Moreover, the plaintiffs alleged that in spite of knowing that the suppliers were breaching the code, Wal-Mart had not taken any steps to inspect the suppliers' facilities or to redress the violations. The Court of Appeals for the Ninth Circuit found, however, that the supply contracts relied upon by the employees were not meant to provide for the workers' protection and that Wal-Mart was not the plaintiffs' joint employer. Moreover, the court stated that the code did not impose a duty on Wal-Mart to inspect its suppliers' facilities but gave it a right to do so. Finally, the court ruled against the parties on their unjust enrichment claim in which the parties alleged that Wal-Mart had profited from knowingly contracting with suppliers with "substandard labor practices." The Court held that there was no prior relationship between the plaintiffs and Wal-Mart and that the connection between the parties "was too attenuated to support an unjust enrichment claim."

#### 2. Cases against Parent Companies for Actions by Subsidiaries

The jurisprudence on holding parent companies liable for actions of their subsidiaries with respect to the treatment of employees is extremely mixed between different jurisdictions and even within jurisdictions. For instance, in the 2012 decision in Chandler v. Cape plc17 in the United Kingdom, the Court of Appeal upheld a High Court decision that a parent company had a duty of care toward its subsidiaries' employees to guarantee safe working conditions. The case was brought by an employee of Cape Building Products Ltd, a wholly owned subsidiary of the defendant, due to the asbestos exposure and subsequent asbestosis suffered by him. Since Cape Building had ceased to exist, the plaintiff brought a negligence claim against the parent company in the United Kingdom (UK), alleging that they had violated the duty of care owed to him. The High Court upheld the plaintiff's claim and set out a three-part responsibility test to determine when a parent company would be responsible for the actions of its subsidiary. First, the damage must be foreseeable; second, there must be sufficient proximity between the parties; and third, it should be "fair, just, and reasonable" for a duty of care to exist. The Court of Appeal affirmed the High Court's ruling and added that parent companies would be liable for the health and safety conditions in their subsidiary when: (1) the businesses of the parent and subsidiary companies were "in a relevant respect the same"; (2) the parent company had or should have superior knowledge about health and safety in that industry; (3) the parent knows or should have known that the working conditions in the subsidiary company are unsafe; and (4) the parent knows or should have known that the subsidiary's employees would rely on the former to use its knowledge for their protection.

<sup>16</sup> Doe I et al. v. Wal-Mart Stores, Inc., 572 F.3d 677 (2009).

<sup>17</sup> Chandler v. Cape plc [2012] EWCA Civ 525.

However, this decision does not represent an unambiguous willingness on the part of British courts to lift the corporate veil. In the subsequent case of *Thompson v*. The Renwick Group plc, <sup>18</sup> which also dealt with the employee of a subsidiary company suffering from asbestos exposure, the court distinguished the case from *Chandler* on facts and held that in this case insufficient grounds existed for holding the parent company liable. Thus, while the Chandler test was affirmed, the case showed that meeting it could prove to be a challenge for claimants. The Court noted, for instance, that simply the appointment of a director to the subsidiary by the parent company could not give rise to an assumption of a duty of care between the parent and the subsidiary's employees.

In 2019, however, the UK courts allowed Zambian claimants to continue pressing their case against Vedanta in England. Vedanta Resources PLC et al. v. Lungowe et al. was brought by 1,826 Zambian villagers who alleged that Vedanta and its Zambian subsidiary had operated the Nchanga copper mine in a manner that caused water pollution and harmed neighboring communities. Both defendants challenged the jurisdiction of the English courts to hear the case because the alleged violations and harms had occurred in Zambia. Both the High Court and the Court of Appeal held that the courts in England had jurisdiction, a decision affirmed by the Supreme Court. The Court partly based its decision on the findings of the lower courts that the plaintiffs intended to pursue a genuine claim against Vedanta, at least in part because the subsidiary might be judgment-proof. Moreover, the court also ruled that multinational companies could put in place several models of management and control, which might give rise to a duty of care toward third parties. While the substantive issues will only be settled in due course, this case represents an important step forward in allowing cases to proceed against parent companies for violations by their subsidiaries.

Finally, in February 2020, the Canadian Supreme Court rendered a significant decision for business and human rights in *Nevsun Resources Ltd. v. Araya.*<sup>20</sup> The case concerned the working condition in the Bisha mine in Eritrea, which was operated by Nevsun's subcontractor and owned by Eritrea's ruling party. The plaintiffs in the case alleged "cruel, inhuman and degrading treatment," long hours, intimidation, and living in fear of being tortured. Nevsun rejected the allegations and declared that "the Bisha Mine has adhered at all times to international standards of governance, workplace conditions, and health and safety." In October 2016, the Supreme Court of British Colombia ruled that the case should proceed in British Colombia because there were doubts that the plaintiffs would get a fair trial in Eritrea. In November 2017, the British Columbia Court of Appeal rejected Nevsun's appeal to dismiss the suit and also allowed claims of crimes against humanity, slavery, forced labor, and torture to go forward against Nevsun. On February 28, 2020, the Canadian Supreme Court dismissed Nevsun's appeal and ruled that the lawsuit can proceed. Notably, the court held that international norms can be applied to the plaintiff's case. Nevsun argued the case should be thrown out because domestic courts are precluded from assessing the acts of foreign governments. This argument was rejected by the court.

<sup>18</sup> Thompson v. The Renwick Group plc [2014] EWCA Civ 635.

<sup>19</sup> Vedanta Resources PLC et al. v. Lungowe et al. [2019].

<sup>20</sup> Nevsun Resources Ltd. v. Araya [2020] SCC 5.

### F. Summary of Recommendations

In brief, as the cases above show, holding companies liable for human rights violation is not straightforward or predictable. In spite of that, however, courts are beginning to take steps to hold companies liable. What is also clear is that these cases are crystallizing important principles for sanctioning corporate human rights violations in the fisheries sector:

- The fisheries sector is unique by virtue of several of its characteristics, especially with respect to its transnationalism and the nature of the work itself. As such, solutions must draw upon an understanding of the networks and factors that perpetuate abuse and human rights violations within this sector.
- It is clear that repurposing laws intended for a different purpose (for instance, false advertising, consumer safety, and so on) for sanctioning human rights violations is likely to founder. Attempting to draft clear and unambiguous laws and regulations setting out company obligations and penalties is likely to go a lot farther.
- It is also clear that courts in jurisdictions like the US have faulted individuals for failing what might be called the "reliance" barrier—that is, the need to show that individuals have relied on company human rights statements prior to purchases. However, this barrier is likely to be met if more and more companies are required to make public statements and conduct campaigns about their efforts and if consumers can be shown to have relied on such representations prior to making their purchases.
- Regulation needs to be holistic and integrated. Surya Deva's integrated model of addressing corporate liability is particularly appropriate in this context. Deva notes that regulation should occur at three levels—institutional (via, for example, voluntary codes), national (through home and host country laws), and international (through international agreements and binding treaties setting out corporate human rights obligations). Moreover, Deva argues that regulatory initiatives should make an effort to include both incentives and disincentives and should impose civil, criminal, and social sanctions simultaneously to ensure robust enforcement of corporate human rights responsibilities.

