Improving Human Rights in Global Fisheries

by

Gabrielle Erica Lout

A Dissertation in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy

Approved April 2022 by the Graduate Supervisory Committee:

Kathleen Vogel, Chair Elena Finkbeiner Nalini Chhetri

ARIZONA STATE UNIVERSITY

May 2022

ABSTRACT

Widespread human rights abuses have been documented in global fisheries, prompting governments, intergovernmental organizations, non-governmental organizations, and businesses to reconsider human rights as a key tenet of seafood sustainability. New and existing approaches are aiming to integrate human and labor rights into sustainability initiatives. These efforts encompass the development of new tools for conducting human rights due diligence and the modification of marketbased approaches like third-party certifications, fishery improvement projects, and buyer sourcing commitments to include criteria for social responsibility. It is critical to evaluate these approaches to better understand their efficacy and areas in need of improvement. This dissertation explores how approaches for seafood sustainability are being adapted to protect and respect human rights of fishers and fishworkers. First, I examine the efficacy of a recognized human rights risk assessment tool: the Social Responsibility Assessment Tool for the Seafood Sector (SRA). Through a preliminary assessment of human rights risk in Guyana's artisanal fishery, I determined that the SRA is an effective approach to identify visible and potential risk, though it must be supplemented with engagement with fishers and fishworkers through interviews. Next, I evaluated labor conditions in the shrimp and groundfish fishery of the Guianas-Brazil Shelf using a novel evaluative framework for decent work. I uncovered cross-jurisdictional challenges including trafficking and limited worker representation. My evaluative framework enabled a holistic analysis of decent work, identifying linked concerns such as widespread illegal fishing and threats to food security. Finally, I conducted an analysis of market-based approaches that include criteria for social responsibility. Interviews with experts highlight that market-based approaches, particularly fishery improvement projects, hold great potential as strategies to improve human rights in fisheries. However, concerns

around market-based approaches include a lack of strong enforcement mechanisms, limited worker representation, and the voluntary nature of initiatives hinder effective change on the ground. Overall, my research suggests that efforts to improve human rights in fisheries are nascent and need further development. By encouraging mandatory due diligence, improved worker representation, and stricter accountability, interventions can more effectively address risks and ensure rights of fishers and fishworkers are protected and respected.

DEDICATION

For all fishers and fishworkers.

And for the scientists, practitioners, and dreamers who work tirelessly to create a more equitable and just world.

"Whenever you are in doubt, or when the self becomes too much with you, apply the following test. Recall the face of the poorest and the weakest man whom you may have seen, and ask yourself, if the step you contemplate is going to be of any use to him. Will he gain anything by it? Will it restore him to a control over his own life and destiny?"

-Mahatma Gandhi in Tendulkar 1969

ACKNOWLEDGEMENTS

I am obliged first to the O'Odham and Pee Posh peoples—past and present—whose ancestral homelands I worked and lived on while conducting my doctoral studies, research, and writing at Arizona State University.

Getting your PhD is a solitary journey full of personal trials and tribulations and self-discovery. However, no one achieves success alone. I owe the successful completion of this dissertation to the countless individuals who have supported me and made this work possible. First and foremost, this research would not have been possible without the participation of the fishers and fishworkers in Guyana, Suriname, and Trinidad and Tobago who opened their lives to me, trusted me, and allowed me to share their story. I also thank all the individuals who participated in interviews for their valuable insights.

I owe an immense debt of gratitude to my dissertation committee. Dr. Kathleen Vogel has been an incredible advisor, showing me great kindness and patience in every struggle and every milestone. I am sincerely appreciative for her willingness to join me on this journey without reservation. Dr. Elena Finkbeiner, my mentor and friend, has been indispensable to my development as a scholar and practitioner. She has nurtured my style of work, grounded in assertiveness and detail, while challenging me to speak louder and be bolder. Most importantly, she has shown me the importance of leading this work with empathy and humility. I thank Dr. Nalini Chhetri for introducing me to Guyana and supporting my work in this special place and challenging me to be a better scholar. For this group of strong women and their leadership, I am deeply grateful.

I have been privileged to work with amazing people from around the world, who have been fundamental in my growth. I thank my Conservation International family—Dr. Jack Kittinger, Juno Fitzpatrick, and Pablo Obregon—for their mentorship

and for allowing me to jump on their moving train years ago. I thank all those who supported this work from Conservation International-Guyana, Ocean Outcomes, and the Food and Agriculture Organization. I also thank Dr. Regina Ostergaard-Klem, my mentor and friend, who has inspired me since my master's.

My gratitude extends to my community at Arizona State University. I want to thank ASU and the HSD program for giving me the freedom and resources to pursue complex interdisciplinary research. Special thanks to all the SFIS faculty and staff, Andra Williams, Dr. Kiki Jenkins, Dr. Heather Smith-Cannoy, the Global Human Rights Hub, Amy Scoville-Weaver, and my entire HSD cohort, for they have all played a significant role in my time at ASU.

None of this would be possible without the support of my friends. Deepest gratitude to Jess Givens and Nicole Mayberry, my dearest onions, they have been my light in the darkness and strength to keep crawling through the PhD desert. Until it hurts. I thank Bethany Richards, Matt Hartwig, Delphine Homerowski, the Renfros, the Gam-Dinis, Carissa Cabrera, Adam Ayers, Kizzy Corbin, Brett Goldberg, and Katie Wright for bringing me joy and balance over coffee, beers, and Sunday hangs.

Finally, I am who I am because of my family—my greatest teachers. I thank my mom, Clara, for exposing me to the world and encouraging me to fight for a cause bigger than myself. I thank my dad, Randy, for showing me the importance of commitment and quiet perseverance. I thank my sister, Alyssa, from who I learned empathy, compassion, and resilience. I thank my brother, Eric, who has shown me that humility is strength and the foundation of true leadership. I am grateful for my nephew Callum, my dove baby, who inspires me to work tirelessly to build a future for the next generations. I thank the Grecos, my second family, for showing me that "family" comes in many forms. Lastly, I thank my partner, Jack, for seeing me, all that I am and all that I will be. Incandescent. You all are my inspiration.

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Chapter 1

INTRODUCTION

Improving human rights in global fisheries has emerged as a sector focus following the documentation of widespread human rights abuses and labor violations in seafood supply chains around the world. Since 2014, investigative journalism, as well as scholarly work, have documented occurrences of exploitative working conditions, forced labor, and human trafficking in prominent fishing nations such as Thailand and China (Mason et al., 2015; Tickler et al., 2018; Walk Free Foundation, 2018). Initial reports were focused on egregious violations in a subset of regions like Southeast Asia (Lewis et al., 2017; Marschke & Vandergeest, 2016). However, violations have also been reported in countries with historically well-managed fisheries and notable human rights records such as the United States and Great Britain (Mendoza & Mason, 2016; Murray, 2014). Human rights violations plaguing global fisheries are much broader than that of labor exploitation, and include economic, social, and cultural (ESC) rights violations, such as threats to food and livelihood security and inequities around gender (Finkbeiner et al., 2021; Teh et al., 2019).

Addressing human rights violations in fisheries is not only an issue of ethics, but also involves significant legal, policy, and environmental implications. As human rights impacts can arise in the process of doing business, states and businesses are expected to protect and respect human rights, which is established in the United Nations Guiding Principles on Business and Human Rights (UNGPs) (United Nations, 2011). With growing evidence of abuses occurring in the seafood sector, businesses must consider how they address human rights risks. The UNGPs provide the framework for businesses to respect human rights particularly through effective human rights due diligence to identify, prevent, and mitigate any human rights risks

throughout supply chains and business operations (United Nations, 2011). At the same time, human rights risks and violations pose a threat to environmental sustainability which has historically been the primary focus of conservation efforts. Violation of rights contributes to vulnerability and insecurity of fishers and resource dependent communities and obstructs efforts to improve environmental sustainability (Allison et al., 2012; Bennett et al., 2017; Ratner et al., 2014). Improving human rights in fisheries is imperative to facilitate long-term benefits of fisheries, securing global food security, and protecting the livelihoods of the 880 million men and women engaged in fisheries work (FAO, 2020).

The increased visibility of human rights violations and the posed risks to environmental sustainability and industry operations has prompted governments, intergovernmental organizations (IGOs), nongovernmental organizations (NGOs), and businesses to act and reconsider social responsibility (a broad term used to encompass human rights, labor rights, and economic development) as a foundational element of seafood sustainability which has primarily been focused on the environment. Seafood sustainability refers to the production of seafood that is done in a way that reduces environmental impacts, ensuring long-term health and stability of a given species. Various new approaches and initiatives have emerged to improve the sector's human-rights record including the development of tools and resources for conducting human rights due diligence and evaluating social risk, as well as approaches to analyze and monitor working conditions. Increasingly, human rights, labor rights, and other social issues such as community development are being integrated into market-based approaches to seafood sustainability such as thirdparty certifications, fishery improvement projects (FIPs), and buyer sourcing commitments. However, with the proliferation of approaches, it is imperative to critically evaluate their efficacy and areas in need of improvement. In this

dissertation, I seek to better understand how sustainability approaches are being adapted to protect and respect human rights of fishers and fishworkers in global fisheries. By critically examining current approaches to improve human rights in fisheries, it is possible to collect data and provide analyses that can highlight which approaches to embrace and drive forward, as well as provide recommendations for how interventions can be more effectively implemented.

In Chapter 2, I apply and evaluate a new human rights risk assessment tool in the context of Guyana's artisanal fishery. The Social Responsibility Assessment (SRA) Tool for the Seafood Sector (Conservation International, 2021), is an emergent human rights risks assessment tool that can be applied to assess risks of social issues, uncover critical information gaps, and identify areas in need of improvement in diverse fisheries. Chapter 2 is the initial evaluation of the SRA and its application. It demonstrates that the SRA is an effective tool to identify visible and potential risk, as well as data gaps and areas where more attention should be focused. I also find that desk-based research must be accompanied by adequate engagement with fishers and fishworkers through interviews, observation, and other primary data collection methods. Furthermore, effective implementation of the SRA depends on specialized expertise and competencies related to human and labor rights in the context of fisheries, and knowledge of the local context, culture, and language of the assessed fishery, emphasizing the need for increased capacity building to cultivate social expertise in fisheries and conservation. As the initial assessment of the human rights risk in Guyana's artisanal fishery, this chapter demonstrates that there are human rights concerns in the fishery including labor violations, inequity, and threats to livelihood security. Integrating human rights and social issues in general into fisheries plans and decision-making should be a key priority moving forward.

In this chapter, I contribute to the academic literature on human rights due diligence, including its application, approaches, and tools. This chapter details the implementation of human rights due diligence using the SRA, advancing the Monterey Framework and its associated tool (Conservation International, 2018; Kittinger et al., 2017). It iterates the importance of worker engagement and specialized expertise as key elements of due diligence cited by scholars and organizations working at the nexus of human rights and industries like seafood and garments (ILRF, 2018; Outhwaite & Martin-Ortega, 2019; Sinkovics et al., 2016; Worker-Driven Social Responsibility Network, 2022). It also advances the literature related to risk-based approaches, articulating the benefits of a risk-based approach and its ability to identify both visible and potential human rights abuses and risks (Garcia Lozano et al., 2022; Taylor et al., 2009).