### G. Role of Different Stakeholders

- Media: Investigations, campaigns, report on abuses and status of compliance, publicize
  existing cases and NGO efforts, publicize existing company codes so that consumer
  reliance on those codes and declarations becomes easier to prove.
- Legal community:
  - Judicial options: File cases in domestic courts in countries where the abuse occurs, file cases in the headquarters where the companies are located, target both the operators and the buyers. Contemplate strategic litigation for policy change as

well as compensation, push for countries to sign Convention C188 and enact implementing legislation for the international agreements.

- Legislative/policy options: Work with governments to set up rigorous domestic requirements for safe labor practices and push for integrated legal change that addresses, *inter alia*, criminal law, labor law, migration law, and environmental laws.
- Private sector options: Work with companies to set up robust due diligence, monitoring, and enforcement policies and actions, and incorporate contractual clauses that establish environmental and human rights obligations.
- International bodies: Publicize the issue more broadly, conduct investigations on human rights abuses in the fisheries sector, and work with the UN Special Rapporteur on Human Rights and the Environment to discuss the matter at a broader level, file a petition before the CESCR.
- Governments: Legislate, inspect, investigate, prosecute, monitor. Respect, protect, fulfill. Especially ensure that the full suite of reforms is adequately implemented and enforced.
- Academic community: Research abuse both qualitatively and quantitatively, build data platforms to analyze and predict hotspots, research gaps in laws and conventions.
- NGOs: Sensitize workers to their rights (for example, job orientations), educate employers, publicize and train different stakeholders about existing laws and legal changes, investigate issues, file cases, lobby the government for change.

### H. Future Research Questions

- How do you build a campaign around sensitizing consumers to human rights abuses in the fishing industry?
- Why and how have certification programs in fishing and other natural resources succeeded and failed in the past?
- What would a model law that addressed corporate liability for human rights look like?
- What national legislative changes were introduced by Thailand after the Associated Press (AP) investigation? Are they replicable and generalizable in countries like the United States?
- What are the barriers to implementation of Convention C188?

- Compare and analyze the model action plans of major companies with respect to eradicating slavery in fishing.
- Examine Convention C188 compliance measures by countries as a guide for other nations.
- Is there any obligation that can be argued for countries to move to a closed registry instead of an open one? How many of the countries implicated in IUU fishing and human rights abuses have open registries? What is their level of treaty compliance?
- Can states be sued for the actions of their flagged ships?
- What methodologies are used by benchmarks like Corporate Human Rights Benchmark to assess the robustness of human rights due diligence?
- Conduct case studies and process tracing for existing cases.

### V. FORCED LABOR AND INSURANCE: A Legal Note

Shalini Iyengar

#### Contents

<b>A</b> . ]	INTRODUCTION	. 152
<b>B</b> . 1	BACKGROUND	. 152
<b>C</b> . 1	RISKS, MORAL HAZARDS, AND INSURANCE	.153
D. '	TYPES OF ACTIONS	.154
<b>E</b> . J	JURISPRUDENCE ON INSURER LIABILITY FOR HUMAN RIGHTS ABUSES	.156
F. H	HUMAN RIGHTS DUE DILIGENCE: THE ALLIANZ CASE	.156

### A. Introduction

The insurance sector occupies a curious place within the broader corporate world. On one level, as corporate actors, they are subject to the vagaries of the markets. On the other hand, by determining which risks are acceptable and which risks can be spread out over time and space, insurance companies in a very real sense create the markets themselves. This puts insurance companies in a powerful position to effect change in the business-as-usual paradigm—after all, without the insurance companies' imprimatur, the wheels of global commerce would quite quickly draw to a standstill. This paper explores the many roles that insurance companies can play in curbing forced labor within the fishing industry, with a specific focus on the distinct space occupied by these companies.

### B. Background

The insurance sector has had a long and problematic history with human rights violations. For instance, within the American context, insurance companies have been held to be directly complicit in supporting the practice of slavery through insuring enslaved people so as to give slave owners three-fourths of the value of the slave if the slave happened to die. In other cases, enslaved people were considered to be collateral and were, on occasion, repossessed by the insurance companies in cases of default. At one point, some companies saw up to a third of their profits come from slave-related policies.

In more recent years, companies have increasingly begun to acknowledge this ugly legacy. From a legislative standpoint, in 2000, the Slave Era Insurance Policies Bill (SB 2199) became law in California. This requires insurers to disclose slaveholder insurance policies issued during the slavery era. This background provides an important framing for the current context of understanding the role and influence of insurance companies. It also adds urgency to the issue

<sup>1 &</sup>lt;u>California Department of Insurance, "Slavery Era Insurance Policies - SB 2199," accessed August 2020, http://www.insurance.ca.gov/01-consumers/150-other-prog/10-seir/sb2199.cfm.</u>

of the insurance sector's obligations to address endemic instances of forced labor and slavery within the fisheries sector. Arguably, this ugly backdrop creates a sharper sense of urgency for insurance companies to take steps to curb modern-day slavery by amending their insurance practices

In addition to the background of previous insurance company support for slavery, there has been increasing consciousness about the importance of identifying the human rights responsibilities and obligations of insurance companies. To begin with, the business and human rights legal framework (for instance, the United Nations Guiding Principles on Business and Human Rights) applies to insurance companies as well. Additionally, the United Nations Environment Program Financial Initiative published the Principles for Sustainable Insurance to identity the standards and obligations of the insurance sector.<sup>2</sup> These principles call for insurance companies to address environmental, social, and governance issues internally, with clients, and to work with governments to develop regulations in this sector. Companies also commit to publishing their progress in implementing the principles. A combination of these principles and company disclosure responsibilities under legislations such as the United Kingdom Modern Slavery International Institute for Environment and Development Act and the French Duty of Vigilance law arguably creates positive obligations for insurance companies.

Finally, there is a very real business case to be made for more attention by insurers to the risks associated with human rights violations in their insured companies. Human rights violations in supply chains, on property, and in working conditions potentially expose insurance companies to costly payouts and higher risk profiles, in addition to being damaging to their reputations.

### C. Risks, Moral Hazards, and Insurance

Insurance plays several roles in the commercial sphere. The first and perhaps most obvious role is that of risk shifting and risk pooling, since insurance works by guaranteeing *ex-post* indemnification.<sup>3</sup> However, insurance also has important roles to play in risk reduction and management.<sup>4</sup> The former is achieved by way of instruments such as "deductibles, exclusions, and experience-rating," which incentivize insured entities to reduce their risk exposure.<sup>5</sup> In addition, insurance companies rely on large collated databased to "classify and price" risk *ex-ante*, as well as to determine the validity of claims on an *ex-post* basis.<sup>6</sup>

All of these measures lead to understanding the ways in which insurance addresses the issues of moral hazard. Broadly speaking, moral hazard refers to the phenomenon of insurers taking less care than they otherwise would because they assume that the risks ensuing from their actions

- 4 Ibid.
- 5 Ibid.
- 6 Ibid.

<sup>2</sup> United Nations Environment Programme Finance Initiative, "PSI: Principles for Sustainable Insurance," accessed August 2020, https://www.unepfi.org/psi.

<sup>3</sup> Kyle D. Logue and Omri Ben-Shahar, Outsourcing Regulation: How Insurance Reduces Moral Hazard (Chicago: University of Chicago Law School, 2012), https://chicagounbound.uchicago.edu/cgi/viewcontent.cgi?article=1358&context=law\_and\_economics\_

have been outsourced to the insurer. In the specific context of forced labor, the phenomenon of moral hazard would lead to considerations of whether the insured parties would be more cavalier about the risks associated with trafficking and forced labor if they knew that they carried insurance specifically to reduce the costs of the risk. While it is beyond the scope of this paper to delve deeper into the issue, available literature suggests that this risk can be obviated in a variety of ways. This literature suggests that insurance has the potential to convert concerns over risks and potential liability to concrete losses and harm mitigation measures. For instance, the insurers might impose certain obligations including due diligence, adequate procedures, and monitoring on the companies employing workers. Insurers also tend to impose exclusionary clauses, including criminality, personal responsibility, and a lack of certain precautions being taken. In addition, insurers often establish acceptable standards for their insured clients and monitor their clients to ensure that these standards are maintained. Finally, by retaining the power to refuse to pay out in the event that their requirements are not satisfied, insurers possess a powerful instrument to ensure continuing compliance with the conditions under which the insurance was granted.

### D. Types of Actions

The following is a list of possible avenues for research:

- Getting the insurance sector to exclude risks arising from slavery and forced labor across
  their various product lines. In the section that follows, I outline some recent jurisprudence
  from the United States where insurance companies have attempted to use exclusionary
  language in the insurance contract to argue that they do not have a duty to indemnify or
  defend their customers in trafficking cases.
- Developing new insurance lines that specifically address issues of human trafficking, forced labor, and slavery. This could, for instance, cover fishermen and pay out in situations of slavery and forced labor. In the case of antitrafficking insurance, each person employed on a fishing vessel would be required to be protected by a policy against human trafficking whose premium would be paid by the employer. In the event that the employee in question was trafficked, the policy might cover compensation and repatriation for the insured. Such a policy would have the dual effect of helping protect the insured against labor exploitation while also dissuading the employer from employing trafficked labor, since the insurance company would presumably retain the right to sue the employer to recover the payout. The risk of the latter would ideally make the employer more diligent in ensuring that the labor they employ has not been trafficked. Similarly, insurance programs could be modeled along the same lines as existing workmen's compensation funds—these could be required to pay out in case of onboard injuries suffered by workmen.
- Creating and disseminating knowledge. Insurance companies are distinguished by their ability to take a macro-level view of circumstances and risks. As such, they are able to contribute to the information space in multiple ways. First, insurance companies can share

<sup>7</sup> Christopher Parsons, "Moral Hazard in Liability Insurance," The Geneva Papers on Risk and Insurance 28, no. 3 (July 2003): 448-71.

<sup>8</sup> Supra, note 3.

their projections of long-term risks with their customers to allow them to make more long-term sustainable decisions. For instance, given that the generation and synthesis of information is the bedrock of insurance companies' practice, it is possible for such information to be valuable for smaller companies that have neither the capacity nor the resources to generate similar insights. Second, insurance companies can use their informational heft to nudge companies into making better socially and environmentally responsible decisions. Additionally, insurance companies are in a position to signal human rights violations within different industries and locations. One interesting example of how this information can help in achieving human rights goals arises from the partnership between Aviva and the Amsterdam-based Seafood Stewardship Index (SSI). The SSI-Aviva partnership arose out of a perceived need to build a risk assessment tool for rating seafood companies on their sustainability performance. The tool has the stated objective of providing information to investors and the potential for such methods to generate and thereby improve transparency and accountability in cases of abuse.

- Developing a human rights due diligence process. The idea underlying such a process would include decisions on how human rights considerations can be integrated within the risk management and underwriting processes undertaken by the insurance companies. One example of such integration is visible in the Allianz environmental, social, and governance (ESG) guidelines discussed below. Description of the process of the proces
- Monitoring and accountability. Insurance companies have a role to play in several stages of the insurance process. Not only can risks be triggered at the time that the insurance is initially granted, such risks can be identified and highlighted in later stages of the process as well. For example, in one instance, Munich Re provided insurance coverage to a hydroelectric power plant, and during the construction of the dam, risk engineers noted poor working conditions at the site. The construction company was unwilling to engage, but the insurer was able to coordinate with the financers (arguably also because insurance is a necessary precondition to the continuation of funds) to improve site conditions.
- Getting insurance companies to deny insurance to those companies that have been involved
  in any incident having to do with forced labor, illegal, unreported, and unregulated fishing,
  or slavery.
- Getting insurance companies to deny insurance to fishing vessels without International Maritime Organization numbers or to those that have flags of convenience.

<sup>9</sup> The Seafood Stewardship Index was established with the intention "to independently and objectively measure the performance of companies across the seafood industry that have a major impact on the environment as well as on social issues."