In Chapter 3, I seek to understand how to evaluate and improve decent work in fisheries. Decent work encompasses employment that respects the fundamental rights of workers, in conditions of safety and dignity (ILO, 2015). A comprehensive approach to evaluating decent work in fisheries, despite its establishment in several legally binding and non-binding instruments and promotion in diverse efforts by NGOs, IGOs, and governments, is still lacking. Using a holistic evaluative framework that I designed drawing on the most relevant elements of recognized instruments—the International Labor Organization (ILO) Work in Fishing Convention (C188), the SRA, and the Food and Agriculture Organization's (FAO) Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines)—I use desk-based research and semi-structured interviews with fisheries stakeholders to evaluate the labor standards and working conditions of the transboundary shrimp and groundfish fishery of the

Guianas-Brazil Shelf, focusing on Guyana, Suriname, and Trinidad and Tobago. Chapter 3 demonstrates that despite the Guianas-Brazil Shelf region's legislation and ratifications relevant to the protection of workers' rights, there are significant gaps in protection of decent work for those engaged in the fisheries sector due to informal employment, poor implementation and enforcement of rules and regulations, and limited worker representation in decision-making and implementation of fisheries interventions and programs. In addition, I use the evaluative framework, inclusive of criteria for food security and illegal, unreported, and unregulated (IUU) fishing, as a mechanism to identify gaps in protections for workers and areas of improvement but also glean important information on the relationship between labor concerns and other fisheries issues such as IUU fishing. This chapter advances the academic literature on decent work in the context of fisheries. Research has been largely deficient around decent work, its elements and how it is evaluated, as well as its application in diverse fisheries and geographies (Garcia Lozano et al., 2022). In addition, this chapter adopts and incorporates several key instruments and frameworks to assess labor conditions using a novel evaluative approach. In doing so, this study directly advances how decent work is defined and analyzed, building on the work of scholars like Alejandro Garcia Lozano and organizations such as the FAO and the ILO.

Finally, Chapter 4 examines how human rights are being implemented into market-based approaches for seafood sustainability. I implemented a desk-based review of recognized market-based interventions that include criteria for human rights, labor rights, and other social issues, to evaluate the landscape of interventions, their referenced human rights instruments, and implementation guidelines including mechanisms for compliance and worker representation. Based on semi-structured interviews with experts involved in social responsibility, I provide

a critical evaluation of three approaches—third-party certifications, FIPs, and buyer sourcing commitments—detailing their potential and their limitations as approaches to address human rights in the seafood sector. Chapter 4 demonstrates that marketbased approaches can be an effective strategy to improve human rights by establishing a minimum level of compliance for the sector (certifications), addressing human rights improvements over time (FIPs), and increasing accountability of businesses to address human rights in supply chains (buyer sourcing commitments). However, it is critical to address the current limitations of these approaches, especially their voluntary nature, and move towards mandatory human rights due diligence, better practices for worker engagement, and stricter mechanisms for accountability. Chapter 4 contributes to the academic literature of both marketbased approaches and social responsibility in the Sustainable Seafood Movement. Notable scholars have analyzed the efficacy of market-based approaches regarding environment sustainability such as Jennifer Jacquet, Jason Konefal and Cathy Roheim, yet without specific attention to social responsibility. Thus, this chapter makes a notable contribution to the social tenet of market-based approaches, detailing how new and existing tools integrate human and labor rights including ESC rights (Finkbeiner et al., 2021; Sharma, 2011; Teh et al., 2019), as well as elements like worker representation.

My dissertation makes significant contributions to the nascent, but scarce academic literature on human rights due diligence, decent work, and social responsibility in the context of global fisheries, but also advances knowledge on human and labor rights in fisheries generally, as well as the working conditions and social risks fishers and fishworkers face each day. It provides critical information and data related to human and labor rights in the fisheries sectors of Guyana, Suriname, and Trinidad and Tobago. More broadly, by understanding the suite of risks and

conditions faced by fishers and fishworkers, conservation practitioners, governments, and businesses can begin to address issues more effectively like equity, food and livelihood security, and gender in their management approaches.

I conducted this dissertation utilizing a *rights-based approach*, with the goal of supporting the improvement and realization of rights for fishers and fishworkers. A rights-based approach is a conceptual framework that integrates human rights standards and principles and is directed at the protection and promotion of rights, especially for vulnerable and marginalized groups (Campese et al., 2009; FAO, 2016; UN Sustainable Development Group, 2003). While there is no single strategy or process for rights-based approaches, implementation should include three essential elements: 1) the achievement of human rights as the key objective of conservation projects or activities; 2) respecting human rights principles of universality, indivisibility, equality and non-discrimination, participation, accountability and rule of law, in the design, implementation, and monitoring of programs; and 3) capacity development for duty bearers (states and non-state actors) to meet their obligations and responsibility, and for rights holders to be aware of and claim their rights (UN Sustainable Development Group, 2003).

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Chapter 2

OPERATIONALIZING HUMAN RIGHTS DUE DILIGENCE IN THE SEAFOOD SECTOR: APPLYING THE SOCIAL RESPONSIBILITY ASSESSMENT TOOL (SRA) IN GUYANA'S ARTISANAL FISHERY¹

Abstract

The Sustainable Seafood Movement has begun to undertake human rights due diligence to assess and mitigate risk in response to documented human rights abuses and labor violations in global seafood supply chains. With these initial efforts, there is a need to evaluate the efficacy of current due diligence approaches and implementation across diverse fisheries and supply chains. This study provides: 1) an initial evaluation of the Social Responsibility Assessment (SRA) Tool for the Seafood Sector and its application as a human rights due diligence assessment tool; and 2) an initial human rights risk assessment of Guyana's fisheries sector. Using the SRA protocol, I present preliminary findings which identify critical risks in Guyana's artisanal fishery, including evidence of debt bondage and gender-based discrimination, as well as country level challenges such as inequities in healthcare and education that pose additional risks for those working in fisheries. I then provide recommendations and next steps for social improvements in Guyana's artisanal fishery, including additional primary data collection to confirm identified risks. This chapter concludes with a critique of the SRA and its approach as a holistic human rights due diligence tool.

Introduction

Reports of human rights abuses and labor violations in global seafood supply chains have drawn critical attention to unacceptable industry practices and systemic disregard for human well-being. Beginning in 2014, investigative journalism and mainstream media have highlighted abuses throughout seafood supply chains from

¹ Manuscript submitted to *Society & Natural Resources*.

forced labor and trafficking onboard vessels at sea to child labor in processing facilities onshore (Mason et al., 2015; McDowell et al., 2015; Mendoza & Mason, 2016; Murray, 2014; Tickler et al., 2018). These publicized incidents pressured a shift in the Sustainable Seafood Movement to focus on human rights after nearly a decade of neglecting these social issues in its reformation of environmental sustainability practices (Bailey et al., 2016; Hilborn et al., 2015; Kittinger et al., 2017). In response, a coalition of experts developed a consensus-driven framework known as the Monterey Framework to define social responsibility in the seafood sector and worked to align efforts in the space (Kittinger et al., 2017). The Monterey Framework is holistic and inclusive of all human rights which are encompassed in its three principles: 1) protecting human rights, dignity, and access to resources; 2) ensuring equality and equitable opportunity to benefit; and 3) improving food, nutrition, and livelihood security (Conservation International, 2018; Kittinger et al., 2017). Since its development in 2017, the Monterey Framework has been adopted by numerous actors working at the nexus of human rights and seafood, including 25 non-governmental organizations (NGOs) and has voluntary commitments of support from over two dozen seafood businesses worldwide. In spite of the limited industry commitment to date, the development of the Monterey Framework is seen as an important step in raising awareness of the fundamental rights of fishers and fishworkers in the seafood industry, as well as the industry's duty to prevent abuse and provide minimum safeguards (Teh et al., 2019).

Preventing and addressing human rights risk and impacts are legal expectations that apply to all states and businesses globally, established in the United Nations Guiding Principles on Businesses and Human Rights (UNGPs) (United Nations, 2011). Conducting human rights due diligence is at the heart of the UNGPs to determine the response and necessary actions to address human rights abuses

and potential risks (Fasterling & Demuijnck, 2013). Despite growing awareness around the importance of conducting human rights due diligence, the seafood industry has fallen short on addressing human and labor rights. The recent Seafood Stewardship Index found that 97% of the top 30 seafood companies lack a due diligence process, and only eight companies have policies to address working conditions generally (World Benchmarking Alliance, 2021). In efforts to support human rights due diligence in seafood supply chains, one tool has emerged for conducting assessments as part of human rights due diligence: the Social Responsibility Assessment Tool for the Seafood Sector, referred to as the SRA. The SRA was co-developed by Conservation International and organizations of the Conservation Alliance for Seafood Solutions and the Coalition for Socially Responsible Seafood (Conservation International, 2021). The SRA was developed to operationalize the Monterey Framework and is built on relevant protocols and guidance like the UN Food and Agriculture Organization's (FAO) Voluntary Guidelines for Securing Small-Scale Fisheries. The SRA is a human rights risk-assessment tool that can be applied in diverse fisheries, including industrial and small-scale or artisanal operations, to assess risks of social issues, uncover critical information gaps, and identify areas in need of improvement (Conservation International, 2021).

Undertaking human rights due diligence should become more commonplace in the Sustainable Seafood Movement as awareness of human rights violation grows, as well as to meet upcoming requirements part of the European Union's (EU) mandatory due diligence legislation making companies in the EU market liable for their human rights and environmental impacts (European Commission, 2022). Therefore, it is important to evaluate current approaches for due diligence specific to the seafood sector, including the application of the SRA. More so, there is room to improve our understanding of current tools and approaches to assess human rights

risk in diverse fisheries contexts including artisanal fisheries to learn what is working well and what gaps and shortcomings might exist.

Currently, human rights risk in the seafood sector are assessed via third-party social audits. However, there continues to be uncertainty around the effectiveness of audits to adequately protect workers. While social audits can identify visible violations, they fail to identify potential and underlying human rights risks (Outhwaite & Martin-Ortega, 2019; Shift, 2013). More so, social audits lack meaningful worker engagement, a fundamental element of human rights due diligence (Burlon, 2021). Auditors often lack the specific industry knowledge or local and cultural context to conduct audits safely and effectively (Sinkovics et al., 2016). Other approaches to assess human rights and labor issues in the seafood industry utilize a risk-based approach. Taylor et al. (2009) articulates the benefits of a risk-approach such as the ability to account for both visible and potential human rights abuses and risk and the simple prioritization of high risk issues to be addressed. Despite these benefits, experts have articulated concerns or limitations of risk-based approaches, such as false perceptions of risk, generalization, or poor reflection of actual, on the ground issues (Garcia Lozano et al., 2022).

This chapter has two main objectives. First, it provides an evaluation of the SRA and its application, specifically through preliminary desk-based research. Desk-based research is a critical first step of human rights due diligence, allowing a review of secondary data that identifies the potential sources of risk that should be thoroughly investigated during fisher/fishworker interviews and observations (Taylor et al., 2009). As an initial scoping, it provides key background information for assessors about country-level or operational human rights risk. In addition, this study applies the SRA in a small-scale or artisanal fishery, examining its applicability in diverse fisheries contexts. Small-scale or artisanal fisheries are extremely diverse

yet are generally characterized by household or familiar operations that utilize limited capital and energy, smaller vessels, short trips that are typically near shore (Halim et al., 2019; Smith & Basurto, 2019). It is imperative to assess these fisheries as they play an integral role in global food security, poverty reduction, and employment with 90% of the world's fisheries participating in small-scale or artisanal operations (FAO, 2015, 2020; Jentoft, 2014). Despite their known importance, artisanal fisheries lack opportunities to participate in the global seafood market, and only two-thirds of the top seafood companies have commitments to support smallscale or artisanal producers (World Benchmarking Alliance, 2021). Second, this study is the first human rights risk assessment of Guyana's artisanal fishery, providing critical baseline social data for the sector. The artisanal fishery in Guyana is of critical socio-economic importance to the country, contributing significantly to food security, employment, and social well-being of rural and urban communities throughout Guyana, as well as the surrounding region (Maison & Perch, 2019; Pouponneau et al., 2019). The fisheries sector in Guyana is faced with numerous challenges including overexploitation, unsustainable industry practices, high rates of illegal, unreported, and unregulated (IUU) fishing, and inadequate monitoring and enforcement fisheries policies and regulations (Drugan, 2019; FAO, 2013; Inamdar et al., 2019). Moreover, in Guyana, coastal communities face increasing vulnerability to climate change impacts, in addition to conflicts with the emerging oil and gas industry (Bagot, 2021; CANARI, 2020; Krauss, 2018). Until recently, fisheries management in Guyana has had little to no attention to social needs like safety nets or social security for fishers and fishworkers (Department of Public Information, 2021). Given that Guyana's artisanal sector is important commercially and for subsistence, understanding the social issues and risks of the artisanal fishery is imperative to drive social improvements and protect fishers and fishworkers.

This study will first present the preliminary SRA results for Guyana's artisanal fishery and provide recommendations for social improvements in the fisheries sector. This study explicitly advances the academic literature on human rights due diligence in practice, including the use of desk-based research, social audits, and worker interviews. It also makes important contributions to knowledge of human rights risks and social issues in Guyana's fisheries sector. It also provides a detailed evaluation of the application of the SRA including general challenges, limitations of this assessment, and recommendations for future implementers.

Methods

The SRA was used to assess the landscape of human rights risk in the small-scale artisanal fishery (Conservation International, 2021). The SRA protocol and methodology include detailed steps and instructions for implementation, documents to review, a lengthy glossary, and annexes. The SRA protocol and methodology and additional guidance for data collection and best practices in the <u>Guide for Data</u>
Collection and the SRA Toolkit can be found on riseseafood.org.

The SRA is based on the three principles of the Monterey Framework and for each of the three principles (1) protecting human rights, dignity, and access to resources, 2) ensuring equality and equitable opportunity to benefit, and 3) improving food, nutrition, and livelihood security), there is a set of related Components and Performance Indicators (PIs) (Table 1). Noting the diversity of fisheries operations, there are PIs that are relevant for industrial versus small-scale fisheries as certain issues vary greatly across contexts. For this study, the PIs for small-scale fisheries were assessed.

Principle	Component	Performance Indicator (PI)		
1	1.1 Human and labor rights	1.1.1	Abuse and harassment	
Protect human rights, dignity,		1.1.2a	Human trafficking & forced labor	
and access to resources		1.1.2a	Debt bondage in small-scale fisheries	
		1.1.3	Child labor	
		1.1.4	Freedom of association and collective bargaining	
		1.1.5	Earnings and benefits	
		1.1.6	Adequate rest	
		1.1.7a	Access to basic services for worker housing/live-aboard vessels	
		1.1.7b	Access to basic services for small-scale fishing communities	
		1.1.8	Occupational safety	
		1.1.9	Medical response	
	1.2 Access Rights	1.2.1	Customary resource use rights	
		1.2.2	Corporate responsibility and transparency	
2 Ensure equality	2.1 Equality	2.1.1	Grievance reporting and access to remedy	
and equitable opportunity to		2.1.2	Stakeholder participation and collaborative management	
benefit	2.2 Equity	2.2.1	Equitable opportunity to benefit	
		2.2.2	Discrimination	
3 Improve food,	d nutrition	3.1.1a	Food and nutrition security impacts of industrial fishing	
nutrition, and livelihood security		3.1.1b	Food and nutrition security for small-scale fishing communities	
inveninous security		3.1.2	Healthcare	
		3.1.3	Education	
	3.2 Livelihood security	3.2.1	Benefits to and within community	
		3.2.2	Economic value retention	
		3.2.3	Long term profitability and future workforce	
		3.2.4	Economic flexibility and autonomy	
		3.2.5	Livelihood security	
		3.2.6	Fuel resource efficiency	

Table 1. Principles, Components, and Performance Indicators for the Social Responsibility Assessment Tool (SRA) (Conservation International, 2021). (a: Suggested for assessing industrial production systems, b: suggested for assessing small-scale production systems).

The PIs of the SRA are underpinned by international human rights instruments and standards. The SRA references multiple standards including: International Labor Organization (ILO) Core Conventions (Freedom of Association and Protection of the Right to Organize Convention, 1948 (C87); Right to Organize and Collective Bargaining Convention, 1949 (C98); Forced Labor Convention, 1930 (C29); Abolition of Forced Labor Convention, 1957 (C105); Minimum Age Convention, 1973 (C138); Worst Forms of Child Labor Convention, 1999 (C182) Equal Remuneration Convention, 1951 (C100); Discrimination (Employment and Occupation) Convention, 1958 (C111)) and the Work in Fishing Convention (C188); the UN Convention of the Rights of the Child; the UN Declaration on the Rights of Indigenous Peoples; the UNGPs; the UN Palermo Protocol; Universal Declaration on Human Rights (UDHR); the FAO & World Health Organization (WHO) Rome Declaration on Nutrition; and the FAO An Introduction to the Basic Concepts of Food Security.

For each PI, there are scoring guideposts (SGs) or specific criteria that defines the PI and each of the categories of risk. PIs are scored on a scale of high risk, medium risk, or low risk. When scoring, each SG clause or criteria in a given risk category must be fulfilled to receive the relevant score. Scoring each PI requires secondary and primary data collection including interviews, surveys, and observations. While desk-based research provides a preliminary scoping, fisher and fishworker interviews validate preliminary findings and provide critical knowledge about on the ground conditions in the fishery or supply chain. Dialogue with workers is the most effective method to identify and understand the risks they face (Taylor et al., 2009). However, due to travel restrictions and safety concerns during the COVID-19 pandemic, I was unable to recruit participants and conduct interviews with

fishers and fishworkers remotely due to limitations or barriers such as: 1) my limited contacts/network in the given fishery; 2) limited or no access internet or data for fishers and fishworkers; and 3) in-country restrictions for in-person research not allowing for the use of a local research assistant. Therefore, findings for this study are solely based on desk-based research and the analysis of scores should be considered as preliminary.

For each PI, there is explicit guidance on the research mode (desk-based and primary data collection or primary data collection only), as well as recommended data sources. Following the SRA's guidance, each PI was assessed using desk-based research and secondary data. Available data reviewed included ratifications of human rights instruments, domestic laws, and fisheries management plans or programs. Furthermore, reports such as the U.S. Department of State's (USDS) Office to Monitor and Combat Trafficking in Persons (TIP) Report; USDS Country Report on Human Rights Practices; Bureau of International Labor Affairs (ILAB) List of Good Produced by Child Labor or Forced Labor; ILO Rapid Assessment on Child Labor were reviewed. Other project reports from NGOs and IGOs, journalism, and peer-reviewed articles were also assessed. Certain indicators (Abuse and harassment (1.1.1); Economic value retention (3.2.2.); Long term profitability and future workforce (3.2.3); and Fuel resource efficiency (3.2.6)) were not assessed due to lack of available and reliable data, or reliance of primary data collection.

Unit of Assessment (UoA)

Determining the UoA is a key part of the assessment protocol, as it clearly defines and bounds the scope of the assessment. The UoA can be as limited as a specific aspect of the supply chain or include the entire supply chain or fishery. The assessment will only illuminate risks in the context of the selected UoA. For this study, the UoA was the artisanal fishery in Guyana. The UoA includes the entire

artisanal fishery and all aspects of its supply chain - the production, pre-processing, processing, and distribution and retail sectors. The characteristics of the UoA are defined in Table 2.

Definition of the Unit of Assessment				
Fishery name	Artisanal fishery (marine, inshore; sometimes referred to as the small-scale artisanal fishery)			
Fishery location	Guyana			
Target species common names and scientific names	Bangamary (king weakfish, Macrodon ancylodon) Sea trout (green weakfish, Cynoscion virescens) Butterfish (smalleye croaker, Nebris microps) Grey snapper (acoupa weakfish, Cynoscion acoupa) Gillbacker (gillbacker sea catfish, Sciades parkeri) Cuirass (crucifix sea catfish, Sciades proops) Seabob (Atlantic seabob, Xiphopenaeus kroyeri) Prawns (Penaeus brasiliensis, P. notialis, P. (Litopenaeus) schmitti and P. subtilis)			
Fishing method or gear type(s)	Primarily drifting gillnets (driftnets); other gear types include pin/beach seine, Chinese seine or fyke net, circle seine, drift seine, cadell lines, and handlines			
Catch quantity (weight)	17,876 mt, industrial and artisanal finfish (nationally)			
Vessel type and size	Wooden vessels 6-18 meters (m) in length with sails, inboard or outboard engines			
Number of registered vessels	1315 vessels			
Number of workers	5,000 (1000 of which are boat owners)			
Cooperatives or fisherfolk organizations	The Upper Corentyne Fishermen Co-operative Society Limited; the Essequibo Island/West Demerara Fishermen's Cooperative Society Ltd.; the Rosignol Fishermen Co-operative Society Limited and the Greater Georgetown Fishermen's Cooperative Society			
Management authority	Fisheries Department under the Guyana Ministry of Agriculture			

Table 2. Information on the Selected Unit of Assessment for the SRA (Drugan et al., 2021; Government of Guyana et al., 2018; Maison & Perch, 2019; Ocean Outcomes, 2021; Pouponneau et al., 2019).

The artisanal fishery is the most important sector in the larger fisheries sector in Guyana in regard to employment and food security (Maison & Perch, 2019). The

multispecies and mixed gear fishery contributes to local consumption and exports targeting numerous demersal fish and shrimp (Maison & Perch, 2019; Pouponneau et al., 2019). The artisanal fishery comprised of 1,315 vessels and approximately 5,000 fishers operates along the continental shelf up to 30 miles (56km) from shore with landing sites at each of the six coastal regions of Guyana (Drugan et al., 2021; Pouponneau et al., 2019). The artisanal fishery is not involved in transport, processing, or marketing of the fishery products; however, fishers sell directly to wholesalers or local small vendors, with preference given to buyers who offer the highest price, can purchase their entire catch, and/or pay cash immediately (Inamdar et al., 2019).

The Fisheries Departments is the responsible body overseeing the management and regulation of the sector (Maison & Perch, 2019). The Coast Guard and Police Force assist with surveillance and monitoring of vessels at sea, and the Maritime Administration Department (MARAD) supports the Fisheries Department with the registration of licensed vessels (Pouponneau et al., 2019). Management is faced with numerous challenges due to the dispersed nature of vessels, high rates of unregistered and unlicensed vessels, poor organization of fishers and fishworkers, and limited membership in cooperatives (Drugan et al., 2021; Maison & Perch, 2019). Previous fisheries management has been challenged to address widespread issues in the fishery like overfishing, unsustainable practices, and high rates of IUU fishing due to limited resources and capacity within the Fisheries Department, inadequate monitoring and enforcement of fisheries policies and regulation, and limited engagement between stakeholder groups (Drugan, 2019; FAO, 2013; Inamdar et al., 2019). Until recently, there has been limited to no attention paid to social issues in the fishery. Recent efforts to better address social issues, like human rights, include a gender analysis of the shrimp and groundfish fishery (Maison &

Perch, 2019), a regional decent work assessment (Lout et al., 2022), and inclusion of issues such as safety in the new Artisanal Fisheries Strategic Framework and Management Plan (Pouponneau et al., 2019).

Results

The results of the assessment are presented below following the order of the SRA Principles. First, Guyana's legal and regulatory framework for human rights in the fisheries sector is presented in Table 3, as this spans all three principles. Then, findings for each principle will be presented, including preliminary scores and the justification for these scores.

National legal and regulatory framework for human and labor rights in the fisheries sector

Guyana's current legislative framework for human rights, consisting of both historical legislation and more recent ratifications, protects the fundamental human rights of fishers and fishworkers, and establishes a baseline for decent living and working conditions. Guyanese law prohibits forced or compulsory labor and hazardous child labor, protects workers right of association and collective bargaining and establishes minimum standards for wages, working hours, and safety at work (ILO, 2011). Guyana has ratified most of the conventions which establish these protections (Table 3). However, in many cases, informal workers and the fisheries sector are not explicitly covered under many national laws that apply to private sector employees, potentially leaving critical gaps in the protection of fishers and fishworkers. Furthermore, there are few laws or policies specific to fishers and fishworkers. For example, Guyana has yet to ratify treaties that would specifically protect fishers and fishworkers like the ILO Work in Fishing Convention, 2007 (C188). The Fisheries Act (Cap 71:08) of 2002 is the primary instrument regulating the sector including domestic and foreign vessels, but lacks specific requirements or

policies related to socio-economic issues such as decent work or livelihood security (FAO, 2018; Fisheries Act, 2002).