<sup>10</sup> University of Oslo, The Rights of the Fishermen: A Study of Why the Human Rights Situation within the Seafood Industry Should Be Addressed, Faculty of Law (2018), https://www.duo.uio.no/bitstream/handle/10852/63813/masterthesis\_HUMR5200\_2018\_KAND8014.pdf?sequence=1&isAllowed=y\_

<sup>11</sup> CRO Forum, Human Rights and Corporate Insurance (Amstelveen, the Netherlands, 2014), https://www.thecroforum.org/wp-content/up-loads/2014/11/human-rights-and-corporate-insurance-november-2014-2.pdf.

<sup>12</sup> Allianz, ESG Integration Framework (Group ESG Office, 2018), https://www.allianz.com/content/dam/onemarketing/azcom/Allianz\_com/sustainability/documents/Allianz\_ESG\_Integration\_Framework.pdf.

### E. Jurisprudence on Insurer Liability for Human Rights Abuses

The case of Nautilus Insurance Company v. Motel Management Services, Inc.<sup>13</sup> concerned a suit for trafficking being brought by a minor woman against motel operators under Pennsylvania's Human Trafficking Law.<sup>14</sup> The plaintiff alleged, *inter alia*, that the motel operators' negligence and failure to intervene had allowed the trafficking to occur. In the course of the proceedings, the motel owners sought to have the insurers defend it in the matter. However, the insurer challenged this effort and argued that the assault and battery exclusion clauses in the insurance contract precluded any obligation to defend on the insurer's part. The district court ruled in the insurance company's favor and held that since the matter arose from "facts alleging negligent failure to prevent an assault or battery," the company was not bound to defend and indemnify the motel operators. The district court's decision was affirmed by the Court of Appeals for the Third Circuit.

In another case in Massachusetts, however, the court saw the insurer's liability differently. In Peerless, <sup>15</sup> a trafficking victim filed a case against a motel under the civil remedy provisions of the Trafficking Victims Protection Act. The court was, *inter alia*, asked to rule on whether the insurer had a duty to defend motel owners against trafficking charges. Unlike the Nautilus case, the court in this case held that the insurer had such an obligation, owing to the wording of the policy that covered "false imprisonment." The court thus noted that the insurer was liable to defend the claim. Taken together, the cases show how insurers face potential liabilities in trafficking cases.

### F. Human Rights Due Diligence: The Allianz Case

The insurance giant Allianz unveiled a policy to address ESG risks across its group of companies. The policy includes human rights risks and fisheries as two of their thirteen "sensitive business areas." Once ESG risks are identified, it triggers a mandatory referral to a specialized team that then analyzes the issue further. The guidelines note that the human rights aspect of the ESG screening is informed by the United Nations (UN) Universal Declaration of Human Rights, ILO standards, the UN Global Compact, and the UN Guiding Principles on Business and Human Rights. The company specifically examines the risks arising from the following workplace practices: (1) disregard for labor rights, including collective bargaining and unionization rights; (2) physical harm or inappropriate conduct of security personnel; (3) involvement in child labor; (4) substandard working conditions, including poor health and safety standards and low wages; and (5) substandard working conditions of subcontractors.

With respect to fisheries, Allianz bases its assessment on a variety of sources, including the Marine Stewardship Council, the Greenpeace International Blacklist, Food and Agriculture Organization of the United Nations guidelines, and international human rights law. In addition to fisheries risks, Allianz also examines workforce conditions, including (1) disregard for labor

<sup>13</sup> Nautilus Insurance Company v. Motel Management Services, Inc., No. 18-2290 and 18-3436 (3d Cir. 2019).

<sup>14 18</sup> Pa.C.S. § 3011 (Feb. 5, 2020).

<sup>15</sup> Ricchio et al. v. BIJAL, INC., Dist. Court, D. Massachusetts (2019)

Supra, note 12. The other areas include agriculture, fisheries and forestry, agricultural commodities investments, animal welfare in agriculture, betting and gambling, clinical trials, animal testing, defense, human rights, hydroelectric power, infrastructure, mining, nuclear energy, oil and gas, and the sex industry.

rights, including collective bargaining and unionization rights; (2) involvement in child labor; (3) involvement in forced labor or human trafficking; and (4) substandard working conditions, including health and safety standards and wages.<sup>1</sup>

Allianz uses these guidelines to screen insurance transactions and score the ESG performance of listed assets. (Companies that score below a certain threshold require either an explanatory note from the asset manager or divestment.) Moreover, as per its website, Allianz helps the lowest-scoring listed assets in their portfolio improve their ESG performance and also excludes certain sectors from investment based on ESG considerations. In assessing ESG issues, the company follows the steps in Figure 1.

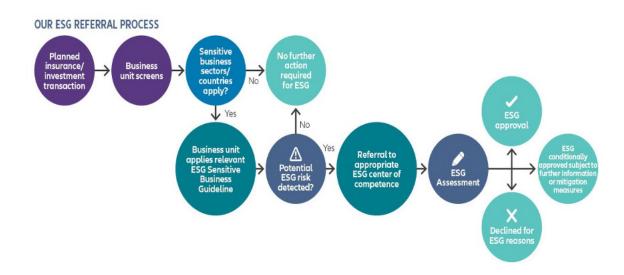


Figure 1. Allianz ESG Referral Process 2

<sup>1</sup> Ibid.

<sup>2</sup> Allianz, "Our ESG Approach," accessed August 2020, https://www.allianz.com/en/sustainability/business-integration/esg-approach.html.