International legal instruments	Ratifications
ILO Freedom of Association and Protection of the Right to Organize Convention, 1948 (C087)	25 Sep 1967
ILO Right to Organize and Collective Bargaining Convention, 1949 (C098)	08 Jun 1966
ILO Collective Bargaining Convention, 1981 (C154)	Not ratified
ILO Forced Labor Convention, 1930 (C029)	08 Jun 1966
ILO Abolition of Forced Labor Convention, 1957 (C105)	08 Jun 1966
ILO Minimum Age Convention, 1973 (C138)	15 Apr 1998
ILO Worst Forms of Child Labor Convention, 1999 (C182)	15 Jan 2001
ILO Equal Remuneration Convention, 1951 (C100)	13 Jun 1975
ILO Discrimination (Employment and Occupation) Convention, 1958 (C111)	13 Jun 1975
ILO Work in Fishing Convention, 2007 (C188)	Not ratified
International Covenant on Civil and Political Rights	15 Feb 1977
International Covenant on Economic, Social, and Cultural Rights	15 Feb 1977
UN Protocol to Prevent, Suppress and Punish Trafficking in Persons, (TIP Protocol) 2000	14 Sep 2004 (Accession)
UN Convention on the Elimination of All forms of Discrimination Against Women (CEDAW), 1979	17 Jul 1980
UN Convention on the Rights of the Child, 1990	14 Jan 1991

Table 3. International Legal Instruments for Human and Labor Rights Relevant to Fisheries and Dates of Ratification by Guyana (ILO, 2022; UN Treaty Database, 2022).

SRA Principle 1: Protect human rights, dignity, and access to resources

Principle 1 of the SRA is defined as "Protect human rights, dignity, and access to resources." In assessing Principle 1 in Guyana following the Scoring Guideposts for each PI, I find that indicators considered to be high risk in the artisanal fishery

include debt bondage (1.1.2b), child labor (1.1.3), earnings and benefits (1.1.5), occupational safety (1.1.8), and medical response (1.1.9) (Table 4).

Principle	Component	Performance Indicator (PI)		Scoring Category
		1.1.1	Abuse and harassment	Not assessed
		1.1.2a	Human trafficking & forced labor	N/A
		1.1.2b	Debt bondage in small-scale fisheries	High Risk
		1.1.3	Child labor	High Risk
	1.1	1.1.4	Freedom of association and collective bargaining	Medium Risk
1 Protect	Human and labor rights	1.1.5	Earnings and benefits	High Risk
human rights,		1.1.6	Adequate rest	N/A
dignity, and access to resources		1.1.7a	Access to basic services for worker housing/live-aboard vessels	N/A
1 333 41 333		1.1.7b	Access to basic services for small- scale fishing communities	Medium Risk
		1.1.8	Occupational safety	High Risk
		1.1.9	Medical response	High Risk
	1.2	1.2.1	Customary resource use rights	N/A
	Access Rights	1.2.2	Corporate responsibility and transparency	N/A

Table 4. Scoring Results for Principle 1 Indicators.

For example, to elucidate some of the data that has shaped the scoring of performance indicators above, let me focus attention on debt bondage (1.1.2b). Guyana has ratified the ILO Forced Labor Convention (C029) and Abolition of Forced Labor Convention (C105) (Table 3), and Guyanese law prohibits slavery or servitude (Constitution of the Cooperative Republic of Guyana, 1980; ILO, 2011). However, forced and compulsory labor is reported to occur in numerous sectors such as mining and agriculture, which may include fisheries, and the government has not effectively

addressed force labor and penalties do not discourage violations (USDS, 2020). A recent evaluation of working conditions showed that in the artisanal fishery, there is evidence of debt bondage characterized by paying off debts to a cooperative, buyer, or vessel owner for equipment, fuel, and other operating costs (Lout et al., 2022). The evaluation found that fishers have been forced to pay for or work without pay for items like lost or damaged gear. In some of these cases, these unpaid debts have resulted in abuse such as beatings, although this was not reported to happen regularly.

For the child labor performance indicator (1.1.3), Guyanese law prohibits employment of children under the age of 15, and any hazardous work that is likely to jeopardize the health, safety, and morals of children is prohibited under 18 (Employment of Young Persons Act, 1938; ILO, 2011, 2017; USDS, 2020). Furthermore, Guyana has ratified numerous conventions protecting children including the ILO Minimum Age Convention (C138) and the Worst Forms of Child Labor Convention (C182), as well as the UN Convention on the Rights of the Child (Table 3). Even so, child labor laws have been poorly enforced and child labor is prevalent in industries including fishing (ILO, 2017; U.S. Department of Labor, 2020; USDS, 2020). The ILO Rapid Assessment of Child Labor in Guyana found the incidence of child labor to be 18.3% for ages 5-17, a rate significantly higher that other neighboring countries (ILO, 2017). The assessment indicated that child labor in Guyana is maintained as a cultural norm and "pervasive phenomenon." In 2019, Guyana launched the National Plan of Action to address child labor. Creating a special unit within the Department of Labor was an initial step to achieve the target of full legal protection for children under the age of 18 from engaging in hazardous work (UNICEF, 2020).

In regard to earnings and benefits (1.1.5), minimum legal requirements for wages and benefits are established in the Labor Act and Wages Council act (ILO, 2011; Labor Act, 1978; Wages Council Act, 1956). Wages are set primarily for private sector employees. Even so, enforcement of minimum wage is not adequate (USDS, 2020). Minimum wages are not properly defined for the fisheries sector in Guyana, or for informal workers in general. Informal workers, particularly women, are often paid less than the minimum wage (ILO, 2002; USDS, 2020).

Like wages, occupational safety (1.1.8) standards in Guyana are considered to be inappropriate for numerous industries and standards are poorly enforced (USDS 2020). Guyana has not ratified ILO Working in Fishing (C188) which would establish safety standards for work on board vessels, as well as requirements for medical response including first aid training (see Table 3). The Fisheries Act requires that vessels carry safety and first aid equipment such as life jackets, however vessels often lack these items and there are limited inspections and enforcement at sea (Drugan et al., 2021; Fisheries Act, 2002; Lout et al., 2022). Inspections and monitoring at sea are limited due to constrained resources and personnel within the Fisheries Department (Pramod, 2020). More so, there has been limited training for fishers on safety at sea or related topics (CANARI, 2020). Improving safety at sea has been in the spotlight in Guyana in recent years following numerous incidents of piracy off the coast, including attacks and killing of fishers and crew (BBC News, 2018; News Room Guyana, 2021). In response, Guyana committed to an anti-piracy policy with neighboring Suriname to better protect fishers, and improve security at sea (News Room Guyana, 2020). Furthermore, improving safety at sea in the artisanal fishery is one of the main objectives in Guyana's new Artisanal Fisheries Strategic Framework and Management Plan (CANARI, 2020; Pouponneau et al., 2019).

Freedom of association and collective bargaining (1.1.4) was scored medium risk. Fishers and fishworkers are free to organize and advocate for their rights, but there is room for improvement such as formalizing policies and providing training on their rights to organize and bargain collectively. Freedom of association and collective bargaining are respected by the law in Guyana (ILO, 2011; USDS, 2020). Guyana has ratified the ILO Freedom of Association and Protection of the Right to Organize Convention (C087) and the Right to Organize and Collective Bargaining Convention (C098) (Table 3) but has not ratified the Collective Bargaining Convention (C154). Fishing cooperatives have had a strong presence historically in the sector and have been increasingly encouraged in the past years (Ministry of Agriculture, 2021). There are three active fishermen's cooperatives: Upper Corentyne Fishermen Cooperative Society Ltd, Rosignol Fishermen Cooperative Society Ltd, and Essequibo Island/West Demerara Fishermen Co-operative Society Ltd (Pouponneau et al., 2019). Cooperatives have the potential to be a bargaining mechanism to establish improved wages, benefits, and other rights, but many are unorganized and collaboration among actors is limited (CANARI, 2020; Lout et al., 2022). Furthermore, only boat owners can join cooperatives presenting gaps in representation for fishers and fishworkers (Maison & Perch, 2019). In 2021, the Greater National Fisherfolk Organization (GNFO) was formed to provide a single voice for fishers in Guyana. Leaders from the active cooperatives, as well as representatives from coastal regions, represent the sector on issues such as safety, working conditions, and sustainability (Guyana National Fisherfolk Organization -Home, 2022). However, GNFO faces challenges with membership and engagement that is inconsistent due to mixed perceptions on the effectiveness of GNFO (CANARI, 2020). There is room to improve the relationships between GNFO, fishers/fishworkers, and the Fisheries Department in order to achieve their intended

benefits as a mechanism to cultivate organization and advocacy for fishers and fishworkers (CANARI, 2020).

Finally, access to basic services for small-scale fishing communities (1.1.7b) was also scored as medium risk. Access to basic services—potable water, electricity, sewage, and waste disposal—have improved over the years across regions including rural communities in Guyana (Bureau of Statistics et al., 2015). There are seven main fishing complexes that are utilized by the small-scale artisanal fishery that have infrastructure for production needs such as ice-making (CANARI, 2020; FAO, 2005). There are additional informal landing sites that may not have the same infrastructure. However, there are still disparities across regions, especially regarding waste and sewage. Only a small portion of the population, concentrated in Georgetown, has access to modern sewage (The Borgen Project, 2019). Untreated waste is released into main waterways like the Demerara River, which may impact the surrounding marine environment and fisheries resources.

SRA Principle 2: Ensure equality and equitable opportunity to benefit

Principle 2 is defined as "Ensure quality and equitable opportunity to benefit."

In Guyana, equity and equal distribution of benefits is a long-term challenge,
especially for vulnerable and marginalized groups such as women (Wenner & Bollers,
2018). As a result, all indicators in this section are high risk (see Table 5).

Principle	Component	Performance Indicator (PI)		Scoring Category
2 Ensure equality and equitable opportunity to benefit	2.1 Equality	2.1.1	Grievance reporting and access to remedy	High Risk
		2.1.2	Stakeholder participation and collaborative management	High Risk
	2.2 Equity	2.2.1	Equitable opportunity to benefit	High Risk
		2.2.2	Discrimination	High Risk

Table 5. Scoring Results for Principle 2 Indicators.

Stakeholder participation and collaborative management (2.1.2) is one of the most pressing challenges impacting sustainability of Guyana's fisheries and dependent livelihoods. There are no formal mechanisms for participation in fisheries governance or collaboration between stakeholders (CANARI, 2020; Drugan et al., 2021; Lout et al., 2022). Current engagement occurs on a limited, irregular basis due to constrained resources and staff within the Fisheries Department and disinterest by fishers to participate (Drugan et al., 2021). There is generally poor organization of fishers and fishworkers across the sector and few cooperatives with limited membership that results in potentially skewed or inequitable representation of fishers but also hinders more widespread participation in fisheries management (Maison & Perch, 2019). Furthermore, mistrust, limited communication, and poor information sharing between fishers and the Fisheries Department hampers improved engagement between stakeholders (Bumbury, 2021; Pouponneau et al., 2019). However, in recent years, actions have been increasingly taken to improve participation. From 2019 to 2021, the UN FAO Global Environment Facility (FAO/GEF) funded StewardFish project aimed to strengthen the capacity of fisherfolk organizations, including the GNFO in Guyana, through mentorship training on leadership and management (CANARI, 2019).