### APPENDIX A.

### Acronyms and Abbreviations

AIS Automatic Identification System

ALC automatic location communicator

Anti-TIP Law Law of the Republic of Indonesia Number 21 Year 2007 on the Eradication of

the Criminal Act of Trafficking in Persons

AP Associated Press

**AREP** Advance Request for Entry into Port

**ASIPES** Association of Industrial Fisheries (Chile)

National Board for the Placement and Protection of Indonesian Overseas

Workers

**BST** Basic Security Training

BST-F Basic Security Training for Fisherman

C188 ILO Work in Fishing Convention
CBP US Customs and Border Protection

**CCAMLR** Convention for the Conservation of Antarctic Marine Living Resources

CDS Catch Documentation Scheme

**CESCR** Committee on Economic, Social, and Cultural Rights

**CLRA** Consumers Legal Remedies Act

CMS Satellite Monitoring Centers of the Maritime Authority (Ecuador)

**CNCP** cooperating nonmember party

COS Stanford Center for Ocean Solutions

**CPPS** Permanent Commission for the South Pacific

CTA Cape Town Agreement

CTT Commerce Trusted Trader

**CTTP** Commerce Trusted Trader Program

**DIRNEA** National Directorate of Aquatic Spaces (Ecuador)

**DWFD** Distant Water Fisheries Development Act

**EEPS** Expedited Entry Port System

**EEZ** exclusive economic zone

**ERS** electronic reporting system

**ESG** environmental, social, and governance

**EU** European Union

**FAD** fish aggregating device

**FAL** False Advertising Law

**FAO** Food and Agriculture Organization of the United Nations

FFA Pacific Islands Forum Fisheries Agency

FHRADC Fiji Human Rights and Anti-Discrimination Commission

FiTI Fisheries Transparency Initiative

**FMC** Fisheries Monitoring Centre

**SK-FMC** South Korea Fisheries Management Center

FOC Flags of Convenience

GDP gross domestic product

GDST Global Dialogue on Seafood Traceability

**GFW** Global Fishing Watch

GOI Government of Indonesia

GTA Global Tuna Alliance

**HCS** historical compliance score

IATTC Inter-American Tropical Tuna Commission

ILO International Labour Organization

**IMARPE** Sea Institute of Peru

IMO International Maritime Organization (often used to refer to IMO number)

INP National Institute for Fisheries (Ecuador)

IOC Indian Ocean Commission

**IOJI** Indonesia Ocean Justice Initiative

**IOM** International Organization for Migration

**IOTC** Indian Ocean Tuna Commission

ISO International Organization for Standardization
ISSF International Seafood Sustainability Foundation
ITF International Transport Workers' Federation

IUU illegal, unreported, and unregulated (fishing)

KTKLN Indonesian Migrant Worker Card

Lao PDR Lao People's Democratic Republic

MCS monitoring, control, and surveillance

MIMRA Marshall Islands Marine Resources Authority

MLC Maritime Labor Convention

MMAF Ministry of Marine Affairs and Fisheries (also sometimes referred to as KKP)

MoM Ministry of ManpowerMoSA Ministry of Social AffairsMoT Ministry of Transportation

MOU Memorandum of Understanding
MTC Minimum Terms and Conditions

MTU mobile transceiver unit

NAP National Action Plan

NGO non-governmental organization

NOAA National Oceanic and Atmospheric Administration

OECD Organisation for Economic Co-operation and Development

P4TKI Indonesian Fisherman Placement Agency

PAL Port Access Letter

PAN-IUU Plan of National Action to Prevent, Discourage, and Eliminate Illegal,

Undeclared, and Unregulated Fishing

PICs Pacific Island countries

PIPA Personal Information Protection Act

**PNA** Parties of the Nauru Agreement

**PSC** Port State Control

**PSCU** Port State Control Unit

**PSM** Port State measures

**PSMA** Port State Measures Agreement

RAR Risk Assessment Report

**RFMO** Regional Fisheries Management Organization

**RMI** Republic of the Marshall Islands

SBMI Indonesian Migrant Workers' Union

**SERNAPESCA** National Fisheries Service (Chile)

SIDES Online Supply Monitoring System for Fisheries Industry

SIGMA Geo-Maritime Information System
SIKPI Fish Freight Permit (Indonesia)

**SIPI** Fishing Permit (Indonesia)

SISESAT Satellite Tracking System (Peru)

SIUP Fishery Business Permit (Indonesia)

**SMS** satellite monitoring system

SNP La Sociedad Nacional de Pesquería (Peru)

**SPRFMO** South Pacific Regional Fisheries Management Organization

**StaRFISH** Regional Web Database Standardized Real Time Fisheries Information Hub

TFTEA US Trade Facilitation and Trade Enforcement Act

TIP Trafficking in Persons
UCL Unfair Competition Law

**UN** United Nations

**UNCLOS** United Nations Convention on the Law of the Sea

**UNGP** United Nations Guiding Principles on Business and Human Rights

**UNODC** United Nations Office on Drugs and Crime

**UPI** Fish Processing Units

VHC-DSC very high frequency digital selective calling

VHF very high frequency (radio)
VMS Vessel Monitoring System

**VoT** Victims of Trafficking

**WCPFC** Western and Central Pacific Fisheries Commission

**WRO** Withhold Release Order

**WWF** World Wildlife Fund

### APPENDIX B.

#### **Interviewees**

\*Note: Some interviews anonymous by request

#### **Ame Sagiv**

Humanity United, Director: Forced Labor & Human Trafficking

#### **Bronwen Golder**

Stanford Center for Ocean Solutions, Research Fellow

#### Cassandra Brooks

University of Colorado Boulder, Environmental Studies Program, Assistant Professor

#### Cristian Laborda

Laborda Abogados, Managing Director

#### Dawn Borg Costanzi

The Pew Charitable Trusts, International Fisheries Senior Officer

#### Eric Hartge

Stanford Center for Ocean Solutions, Research Development Manager

#### Francisco Blaha

Fisheries Specialist, Former Fisherman and Food and Agricultural Organization Officer

#### Henrik Österblom

Stockholm Resilience Centre, Professor and Science Director

#### Holly Koehler

International Seafood Sustainability Foundation, Vice President, Policy and Outreach

#### \* IOTC Secretariat

Indian Ocean Tuna Commission, Fisheries Compliance Officer

#### James Sloan

Cofounder of Siwatibau & Sloan Law Firm

#### Januar Dwi Putra

The David and Lucile Packard Foundation, In-Country Advisor for the Indonesia Marine Strategy

#### Jeromine Fanjanirina

Monitoring, Control, and Surveillance (MCS) Expert/Consultant, Indian Ocean and Eastern Africa

#### **Jessica Sparks**

University of Nottingham, Rights Lab Associate Director (Ecosystems and the Environment Programme), Assistant Professor of Antislavery Ecosystems

#### John Claussen

The David and Lucile Packard Foundation, Program Officer: Conservation and Science, Ocean Program

#### Juan Carlos Sueiro

Oceana, Fisheries Director

#### **Katie Thompson**

Stanford Center for Ocean Solutions, Research Assistant

#### Mark Young

International Monitoring, Control, and Surveillance Network, Executive Director

#### Pablo Guerrero

World Wildlife Fund Ecuador, Marine Conservation Director

#### Peter Horn

The Pew Charitable Trusts, International Fisheries, Director

### **Rhys Arangio**

Austral Fisheries Pty Ltd, Operations and Policy Officer

#### Susan Jackson

International Seafood Sustainability Foundation (ISSF), President

#### **Theo Verios**

Austral Fisheries Pty Ltd, Southern Deep-Sea Fleet Operations

#### Tom Pickerell

Global Tuna Alliance, Executive Director

**Tony Long** Global Fishing Watch, Chief Executive Officer

# APPENDIX C.

# **IUU Fishing Appendices**

# I. Timeline of Government Agencies Charged with the Management of Fisheries in Ecuador

Date	Organization	Description
1961 – Present	National Institute for Fisheries (INP)	The INP is the body charged with conducting biological, technical, and economic research on aquatic resources, with the goal of informing fisheries policy, development, and management. <sup>3</sup>
[Date Unknown] – Early 2000s	Ministry of Foreign Commerce, Industrialization, Fisheries, and Competitiveness	The Ministry of Foreign Commerce, Industrialization, Fisheries, and Competitiveness was made up of a number of sub-bodies that managed Ecuadorian fisheries. These were the National Council for Fisheries Development, in charge of developing fisheries policy; the Undersecretariat for Fishery Resources, in charge of supervising and implementing fisheries policy; and the Directorate General for Fisheries, also charged with supervision of the fisheries sector and implementation of fisheries programs.
Early 2000s – 2017	Ministry of Agriculture, Livestock, Aquaculture, and Fisheries	The Ministry of Agriculture, Livestock, Aquaculture and Fisheries operated as the main government agency charged with managing fisheries, in combination with related sectors focused on food security, like agriculture, livestock, and aquaculture.
2017 - 2019	Ministry of Aquaculture and Fisheries	The Ministry of Aquaculture and Fisheries was composed of the Undersecretariat of Fisheries Resources, the Undersecretariat of Aquaculture, and the Undersecretariat of Quality and Safety. The Ministry of Aquaculture and Fisheries housed a specialized organization, the National Fishery Institute (INP). The Undersecretariat of Fisheries Resources and the Undersecretariat of Aquaculture were engaged in management of their respective sectors, operating with an emphasis on the "promotion and sustainable use of national fisheries [and aquaculture.]"  The Undersecretariat of Quality and Safety was responsible for the regulation, control, and certification of the processes

<sup>3</sup> Instituto Nacional de Pesca, "¿Quienes Somos," accessed June 1, 2020, http://www.institutopesca.gob.ec/quienes-somos.

<sup>4</sup> Ministerio de Acuacultura Y Pesca, "Subsecretaría de Calidad Inocuidad," accessed June 1, 2020, http://acuaculturaypesca.gob.ec/sci-sede-y-jurisdiccion.

Date	Organization	Description
2019 – Present	Ministry of Production, Foreign Trade, Investments and Fisheries	Maintained the existence of an Undersecretary of Fisheries Resources, nestled under the Vice Ministry of Aquaculture and Fisheries. The Undersecretary is governed by Ministerial Agreement No. MPCEIP-DMPCEIP-2019-0034:
		"[T]he Minister of Production, Foreign Trade, Investments and Fisheries, delegates to the Undersecretary of Fisheries Resources of the Vice Ministry of Aquaculture and Fisheries the exercise of the competences, functions, powers and responsibilities legally established to the highest authority, to continue subscribing the normative administrative acts and authorizations for the execution of the fishing activity in its various phases; for which, it will have the support of the technical areas organically dependent on the said Undersecretariat, also having the advice and legal approval of the Legal Directorate of Aquaculture and Fisheries; without prejudice to the powers and competences granted in the Fisheries and Fisheries Development Law
2020 - Present	National Aquaculture and Fishing System	Created by the Organic Fisheries Law, also referred to as the Integrated Aquaculture and Fisheries System (Sistema Integrado de Acuacultura y Pesca); it is a database tool for use by the Fisheries Authority.
2020 - Present	Aquaculture and Fisheries Information System	A new system proposed by the Organic Fisheries Law, which will contain general information on aquaculture, fishing, and related activity and collect, store, process, and control information for the purpose of these activities. It will be administered by the governing body and accessible to all entities that make up the National Aquaculture and Fisheries System. Information included in the system will be statistical data as well as "geographic, territorial" data supported by "images, satellites, and others generated by the governing body".

### II. Indian Ocean Collaborative Information Tools

#### Geo-Maritime Information System (SIGMA)

- Data is shared automatically once received by national VMS centers.
- System relies on functional and operational national VMS systems that have the capacity to automatically forward the positioning data of relevant vessels to one regional computer server, managed at the IOC headquarters.
- Allows fusion of multiple data sources, including VMS data that can be represented on sea charts, for authorized operators.
- Can also fuse data sources other than VMS, such as AIS Satellite, radar satellite, AIS by shore-based station, long range identification and tracking systems, electronic logbook, etc.
- Improves the targeting and effectiveness of at-sea and port-based control operations.
   The regional VMS fuses the VMS data of licensed foreign fishing vessels working in the IOC zone and fishing vessels of coastal states operating at the regional scale.
- IOC's regional VMS system is unique as IOC states all have full capacity to manage an operational national VMS system in their respective centers and agree to cooperate to reinforce the level of surveillance.<sup>6</sup>

#### Regional Web Database StaRFISh

- StaRFISh is a web-based regional information data exchange system of the Southwest Indian Ocean region.
- Streamlines the management of MCS
   activities and rapidly identifies anomalies that
   illegal behaviors could generate, as well as
   standardizes information management across
   the countries.
- Data shared need to include information on the vessels, such as register, contact details, register of licenses entrances in/exits from, passages and innocent passages through EEZs, management of port inspections (a link is established with the e-PSM system of IOTC) to avoid countries entering the same information twice (on e-PSM and StarRFISh), management of inspections at sea at the national and regional levels, management of offenses, observer reports (provided on their respective EEZs), and a directory of all fisheries actors.<sup>7</sup>
- A regional memorandum for data exchange was signed between IOC member countries with the general purpose of providing member states with a real-time view of fishing vessel activity as a whole in the cooperation zone.
- Advantages: data sharing, cumulative enrichment of information, centralization of the information, listing of offenses, central maintenance, reduced costs, rapid deployment of the information, no compatibility issue (webbased system), risks analysis, improved fisheries management, MCS operations, and improved targeting of controls, especially for vessels that rarely visit the region's ports.<sup>8</sup>
- Note: While the idea behind StaRFISh was to create a link between e-PSM and the system, this has not been done yet due to a lack of funding.