There is no evidence of sector-wide, formal mechanisms for all fishers and fishworkers to report grievances (2.1.1). One informal policy to file complaints is utilized by the Upper Corentyne Fishermen Co-operative Society Limited (Lout et al., 2022). This indicator was scored as high risk due to the lack of an accessible, sector-wide mechanism or protocols. However, additional cooperatives may have their own policy or procedure for members to report complaints and access remedy and should be further examined.

Guyanese law prohibits discrimination based on race, gender, disability, social status, or citizenship. The Constitution, Equal Rights Act, and Prevention of Discrimination Act, establishes equal rights for men and women, and equal legal status (Constitution of the Cooperative Republic of Guyana, 1980; Equal Rights Act, 1980; Prevention of Discrimination Act, 1997; ILO, 2011). Guyana has also ratified the Equal Remuneration Convention (C100) and the Discrimination (Employment and Occupation) Convention (C111) (see Table 3). Despite legislation and commitments, gender-related discrimination is an ingrained, widespread issue at the national level occurring in recruitment, remuneration, and participation in work (USDS, 2020). For example, in some sectors, Guyanese women earn almost 60 percent less than men for equal work (USDS, 2020). In the artisanal fishery, there is evidence of inequities and discrimination based on gender. For example, women play a significant role in the sector, yet their contributions are undervalued and there are few policies in the fishery directed towards gender equality or women's empowerment (Maison & Perch, 2019). While women are found at every stage of the value chain, they are predominantly involved in processing, distribution, and retail (FAO, 2018). The role of women is considered informal, and they have few opportunities for participation in decision making or positions with higher economic return (Maison & Perch, 2019). Societal and gender norms are cited to contribute to perceptions around women's ability to participate in the fisheries sector, or what activities are considered appropriate (Maison & Perch, 2019; Manyungwa-Pasani et al., 2017).

SRA Principle 3: Improve food, nutrition, and livelihood security

Improving food, nutrition, and livelihood security (Principle 3) requires that:

1) the nutritional needs of communities are maintained or improved; and 2)

livelihood opportunities are secured or improved. Guyana has historically been a

food-secure nation due to its natural resources and productive agriculture sectors,

with a national prevalence of undernourishment of 5.2 percent in 2018-2020 (FAO, 2021). However, in recent years, national food security has been an emerging concern (Stabroek News, 2021) and there is a portion of the population that is food insecure (Thompson, 2021) resulting in a high risk score for food and nutrition security of small-scale fishing communities (3.1.1b) (see Table 6). Issues such as climate change, the COVID-19 pandemic, poverty, and unemployment contribute to inequities around access and stability of food throughout the country (FAO et al., 2015; Thompson, 2021). There is limited sector-specific data on food security to understand the impacts on fishers and communities. There have been country-level efforts to address food security including the establishment of the 2011 Guyana Food and Nutrition Security Strategy (Ministry of Agriculture, 2011), although progress on this strategy has not been reported, and these programs do not account for new challenges like the COVID-19 pandemic.

Principle	Component	Performance Indicator (PI)		Scoring Category
3 Improve food, nutrition, and livelihood security	3.1 Food and nutrition security	3.1.1a	Food and nutrition security impacts of industrial fishing	N/A
		3.1.1b	Food and nutrition security for small-scale fishing communities	High Risk
		3.1.2	Healthcare	High Risk
		3.1.3	Education	High Risk
	3.2 Livelihood	3.2.1	Benefits to and within community	Medium Risk
	security	3.2.2	Economic value retention	Not assessed
		3.2.3	Long term profitability and future workforce	Not assessed
		3.2.4	Economic flexibility and autonomy	Medium Risk
		3.2.5	Livelihood security	High Risk
		3.2.6	Fuel resource efficiency	Not assessed

Table 6. Scoring Results for Principle 3 Indicators.

Table 6 shows that healthcare (3.1.2) and education (3.1.3) systems are faced with several challenges in Guyana and as such are high risk for the artisanal fishery. Universal healthcare exists in Guyana, but there continue to be geographic inequities in access to adequate healthcare, especially for non-coastal, rural regions and high prevalence of non-communicable diseases such as cardiovascular disease, cancer, chronic respiratory disease, diabetes, injuries, and mental health conditions (Health Systems 20/20 & Ministry of Health, 2011; The Borgen Project, 2020). Ensuring equitable access to services was a key objective of the National Strategy for Guyana known as Health Vision 20/20 (Health Systems 20/20 & Ministry of Health, 2011). Guyana's health indicators have improved over the past ten years, including increased life expectancy (66 years) and reduced child mortality (20 per 1000 births) (PAHO, 2014). Addressing non-communicable diseases is an ongoing challenge (The

Borgen Project, 2020). While there have been no health assessments for the fisheries sector or data on types of occupations, research has found that physical and mental health are a concern for occupations like fishing. Natural resource dependent occupations, like fishing, are exposed to uncertainties and even shocks resulting from environmental and social changes or impacts, and fishers/fishworkers can face mental health issues like depression, anxiety, and self-harm (Woodhead et al., 2018).

There are also disparities across Guyanese regions regarding access to and quality of education and learning outcomes (3.1.3). Low levels of financing for education, conditions of schools in rural areas, and high rates of teacher migration contribute to the challenges in the education sector (Ministry of Education, 2021). Even so, Guyana has high youth literacy rates of 96.3% for males and 97% for females in 2014 (The World Bank, 2021). Primary school participation differs slightly; for males it is reported to be 99.6%, while enrollment for females is reported as 96.0%. However, only 1.7% of primary age children are out of school (The World Bank, 2021). An education assessment by region or within the fisheries sector will be necessary to reveal more specific challenges and/or progress.

In the artisanal fishery, it is open access for Guyanese exclusively (Maison & Perch, 2019). People from within the community hold resource access rights and/or permits and consideration is given to the local workforce, although there are not equal employment rates for women. Benefits to and within the community (3.2.1) was therefore medium risk. Likewise, economic flexibility and autonomy (3.2.4) was medium risk as small-scale fishers typically sell their own products to a variety of buyers of their choosing (Inamdar et al., 2019). There is no evidence of price collusion among local buyers.

Lastly, livelihood security (3.2.5) is high risk and a concern for the artisanal fishery. The fishery contributes significantly to the livelihoods of men and women across Guyana. While fishers have licenses and harvesting access, they are informal workers and not recognized as part of the legal workforce. Furthermore, there is no evidence that a large proportion of fishers and fishworkers have access to alternative livelihoods outside of the fishery. A livelihood is considered secure and sustainable when it can recover from external stresses and shocks (Conservation International, 2021). In the past several years, Guyana has undergone immense changes due to the rapidly growing oil and gas industry and the COVID-19 pandemic. Fishers and fishworkers have been increasingly concerned with impacts such as declining fisheries resources and are vulnerable to ongoing threats such as climate change and declining fisheries resources (Bagot, 2021; CANARI, 2020). With a myriad of threats and lack of alternative livelihoods, security and preservation of livelihoods may be undermined.

Discussion

This study provides the first assessment of the human rights risk and social issues in Guyana's artisanal fishery. The risk assessment which covered the entire fishery and related operations identified several 'high risk' concerns and areas of improvement for the sector including human and labor rights violations, inequities across regions and stakeholder groups, and vulnerabilities in food and livelihood security.

Guyana has made notable commitments, ratifying numerous conventions establishing the legal minimum protecting the rights of fishers and fishworkers.

Despite these notable commitments, this assessment identified several gaps in the protection of workers, particularly children and women. There is evidence of debt bondage (1.1.2b) occurring in the fisheries sector (Lout et al., 2022). Debt bondage,

the most prevalent form of modern slavery, is driven by factors like poverty, lack of alternative livelihoods, poor education and illiteracy, and gender inequalities and discrimination (United Nations, 2016). Education (3.1.3) and discrimination (2.2.2) were also identified as high risk in the fisheries sector, drawing attention to potential links across indicators and areas that require more thorough investigation. Guyana has adequate literacy rates, but poor financing for education, conditions of schools, and high rates of teacher migration contribute to inequities across regions in terms of education (Ministry of Education, 2021; The World Bank, 2021). Furthermore, the role of women in the sector and their empowerment is undervalued and not widely addressed in the artisanal fishery (Maison & Perch, 2019). The gender dynamics in Guyana's artisanal fishery parallel global trends in which women play a fundamental role but are less often acknowledged and valued for their contributions (Harper et al., 2013). Social and gender norms constrain women's ability to equally participate and benefit from the fishery (Maison & Perch, 2019; Manyungwa-Pasani et al., 2017).

Child labor (1.1.3) was also cited as a cultural norm with evidence of children engaging in fisheries operations (ILO, 2017; U.S. Department of Labor, 2020). While hazardous child labor is an urgent issue to address, studies have examined the diversity of child labor in fisheries and noted that youth engaging in artisanal fisheries may learn and acquire skills and systemic knowledge (Iversen, 2006). Assessing the prevalence of children engaging in Guyana's fisheries will be critical to better understand the prevalence of child labor and in what ways children are involved in the sector.

The need to improve implementation and enforcement of domestic and international laws, and better adapting standards to address the specific nature of work in the fisheries sector is evident regarding occupation safety (1.1.8). Safety at

sea has gained increasing attention in the sector in recent years following incidents of piracy (BBC News, 2018; News Room Guyana, 2021). Despite increased awareness, safety at sea continues to be widespread challenge due to limited resources and personnel to carry out regular inspections and surveillance, as well as effective enforcement of safety requirements (Drugan et al., 2021; Lout et al., 2022; Pramod, 2020). Enforcement challenges to protect fishers and fishworkers at sea was not exclusive to occupational safety but are cited for numerous indicators such as child labor (1.1.3) and discrimination (2.2.2). Moreover, laws and policies pertaining to work in the fishery have been more environmentally focused, lacking special considerations for social issues like safety or equity. One notable recent example is the Guyanese Artisanal Fisheries Strategic Framework and Management Plan which includes specific actions to improve fisher safety, including education and training on safety for fishers and workers (Pouponneau et al., 2019).

Engaging fishers and fishworkers in decision-making and implementation is an important element of effective fisheries management (Pomeroy et al., 2009).

Furthermore, when it comes to addressing human rights and improving working conditions, fishers and fishworkers must be involved (RISE, 2021). Stakeholder participation and collaborative management (2.1.2) is an area in need of improvement in Guyana. Disorganization of fishers and fishworkers, limited membership in cooperatives, and strained relationships between stakeholders like fishers and the fisheries department hinders meaningful and consistent engagement of fishers and fishworkers in fisheries management (Bumbury, 2021; Maison & Perch, 2019). In the past few years, there have been ongoing opportunities and notable efforts to improve engagement with fishers and fishworkers, including women (CANARI, 2019). Formalizing mechanisms for participation and increasing opportunities for engagement in planning, decision-making, implementation,

monitoring and enforcement of fisheries management and social improvements, with specific guidelines for women and other marginalized groups, must continue to be a priority.

Applying the SRA in Guyana during the COVID-19 pandemic presented major limitations due to lack of in-person interviews or surveys. The SRA protocol requires triangulation of data using primary and secondary sources; this study only used secondary sources. In the case of Guyana, the findings of the assessment and scores are preliminary and will require interviews to validate the scoring. More so, certain indicators were not assessed (Abuse and harassment (1.1.1); economic value retention (3.2.2.); long term profitability and future workforce (3.2.3); and fuel resource efficiency (3.2.6) due to lack of available data or primary data requirements. In general, there is limited available data on human rights and labor issues in Guyana and the fisheries sector overall. As a result, this study relied heavily on the alternate data sources that were available and reliable such as the USDS Country Report on Human Rights Practices and the recent gender analysis of the shrimp and groundfish fishery conducted by Maison and Perch (2019). In the future, in-person interviews with fishers and fishworkers and other relevant stakeholders will be critical to better understand what is occurring at the community- and even individual-level related to assessing human rights. The limitations of this study sheds light on the broader challenges of remote research during the COVID-19 pandemic and effectively engaging with fishers and workers for this type of human rights due diligence assessment. As remote research challenges may continue, adapting assessment protocols will be necessary. Assessment teams should partner with local researchers that are trained in the SRA or have the necessary social science or human rights expertise. When a local field team is unable to conduct interviews, an alternative methodology to in-person engagement could be to utilize communication

platforms such as WhatsApp, Facebook, or video conferencing apps, although some interviewees may only prefer to be interviewed in person.

While this assessment was constrained to desk-based research, the findings still provide critical knowledge on the potential risks and issues present in the artisanal fishery and the larger fisheries sector in Guyana. The assessment provides a preliminary scoping and findings act as comprehensive background information to quide primary data collection. Social issues in Guyana's fisheries were not publicized, documented, or previously researched in a comprehensive manner. By conducting a comprehensive risk assessment, the social and human rights status of this fishery was revealed contributing directly to knowledge on these elements in Guyana's fisheries and human rights risks and social issues in the context of small-scale or artisanal fisheries. The findings indicate there are human rights violations occurring in the fishery, as well as social issues that may be impacting numerous livelihoods. Identifying these issues is the critical first step to address and mitigate these risks. This is important to guide future primary data collection, as well as upcoming fisheries management plans and decisions. Furthermore, the identification of human right risks is important for current and future buyers and other industry actors, as both the state and businesses have responsibilities to prevent violations and protect fishers and workers. These findings should be a lesson for the Sustainable Seafood Movement more broadly, raising awareness on the importance of assessing fisheries and supply chains.

Evaluation of the SRA

This study provides the first evaluation of the SRA and critique of its application. The SRA was originally developed to operationalize the Monterey Framework as a tool to conduct human rights due diligence in diverse seafood supply chains and contexts. The application of the SRA in Guyana demonstrates the tool's

adaptability to various contexts, like a small-scale or artisanal fishery. As the tool intends, applying the SRA in Guyana's small-scale artisanal fishery: 1) assessed risks of social issues; 2) uncovered critical information gaps; and 3) identified areas in need of improvement and future efforts. The findings provide a preliminary assessment of the artisanal fishery in Guyana which can act as a foundation for upcoming research and projects, as well as a baseline to track changes in the fishery over time. Moreover, this assessment can inform the development of future improvement plans to drive social change within the fishery. For example, these findings drew attention to sector-wide areas of improvement like occupational safety and improved fisher/fishworker participation. Identifying both the potential risks, as well as progress, can help direct resources and efforts towards priority areas.

Built on the Monterey Framework, the SRA aligns with human rights standards and key international instruments and other guidance specific to the fisheries sector (Kittinger et al., 2017). For each PI, the specific instrument or guidance that defines the criteria is referenced, including ILO Core Conventions and the Work in Fishing Convention (C188), the UN Convention of the Rights of the Child, the UN Declaration on the Rights of Indigenous Peoples, the UNGPs, the UN Palermo Protocol, UDHR, the FAO & WHO Rome Declaration on Nutrition, and the FAO An Introduction to the Basic Concepts of Food Security. These standards are evident in the criteria for each PI and the Scoring Guideposts, as well as supplemented by additional data sources specific to the UoA such as local assessments or fisheries management plans. The inclusion of diverse instruments, as well as numerous data sources and research methods allows for a comprehensive assessment that addresses the full suite of human rights with findings that document both country-level and sector-level risks and abuses.

The SRA protocol and methodology provides detailed steps and instructions for data collection and scoring of PIs. In addition, there is considerable guidance and supplemental documents to support the implementation of the SRA like the Guide for Data Collection and Assurance Guidance found on riseseafood.org. Even with the extensive resources for implementers, applying the SRA requires considerable expertise on human rights, labor rights, and social issues in the context of diverse fisheries. The assessor or assessors should also have knowledge on the local context, culture, and language relevant to the UoA. The need for specialized expertise during assessments is a critical element of safe and effective assessments, but often a gap for assessors or auditors (Sinkovics et al., 2016). For Guyana, the lead assessor was a human rights and fisheries expert with long-term experience working in the artisanal fishery in Guyana. During the assessment, a local field team was consulted and ultimately would have co-led the primary data collection in the field if pandemic restrictions would have lifted. The expertise and knowledge requirements for the SRA may present a challenge for fisheries organizations that lack social or human/labor rights expertise. On the other hand, this gap presents an opportunity for fisheries experts to collaborate with social experts and human rights organizations.

Risk-based approaches are utilized commonly to assess human rights and labor issues in fisheries (Taylor et al., 2009). While critiques of risk-based approaches have noted the potential of generalizing or falsely perceiving risk (Garcia Lozano et al., 2022), this study reveals that risk-based approaches can identify visible and potential or underlying risk (Taylor et al., 2009). While this preliminary assessment only utilized secondary data sources, findings drew attention to indicators that are of concern, or medium and high risk, while identifying data gaps and areas where primary data collection should be focused. Moreover, risk-based approaches have been cited as a useful tool in data-poor contexts (Garcia Lozano et

al., 2022). However, when using the SRA, to achieve a low-risk score, and in many cases medium risk, reliable and transparent data justifying the score is necessary. In this scenario, a lack of data may translate into a medium or high-risk score.

Therefore, assessment findings must be validated by several data sources, and it should not be assumed that a high-risk score indicates widespread abuses or that a low-risk score indicates no human rights risk. A high or medium risk score can aid in prioritizing high risk issues to be further investigated and addressed (Taylor et al., 2009) and can also call for formalizing practices or policies within artisanal fisheries contributing to improving their overall organization and capacity. More importantly, the rigid scoring requirements of the SRA identify existing human rights violations and *potential* human rights risks and even root causes of risks, which is critical in progressing towards proactive risk mitigation in a fishery or supply chain.

Desk-based research is the initial step of the SRA. The review of documents and secondary data provides critical background information and context for a fishery or other UoA. To complete the SRA and validate preliminary scoring, primary data collection, specifically in-person interviews with fishers and fishworkers is fundamental. The SRA recommends that the assessment is conducted using a fisher/worker-driven approach (Conservation International, 2021) in which fishers and fishworkers are involved in the evaluation, identification of improvements, and implementation of interventions (ILRF, 2018). There is growing recognition around the limitations of audits to engage workers, however, there has yet to be a standardized approach for involving workers in human rights due diligence (Global Compact Network Germany & twentyfifty Ltd., 2014). Instead, increased awareness has resulted in the emergence of approaches or guidance for the participation of workers in human rights due diligence. Worker-Centric Assessments (WCAs) is one of several tools for due diligence in which assessors focus significantly on

interviewing workers (Burlon, 2021). Worker interviews are the "window into the worker experience" and in the case of fisheries in which worker experience can vary across the diversity of fisheries operations, worker interviews allow assessors to understand the nuances of conditions and risk (Burlon, 2021). Like WCAs, the SRA emphasizes the importance of dialogue with fishers and fishworkers as a critical feature of human rights due diligence. Other recommendations for engagement with stakeholders include dialogue throughout implementation and review of the assessment, and consulting with groups to identify priority areas of improvement and design mitigation strategies (Global Compact Network Germany & twentyfifty Ltd., 2014). The SRA includes these important elements beginning with the inclusion of local field teams providing local expertise and knowledge to the design of the assessment protocol to fisher/fishworker interviews as the heart of the assessment to engaging with fisher/fishworkers during the selection of issues to address. The SRA itself can be a tool to strengthen the engagement of fishers and fishworkers as well as other stakeholders.

Conclusion

Initiating human rights due diligence by assessing human rights and social issues in a fishery is imperative to identify and address risks and create beneficial social change. Applying the SRA, a risk-based assessment tool, identified numerous existing and potential risks in Guyana's artisanal fishery including human rights violations and inequities across regions and among stakeholders. Further investigation of these risks through in-person interviews with fishers and fishworkers is necessary to validate the preliminary findings. The findings presented in this paper can be utilized as the basis for upcoming primary data collection, informing the development of research instruments and plans. Conducting the SRA in Guyana, in a fishery that directly supports countless individuals and is strongly connected to the

social well-being of the country, created an ideal opportunity to evaluate the tool's application and protocol. The desk-based research part of the initial step of SRA gleaned extensive social information on the selected artisanal fishery in Guyana, including existing issues as well as potential risks. However, findings are preliminary as the SRA requires future interviews with fisher and fishworkers interviews, a key element of their fisher/worker-drive approach. Furthermore, the SRA requires specific expertise and on-the-ground research on human rights risks which may create challenges for small organizations and remote assessors. More importantly, this study demonstrated the intended outcomes of the SRA as a human rights due diligence assessment tool, identifying existing and potential risks, and areas in need of improvement. Moving forward, the SRA should be applied and evaluated in additional contexts such the industrial sector and processing operations in different country contexts.

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Chapter 3

DECENT WORK IN A SEASCAPE OF LIVELIHOODS: REGIONAL EVALUATION OF THE SHRIMP AND GROUNDFISH FISHERY OF THE GUIANAS-BRAZIL SHELF²

Abstract

With growing evidence of labor violations and exploitative working conditions in fisheries, ensuring decent work is imperative to protect fishers and fishworkers in the global seafood sector. This study provides the first evaluation of decent work in a shared, transboundary fishery—the shrimp and groundfish fishery of the Guianas-Brazil Shelf. Decent work in fisheries has gained increasing attention and research, yet gaps exist in our understanding of the elements of decent work, how to evaluate it, and how to enable decent work. To date, there has been limited analysis of decent work in a range of geographies and diverse fisheries contexts, including small-scale fisheries and transboundary fisheries. This study will address this gap by evaluating decent work, utilizing a new fishery-specific, holistic evaluation framework drawing from existing frameworks including the ILO Work in Fishing Convention (C188), the Monterey Framework for Social Responsibility, and the FAO Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries. This evaluation details country-level challenges that put fishers and fishworkers at risk in their occupation, including illegal fishing, vessel safety, and worker representation. This paper concludes with recommendations, to be advanced with a transboundary, regional approach, to ensure decent work and strengthen existing progress, including: 1) addressing widespread illegal activities; 2) adopting fisheries-specific standards like C188; 3) implementing and enforcing policies at the country and regional level; and 4)

² Manuscript submitted to *Marine Policy* with co-authors, Juno Fitzpatrick, Alejandro J. Garcia Lozano, and Elena Finkbeiner. I contributed to the conceptualization, development of methodology, investigation, analysis, writing – original draft, writing – review and editing, and project administration. Co-authors contributed to this paper by advising on the methodology and writing – review and editing.

ensuring worker representation and participation leveraging cooperatives and collectives.

Introduction

Ensuring decent work in fisheries has emerged as a priority objective due to growing evidence of labor violations and exploitative working conditions for fishers and fishworkers in the global seafood sector. Work in fisheries, characterized by precarious employment, hazardous and dangerous conditions, informal employment, and opaque supply chains, exacerbates vulnerability to human rights abuses, including human trafficking and forced labor at sea and onshore, as well as food insecurity and inequities around gender (FAO, 2020; Lewis et al., 2017; Tickler et al., 2018). Despite growing attention to human and labor rights, fishers and fishworkers in the seafood industry continue to lack adequate protection and social safeguards, with significant concerns for migrant workers and women (Finkbeiner et al., 2021). Even in cases where regulations exist, implementation and enforcement of decent work is limited (FAO, 2016). Over the past few years, governments, intergovernmental organizations (IGOs), nongovernmental organizations (NGOs), and industry have ramped up efforts to promote decent work and human rights protection for fishers and fishworkers (Garcia Lozano et al., 2022). While progress is notable, critical gaps remain in our understanding of the elements of decent work, how it is evaluated, and how to effectively enable decent work in diverse fisheries contexts.