<sup>6</sup> Jeromine Fanjanirina, "The IOC Information Exchange Tools for Fisheries Monitoring Control and Surveillance," Indian Ocean Commission, SmartFiche 37.

<sup>7</sup> Ibid.

<sup>8</sup> Ibid.

# III. AREP system (IOTC)



# Advance Request for Entry in Port (AREP)

	Vessel information		
Intended port of call			
Port of call state			
Estimated local date and time of arrival			
Purposes	-		
Port of last port call / Date of last port call			
Name of vessel		Flag	
Type of vessel		IRCS	
Vessel contact information	- FishingMaster: Phone: Email: - Master: Phone: Fax: Email:j - Owne Phone: Fax: Email: - Agent: Phone: Email: - BeneficialOperator: - Operator:		
Certificate of Registry id		IMO id	
External id		IOTC id	
VMS scope		VMS type	
Type of vessel		Vessel dimensions (length/beam/d raft)	
Vessel master			
Types of gear			
Port of registration			

		Relevant F	ishing authorisation(s)			
Identifier	Issued by	Valid from - Valid to	Fishing area(s)	Species	Gear	Туре
Attachments	;;;					

Relevant Transhipment authorisation(s)					
Identifier	Issued by	Valid from - Valid to			

Transhipment information									
Date In I	Port / At Sea	Received/offlo aded	Vessel name	Flag	ld number	Species	Product form	Catch area(s)	Quantity



# Advance Request for Entry in Port (AREP)

Evaluation of catch to be offloaded								
Species	Product form	Catch area(s)	Quantity on board declared (Kg)	Quantity to be landed (Kg)	Quantity to be Transhiped (Kg)			

# IV. Risk Assessment Report (IOTC)



# **Risk Assessment Report**

	Vessel information		
Intended port of call			
Port of call state			
Estimated local date and time of arrival			
Purposes	- Refueling - Landing		
Port of last port call / Date of last port call			Apr 11, 2020 12:00:00 AM
Vessel Name		Flag	
Type of vessel	Purse seiners	IRCS	
Vessel contact information	- Master: Phone: Email: - Agent: Phone: Email: - Operator: Phone: Email: - FishingMaster: Phone: Email: - Owner: Phone: Email:		
Certificate of Registry ID, NRN or CFR		IMO id	
External id		IOTC id	
VMS scope	Yes: RFMO(s)	VMS type	Inmarsat C, Iridium
Type of vessel	Purse seiners	Vessel dimensions (length/beam/d raft)	89.40 / 14.30 / 7.00
Vessel master			
Types of gear	Purse seine		
Port of registration			

Level 1 Report	
✓ Vessel listed as IUU	No
Valid Flag State Authorization to Fish DO NOT EXIST	No
✓ Vessel listed on IOTC Record of Authorized vessels	Yes
✓ Vessel Identifiers Mismatch	No
✓ Previous denial of port entry	No

Appendices Appendices



Jan 1, 2016 Dec 31, 2020

# **Risk Assessment Report**

lote etol								
Serious misreportin	ng on previous catch de	eclaration		No				
VMS on board - Inmarsat C - Iridium				Yes				
✓ AREP Submited				Yes				
		Level 2 Report						
	·	207012 Hopoit						
✓ Previous IUU Listing	g			No				
Owner in IUU List				No				
✓ Previous AREP in the second of the sec	nis Port			Yes				
✓ No reply to RAI				No				
		100						
	L	_evel 3 Report						
	Ve	essel Particulars						
Mismatching attribute name	Mismatching attribute office	cial value	Mismatching attribute actual value					
Owner address								
Owner name								
		Active vessel		9				
Ref Year	Vessel Name	Active vessel	Flag Country					
2017	700011141110		. ag cominy					
2016								
2012								
2011								
Flag History								
Authorized From	Authori	ized To	Flag Country					
Jan 1, 2014	Dec 31, 2020		, ag oomaj					
Dec 1, 2010	Dec 31, 2013							
A di di di		Owner History						
Authorized From Authorized To	Owner Name		Owner Address					



# **Risk Assessment Report**

Dec 1, 2010 Feb 12, 2014 Armement SAPMER Darse de pche - Magasin 10, BP 2012, 297 823 Le Port Cedex, La Runion, France

License to fish in Coastal State waters			
Year when the vessel was declared active	Issuing country		
2017	Madagascar, Mauritius		
2016	France (Territories), Comoros, Mauritius		
2015	France (Territories)		
2012	Seychelles		
2011	Madagascar		
2010	Seychelles, Mauritius		

At-sea transhipments			
Deployment id	Carrier Vessel	Transhipment start	Transhipment end
	NONE		

Invalid Flag State Authorizations To Fish				
Name	Valid from - Valid to	Attached		
NONE				

# APPENDIX D.

# **Forced Labor Appendices**

# I. Definitions

Term	Definition	Source
Forced or compulsory labor	inder the threat of a nenalty and for which the nergon	
Human trafficking or trafficking in persons	"The recruitment, transportation, transfer, harboring or receipt of persons, by means of the threat or use of force or other forms of coercion, of abduction, of fraud, of deception, of the abuse of power or of a position of vulnerability or of the giving or receiving of payments or benefits to achieve the consent of a person having control over another person, for the purpose of exploitation. Exploitation shall include, at a minimum, the exploitation of the prostitution of others or other forms of sexual exploitation, forced labor or services, slavery or practices similar to slavery, servitude or the removal of organs."	Palermo Protocols, pg 42
Modern slavery	"Traditional practices of forced labor, such as vestiges of slavery or slave-like practices, and various forms of debt bondage, as well as new forms of forced labor that have emerged in recent decades, such as human trafficking."	ILO, General Survey on the fundamental Conventions concerning rights at work in light of the ILO Declaration on Social Justice for a Fair Globalization Report of the Committee of Experts on the Application of Conventions and Recommendations, 2012, ILC.101/III/1B, para. 272.
Slavery	Slavery is the "status or condition of a person over whom any or all of the powers attaching to the right of ownership are exercised," as defined in 1926 by the League of Nations.	Blood and Water. 2019. EFJ 6.

Term	Definition	Source
Human rights	"Human rights are rights inherent to all human beings, regardless of race, sex, nationality, ethnicity, language, religion, or any other status. Human rights include the right to life and liberty, freedom from slavery and torture, freedom of opinion and expression, the right to work and education, and many more. Everyone is entitled to these rights, without discrimination."	<u>UN Website</u>
Foreign fishing vessel	"Any vessel, ship or other craft which is used for, equipped to be used or of a type that is normally used for fishing which operates in the fisheries waters of an FFA Member and is not part of the domestic fleet of that FFA member."	The Harmonised Minimum Terms and Conditions for Access by Fishing Vessels, pg 3
Wild capture fisheries	"All kinds of harvesting of naturally occurring living resources in both marine and freshwater environments."	<u>GreenFacts</u>
Distant water fishing nations	"A term used to describe those countries that fish outside their own territories and usually extend their range of action to faraway places. The establishment of the economic exclusive zones regulated the access to these areas in order to avoid conflicts for the use of marine resources between coastal and distant nations."	ISSF
Seafarer	"Any person who is employed or engaged in any capacity on board a seagoing ship."	Maritime Labor Convention, Article 2(f)
Fisher	"Every person employed or engaged in any capacity or carrying out an occupation on board any fishing vessel, including persons working on board who are paid on the basis of a share of the catch but excluding pilots, naval personnel, other persons in the permanent service of a government, shore-based persons carrying out work aboard a fishing vessel and fisheries observers."	ILO C188 Work in Fishing Convention, Article 1(e)

# II. Multilateral Bodies

### Relevant International Bodies (Such as Multilateral and Bilateral Institutions, Regional Coalitions)

Acronym	Name	Notes
ASEAN	Association of Southeast Asian Nations	Ten member states: Indonesia, Malaysia, Philippines, Singapore, Thailand, Brunei Darussalam, Viet Nam, Lao PDR, Myanmar, and Cambodia. Focused on strengthening relations and collaborations, economic growth, social progress, cultural development, and peace and stability in the region. The ASEAN Charter serves as a firm foundation that provides the ASEAN community legal status and an institutional framework for ASEAN.
FAO	Food and Agriculture Organization	Specialized agency in the UN that leads international efforts to defeat hunger. Goal to achieve food security for all and make sure that people have regular access to enough high-quality food to lead active, healthy lives. Has 194 member states.
FFA	Pacific Islands Forum Fisheries Agency	Strengthens national capacity and regional solidarity so its 17 members can manage, control, and develop their tuna fisheries within their exclusive economic zones (EEZs). Advisory body providing expertise, technical assistance, and other support to its members. Members 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).
ILO	International Labour Organization	Mission to promote rights at work, encourage decent employment opportunities, enhance social protection, and strengthen dialogue on work-related issues. Tripartite structure gives equal voice to workers, employers, and governments to ensure that views of social partners are closely reflected in labor standards and in shaping policies and programs. Has 187 member states.
IMO	International Maritime Organization	United Nations specialized agency with responsibility for the safety and security of shipping and the prevention of marine and atmospheric pollution by ships. IMO's work supports the UN Sustainable Development Goals (SDGs). Global standard-setting authority for the safety, security, and environmental performance of international shipping.
IOM	International Organization for Migration	Leading intergovernmental organization in the field of migration. Works closely with governmental, intergovernmental, and nongovernmental partners. Dedicated to promoting humane and orderly migration for the benefit of all by providing services and advice to governments and migrants. Focus on migration and development, facilitating migration, regulating migration, and forced migration. Has 173 member states.

ITF	International Transport Workers' Federation	Democratic, affiliate-led federation and world's leading transport authority. Fights to improve working lives and connect trade unions from 150 countries to help members secure rights, equality, and justice. Voice for 20 million workers worldwide. Operates internationally and wields substantial bargaining and lobbying powers with international bodies and governments. Coordinates campaigns against multinationals and governments that bring results and change.
UN	<u>United Nations</u>	International organization founded in 1945. Has 193 member states. Takes action on the issues confronting humanity in the twenty-first century, such as peace and security, climate change, sustainable development, human rights, disarmament, terrorism, humanitarian and health emergencies, gender equality, governance, food production, and more. Provides a forum for members to express their views in the General Assembly, the Security Council, and the Economic and Social Council and other bodies and committees.
UNODC	<u>United Nations</u> Office on Drugs and <u>Crime</u>	Offers practical assistance and encourages transnational approaches to action against drugs, organized crime, corruption, and terrorism. Implements the 2030 Agenda for Sustainable Development and the 17 SDGs.
WCPFC	The Western and Central Pacific Fisheries Commission	Established by the Convention for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean (WCPF Convention). Draws on many of the provisions of the UN Fish Stocks Agreement while reflecting the special political, socioeconomic, geographical, and environmental characteristics of the western and central Pacific Ocean (WCPO) region. Seeks to address problems with high seas fisheries management and sets the limit for the amount of fish that may be caught in the western and central Pacific Ocean.

# III. Multilateral Instruments

Acronym	Name	Organization	Established, Signed, Adopted	Entered into Force
C029	Forced Labor Convention, 1930 (No. 29)	ILO	1930	1932
C185	Seafarer's Identity Documents Convention (revised)	ILO	2003	tbd
C188	Work in Fishing Convention	ILO	2007	2017
СТА	Cape Town Agreement	IMO	2012	tbd
MLC	International Maritime Labor Convention ("Seafarer's Bill of Rights")	ILO	2006	2013
MTCs	The Harmonised Minimum Terms and Conditions for Access by Fishing Vessels	FFA	2016	2020
Palermo Protocols	United Nations Convention against Transnational Organized Crime and the Protocols Thereto	UN	2000	2003
PSMA	Port States Measures Agreement	FAO	2009	2016
Ruggie	UN Guiding Principles on Business and	UN Human	2011	
Principles	Human Rights (Ruggie Principles)	Rights Council		
SDGs	Sustainable Development Goals	UN	2015	2030
STCW	International Convention on Standards of Training, Certification, and Watchkeeping for Seafarers	IMO	1978	1984
UDHR	Universal Declaration of Human Rights	UN GA	1948	n/a
UNCLOS	United Nations Convention for the Law of the Sea	UN	1982	1994
	UN FAO's <u>draft guidance on social</u> responsibility in fishing	FAO	2019	
	UN International Covenant on Economic, Social, and Cultural Rights	UN GA	1966	1976
	UN International Convention on the Protection of the Rights of All Migrant Workers and Members of their Families	UN GA	1990	2003