Decent work is defined as "productive work for women and men delivering a fair income, security in the workplace and social protection for families, better prospects for personal development and social integration, freedom for people to express their concerns, organize and participate in the decisions that affect their lives and equality of opportunity and treatment" (ILO, 2015). Decent work is

established in major human rights declarations like the 1946 Universal Declaration of Human Rights (UDHR) and the 1966 International Covenant on Economic, Social, and Cultural Rights (ICESCR) (ILO, 2015; International Covenant on Economic, Social and Cultural Rights, 1966; UN Universal Declaration of Human Rights, 1948). Decent work has been recently promoted as a widespread need for all individuals in the United Nations 2030 Agenda for Sustainable Development as Sustainable Development Goal (SDG 8), "Promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all" (McNaughton & Frey, 2011; UN General Assembly, 2015; Goal 8 | Department of Economic and Social Affairs (un.org)).

The International Labor Organization's (ILO) Decent Work Agenda consists of four interrelated pillars—1) employment creation; 2) social protection; 3) rights at work; and 4) social dialogue—which are further encompassed in ten elements: employment opportunities; adequate earnings and productive work; decent working time; combining work, family and personal life; work that should be abolished; stability and security of work; equal opportunity and treatment in employment; safe work environment; social security; and social dialogue, employers' and workers' representation (ILO, 2013, 2015). Decent work in fisheries is established by several international, binding legal instruments as well as non-binding recommendations and codes developed by IGOs, environmental NGOs, and human rights organizations (see Table 7).

	Freedom of Association and Protection of the Right to Organize Convention, 1948 (C087)			
	Right to Organize and Collective Bargaining Convention, 1949 (C098)			
	Forced Labor Convention, 1930 (C029)			
	Abolition of Forced Labor Convention, 1957 (C105)			
	Minimum Age Convention, 1973 (C138)			
	Worst Forms of Child Labor Convention, 1999 (C182)			
	Equal Remuneration Convention, 1951 (C100)			
Legally binding instruments	Discrimination (Employment and Occupation) Convention, 1958 (C111)			
	Work in Fishing Convention, 2007 (C188)			
	UN Protocol to Prevent, Suppress and Punish Trafficking in Persons, 2000			
	UN Convention on the Elimination of All forms of Discrimination Against Women (CEDAW), 1979			
	FAO Agreement on Port State Measures to Prevent, Deter, and Eliminate Illegal, Unreported, and Unregulated Fishing (PSMA)			
	IMO Cape Town Agreement (CTA)			
	IMO Convention on Standards of Training, Certification, and Watchkeeping for Fishing Vessel Personnel (STCW-F)			
	FAO Code of Conduct for Responsible Fisheries, 1995			
	The International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (IPOA-IUU), 2001			
	The Voluntary Guidelines for the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security (VGGT), 2012			
Non-binding instruments	The Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines), 2014			
	ILO Guidance on Addressing Child Labor in Fisheries and Aquaculture, 2013			
	ILO Guidelines on Occupational Safety and Health Management Systems (ILO-OSH), 2001			
	The Monterey Framework for Social Responsibility, 2017			

Table 7. Instruments for Decent Work in Fisheries (Kittinger et al., 2017).

Through these instruments, decent work in fisheries aims to ensure that fishers' and fishworkers' fundamental rights are protected: freedom of association and the effective recognition of the right to collective bargaining; the elimination of all forms of forced or compulsory labor; the effective abolition of child labor; and the elimination of discrimination in respect to employment and occupation. Decent work in fisheries also aims to account for the sector-specific nature of fisheries work and related needs, including hazardous conditions and safety at sea, recruitment of migrant workers, and worker voice, or the right to fair and effective grievance processes and remediation.

Adapting the definition and elements of decent work to account for the complexities of work in the fisheries has given rise to sector-specific international legal instruments. In 2007, the ILO Work in Fishing Convention (C188) was adopted by the ILO and came into force in 2017, establishing standards for fishers and for vessels including minimum age, medical examination and certification, manning and hours of rest, crew lists, work agreements, repatriation, recruitment, payment, onboard accommodation and food, medical care at sea, occupational safety, and social security (ILO, 2007). Yet only 18 countries worldwide have ratified C188, 7 of which are EU Member States. The ILO, alongside the International Maritime Organization (IMO), and Food and Agriculture Organization (FAO) began promoting the ratification and implementation of four legal instruments to promote fisher safety and welfare and reduce illegal fishing activity (FAO, 2020). These recommendations included: C188; the 2012 IMO Cape Town Agreement (CTA), which ensures the safety of industrial vessels, crew and observers; the 1995 IMO Convention on Training and Certification for Fishing Vessel Personnel, (STCW-F), which sets the minimum training requirements for crew; and the 2009 FAO Agreement on Port State Measure to Prevent, Deter, and Eliminate Illegal, Unreported and Unregulated

Fishing (PSMA), which prevents vessels engaging in IUU fishing from entering ports (FAO, 2020). There is growing research and evidence related to the social impacts of illegal, unreported, and unregulated (IUU) fishing, including the links between illegal fishing activity and violations such as trafficking, forced labor, and poor working conditions (Liddick, 2014; Mackay et al., 2020; Yea & Stringer, 2021).

Legally binding instruments have mainly focused on industrial fisheries, specifically the harvest or production stage. C188 has become the primary instrument addressing work in fisheries, establishing minimum standards for industrial and small-scale fisheries, including formal and informal workers. While the convention is comprehensive, there are concerns about its effectiveness with limited ratification to date, high costs of implementation, and the need for increased monitoring and evaluation of fisheries (Stanford Center for Ocean Solutions (COS) and the Stanford Law School (SLS), 2020). The convention does not consider onshore, post-harvest activities including women's engagement in processing and marketing (Gorez, 2020). Furthermore, there is a level of flexibility in C188 requirements in which members can exempt vessels less than 24 meters from certain requirements (e.g., medical certificates or basic safety training) that may leave critical gaps in the protection of small-scale fisheries workers (Stanford Center for Ocean Solutions (COS) and the Stanford Law School (SLS), 2020).

To address these gaps, decent work is also being promoted with non-binding instruments that make important considerations for specific subsectors and issues, in addition to establishing standards for industry. For example, guidance such as the Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines) has been fundamental in promoting the rights of small-scale fishers and fishworkers. The SSF Guidelines call for states to ratify ILO and IMO conventions and ensure their implementation in

national legislation (FAO, 2015). The SFF Guidelines also highlight the need for special attention to the most vulnerable groups such as women and migrant workers. Another notable instrument, the Monterey Framework for Social Responsibility, is a holistic, consensus framework, that has been adopted by numerous organizations working at the nexus of human and labor rights and fisheries and over two dozen businesses (Conservation International, 2018). Built from the SSF Guidelines, human and labor rights and other social issues are embedded in its three principles: 1) protect human rights, dignity, and access to resources; 2) ensure equality and equitable opportunities to benefit; and 3) improve food and livelihood security (Kittinger et al., 2017).

The above efforts reveal that decent work in fisheries is being promoted in regulatory contexts and voluntary initiatives, yet there are several gaps that hinder its implementation at scale, across various contexts. First, our understanding of the elements of decent work and its implementation has been limited to the industrial sector across a small subset of geographies (Finkbeiner et al., 2021). In recent years, investigative journalism and research have started to document and report on labor violations and working conditions onboard industrial vessels in prominent fishing nations such as Thailand, China, Taiwan, and Vietnam (EJF, 2014, 2019; Greenpeace East Asia, 2020; Marschke & Vandergeest, 2016; McDowell et al., 2015; Walk Free Foundation, 2018). However, there are many countries and regions that are understudied. Furthermore, there has been limited attention to small-scale fisheries in which nearly 90% of fishers are engaged globally, inclusive of inland fisheries and transboundary fisheries, potentially creating critical gaps for the protection of these workers (FAO, 2016, 2020; Jentoft, 2014). More so, studies that have focused more on the harvest stage of supply chains limits our understanding of labor conditions for women, who are predominantly engaged in post-harvest sectors

like processing and retail (Finkbeiner et al., 2021). With few studies, there is little understanding of the full scope of labor violations and risk across the globe, as well as progress related to decent work in regions such as Latin America and the Caribbean. Lozano et al. (2022) draws attention to these gaps, emphasizing a need for analysis of decent work across different geographical contexts, as well as across stages of the supply chain.

Evaluating and monitoring decent work in fisheries is highly complex due to the multifaceted nature of decent work in general, as well as the diversity of fisheries involving scale, commodity type, seasonality, and geographical context (FAO, 2016; ILO, 2015). In 2008, the ILO adopted a framework for Decent Work Indicators developed by an international Tripartite Meetings of Experts and endorsed by the 18th International Conference of Labor Statisticians (ILO, 2013). The framework established statistical and legal indicators to analyze the elements of decent work (see Table 8).

Substantive element	Example indicators to measure decent work	
Employment opportunities	Unemployment rate ^a ; education, or training ^a ; government commitment to full employment ^b ; unemployment insurance ^b	
Adequate earnings and productive work	Working poverty rate ^a ; average real wages ^a ; statutory minimum wage ^b	
Decent working time	Excessive working time ^a ; average annual working time ^a ; maximum hours of work ^b ; paid annual leave ^b	
Combining work, family, and personal life	Maternity protection ^a ; maternity leave ^b	
Work that should be abolished	Child labor rate ^a ; forced labor rate ^a ; child labor ^b ; forced labor ^b	
Stability and security of work	Precarious employment rate ^a ; job tenure ^a ; termination of employment ^b	
Equal opportunity and treatment in employment	Occupational segregation by sex ^a ; gender wage gap ^a ; equal employment and treatment ^b ; equal remuneration of men and women ^b	
Safe work environment	Occupational injury frequency rate - fatal and nonfatal ^a ; labor inspection ^a ; employment injury benefits ^b ; occupational safety and health (OSH) labor inspection ^b	
Social security	Share of population above statutory pensionable age ^a ; public social security expenditure ^a ; old-age social security ^b ; incapacity for work due to sickness/injury leave ^b	
Social dialogue, workers' and employers' representation	Trade union density ^a ; collective bargaining coverage rate ^a ; freedom of association and the right to organize ^b ; collective bargaining right ^b	

Table 8. Substantive Elements and Example Indicators – ^aStatistical and ^bLegal Framework – to Measure Decent Work (Garcia Lozano et al., 2022; ILO, 2013).

While the indicators are useful to analyze and monitor decent work at the country level or across numerous sectors, the unique nature of work in fisheries requires specific considerations. There has yet to be a comprehensive, holistic approach to evaluate and monitor decent work in fisheries. Existing studies only look

at a predefined limited set of general indicators or indicators from a specific instrument, like C188. In addition, although C188 can provide a baseline to examine labor issues, it doesn't address women's rights at work, or incorporate other rights and social issues linked to labor like food security or participation that are especially important in small-scale fishing communities. There is a need to evaluate decent work more holistically, analyzing the links between decent work and other rights and inclusive of broader social issues (Garcia Lozano et al., 2022).

One example of a more comprehensive, holistic approach, the Social Responsibility Assessment (SRA) Tool co-developed by Conservation International and based on the Monterey Framework, is a risk-assessment tool for conducting human rights due diligence in seafood supply chains. As noted in Chapter 2, the SRA analyzes the full suite of human and labor rights and can be implemented throughout stages of supply chains, in industrial and small-scale fisheries, and aquaculture (Conservation International, 2021). In addition to the need for holistic frameworks, human rights organizations like Global Labor Justice - International Labor Rights Forum (GLJ - ILRF), have stressed the importance of worker representation and worker-driven approaches when evaluating and monitoring decent work, making this a key element of their "Essential Elements of Social Responsibility" (ILRF, 2018). The Essential Elements were built from Worker-driven Social Responsibility (WSR) developed by the WSR Network (Worker-Driven Social Responsibility Network, 2022). In WSR, workers or worker organizations participate in, and lead, the assessment, design, implementation, and monitoring and enforcement of programs related to decent work. Furthermore, worker-driven monitoring in which workers participate in the designing of monitoring systems or procedures, like grievance mechanisms, are fundamental to achieve decent work, to have effective monitoring and identification of issues and then, provide remedy for workers (Outhwaite &

Martin-Ortega, 2019). Increasingly, these concepts are becoming key aspects of decent work initiatives, although they are not widespread. There is an opportunity to analyze decent work with a broadened scope, inclusive of related social issues like food security, and place more importance on worker-driven approaches to analyze and implement decent work.

Drawing on critical gaps to operationalize decent work, this study has three goals. First, it will provide a comprehensive evaluation of labor standards and working conditions in the transboundary shrimp and groundfish fishery of the Guianas-Brazil Shelf, specifically Guyana, Suriname, and Trinidad and Tobago (see Image 1). This is a useful case study because it will examine decent work in a transboundary context in which both fisheries stocks and labor are shared across three distinct countries. Second, this paper will identify shared priorities in the region, as well as identify opportunities and challenges to promote decent work across a regional seascape. This study contributed to the project, Catalyzing Implementation of the Strategic Action Programme for the Sustainable Management of Shared Living Marine Resources in the Caribbean and the North Brazil Shelf Large Marine Ecosystem (CLME+ project) (FAO, 2021b). One of the main outcomes of this work is to facilitate long-term benefits from the shrimp and groundfish fishery, with special attention to livelihoods and social justice, and mainstreaming decent work and social protection criteria (FAO, 2021b). The shrimp and groundfish fishery in the region, consisting of industrial and small-scale fleets, contributes significantly to the economy, food security, poverty eradication and livelihoods, supporting thousands of individuals, including women and migrant workers (FAO, 2021b). Until recently, there has been little to no research on human rights or labor issues in the fisheries sector in the region. As such, this fishery provides an important opportunity to analyze the elements of decent work at the country- and transnational-level and how decent work varies across jurisdictions, while documenting working conditions and risks. This study is the first evaluation of decent work, inclusive of social issues like food security, gender, and worker engagement and collaborative management, in the region and in a transboundary fisheries context. Third, this study advances an evaluative framework for assessing, monitoring, and improving decent work in fisheries. The evaluative framework draws on three instruments—1) C188; 2) the Monterey Framework for the Seafood Sector and associated SRA tool and protocol; and 3) the SSF Guidelines—to address gaps of any single instrument or standard, approaching decent work holistically and accounting for the specific local and cultural context of the fishery. This study contributes to the emerging academic literature on decent work in fisheries by analyzing human rights and labor conditions through a decent work lens and contributes to advancing decent work by developing and applying a novel evaluative framework. It also contributes important data on labor conditions in the Guianas-Brazil shelf Region.

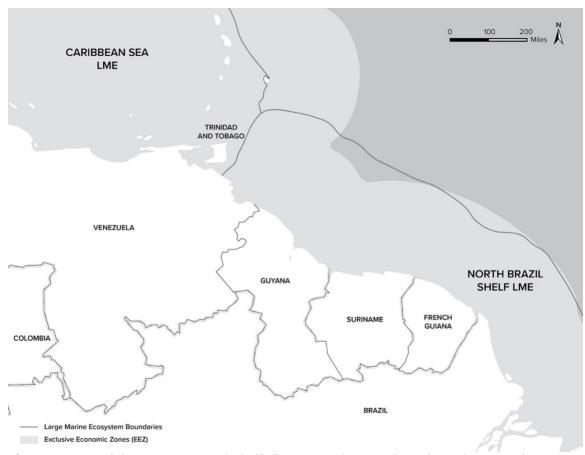


Figure 1. Map of the Guianas-Brazil Shelf Illustrating the Transboundary Shrimp and Groundfish Fishery of Guyana, Suriname, and Trinidad and Tobago (Homerowski, 2022).

Study Area

The shared shrimp and groundfish fishery of the Brazil-Guianas Shelf is of critical socio-economic importance in Guyana, Suriname, and Trinidad and Tobago. Industrial and artisanal fleets target various finfish: Lane Snapper (*Lutjanus synagris*); Southern Red Snapper (*Lutjanus purpureus*); Gray snapper (*Cynoscion acoupa*); Sea trout (*Cynoscion virescens*); Jamaica weakfish (*Cynoscion jamaicensis*); Bangamary (*Macrodon ancylodon*); Butterfish (*Nebris microps*); Whitemouth croaker (*Micropogonias furnieri*); Gillbacker (*Sciades parkeri*); Cuirass (*Sciades proops*); and several shrimp species - Southern Pink Shrimp (*Farfantepenaeus notialis*); Brown Shrimp (*Farfantepenaeus subtilis*); Pink-spotted Shrimp (*Farfantepenaeus brasiliensis*); and Atlantic Seabob (*Xiphopenaeus kroyeri*)

(FAO, 2013). Industrial fleets utilize demersal trawls. Small-scale fleets utilize trawls, but also consist of a wide variety of gears such as seine nets, gillnets, pots, and handlines (Drugan et al., 2021; FAO, 2013).

The shrimp and groundfish fishery is important for employment and incomegeneration for men, women, and migrant workers engaged in harvest and post-harvest in the region (Perch et al., 2020). Employment in the formal and informal sectors can be characterized as full-time, part-time, or seasonal. Overfishing and exploitation and IUU fishing are significant issues in the shrimp and groundfish fishery (FAO, 2013). Recent studies showed that stocks for each country are decreasing in abundance and are either exploited or overexploited (FAO, 2021b). In addition, weak management capacity and constrained resources obstruct effective management, which has been focused on environmental sustainability, with little attention to social issues (FAO, 2013).

In recent years, there have been several concerns about the safety of fishers in the sector. In 2018, there were several accounts of piracy off the coasts of Guyana and Suriname; described as a "massacre," a well-organized pirate attack killed 12 Guyanese fishers (BBC News, 2018; Marks, 2018). In response, both countries have committed to joint anti-piracy actions, protecting fishers, and ensuring security at sea (FAO, 2021b; News Room Guyana, 2020). For many years, Guyanese fishers have secured licenses to operate in Suriname, although not without conflict.

Allegations of harassment, including from Surinamese patrol officers, have surfaced demanding an improved licensing system and monitoring in the region (Stabroek News, 2021). The granting of licenses to Guyanese fishers has been a consistent issue of concern for Suriname regarding the sustainability of its fisheries resources and protection of local livelihoods (Chabrol, 2021). More recently, in 2021, a Guyanese fisher was reported missing after falling overboard during a conflict with

another vessel in Surinamese waters (News Room Guyana, 2021). The same month, three fishers and their vessels were reported missing in Trinidad and Tobago (Loop News, 2021). These incidents are cause for concern for the safety and protection of fishers.

The region is undergoing significant changes due the rapidly growing oil and gas industry off the coasts of Guyana, and more recently Suriname. In 2017, Guyana became the location of the "next big oil boom" with landmark discoveries made offshore by Exxon Mobil and Hess (Krauss, 2018). Since the first extractions, there have been significant environmental concerns, and limited preparation for a possible environmental disaster that would have significant environmental and social implications (Juhasz, 2021). Fishers and fishworkers have been at the forefront of concerned citizens as the fisheries sector is the most at risk if a spill were to occur. Fishers in Guyana have been reporting rapidly declining catches affecting their livelihoods and well-being of their families (Bagot, 2021). These declines have been attributed to Exxon's operations offshore prompting investigations by the FAO and U.S. Environmental Protection Agency (EPA) (INEWS, 2021). Suriname, following closely behind Guyana, is the focus of oil and gas exploration and thought to become another future site for large-scale oil production (Parraga, 2021).

Methods

This study involved a desk review and qualitative interviews with key stakeholders of fisheries in the Brazil-Guianas Shelf region. This study aimed to answer the following questions: What are the labor standards for work in fisheries in Guyana, Suriname, and Trinidad and Tobago? What are the current working conditions in the shrimp and groundfish fishery? What are the priority issues to address to advance decent work in the region?

Identifying qualitative indicators to evaluate decent work

The initial step in the research process was to establish an evaluative framework with a set of qualitative indicators for decent work in the shrimp and groundfish fishery (see Table 9).

Sector-specific indicators	Related substantive elements from the ILO	
Earnings and benefits ^{a,b}	Adequate earnings and productive work	
Adequate rest ^{a,b}	Decent working time	
Trafficking and forced labor ^{a,b,c}	Work that should be abolished	
Child labor ^{a,b,c}	-	
Discrimination ^{b,c}	Equal opportunity and treatment in employment; employment opportunities; combining work, family and personal life	
Equitable opportunity to benefit ^{b,c}		
Occupational safety and health ^{a,b,c}	Safe work environment	
Social protection ^{a,c}	Social security	
Freedom of association and collective bargaining ^{a,b,c}	Social dialogue, workers', and employers' representation	
Worker engagement and collaborative management ^{b,c}	_	
Grievance mechanism or procedures ^b	-	
Food security ^{b,c}	Adequate earnings and productive work	
Illegal, Unreported, and Unregulated (IUU) fishing ^c	Safe work environment	

Table 9. Qualitative Indicators Selected to Evaluate Decent Work in the Shrimp and Groundfish Fisheries Derived from ^aC188, ^bthe SRA, and ^cSSF Guidelines. (The specific criteria and elements considered for each indicator can be found in Appendix A.1.)

Building on the ILO's substantive elements and example indicators to measure decent work, elements from C188, the SRA, and the SSF Guidelines were incorporated to revise the existing general elements and indicators to be specific to the shrimp and groundfish fishery. The indicators to be evaluated needed to address known characteristics of the shrimp and groundfish fisheries such as: industrial and artisanal operations; onshore, post-harvest sectors like processing; informality of employment; women and migrant workers; and other linked fisheries issues like food security and IUU fishing. For each substantive element, the related or aligned indicator or criteria from each of the three instruments was identified and coded. For example, adequate rest included in C188, and the SRA addresses decent working time in the fisheries sector. Similarly, worker engagement and collaborative management and grievance mechanisms and procedures were included in the substantive element of social dialogue, workers' and employers' representation to encompass more than just freedom of association and collective bargaining. All three instruments were used to consider any gaps in the substantive elements and indicators, as well as each other. For example, food security is not typically evaluated as part of decent work and is not part of the ILO substantive elements. However, food security is important to consider in the context of fisheries and the linkages to poverty and adequate earnings, particularly in small-scale fisheries. The SRA and SSF Guidelines have distinct criteria for food security, while C188 does not. Likewise, IUU fishing was included as an indicator due to known linkages between illegality, safety, and working conditions. In this case, the SSF Guidelines is the only instrument that includes specific criteria for IUU fishing.

Review of legal and regulatory framework and fisheries practices of Guyana, Suriname, and Trinidad and Tobago

For each country, the laws, policies, and legal documents related to labor, safety, and fisheries resource management were reviewed, with specific focus on the instruments related to decent work (see Table 7). Secondary documents were coded and analyzed to gain an understanding of regional and sectoral human and labor rights risks, and well as progress towards decent work. These document types included fisheries reports, the United States Department of State Trafficking in Persons Report, the IUU Fishing Index, the Global Slavery Index, other human rights and labor rights risk assessments, decent work country programs, local journalism, and scientific articles. Recommended data sources for each indicator can be found in Appendix A.2.

Interviews with key stakeholders

Semi-structured interviews were conducted with stakeholders from Guyana, Suriname, and Trinidad and Tobago. Participants included fishers and fishworkers, vessel owners, fisheries officers, other government authorities involved in fisheries and labor, IGO and NGO employees, and expert consultants. An initial sample of key informants containing representatives from each country was selected and recruited based on the existing contacts in the sector. Snowball sampling was then used to identify additional participants. Interviews were conducted until no new additional data was found, or saturation, was reached. Twenty-six interviews were conducted (11 Guyana; 7 Suriname; 8 Trinidad and Tobago) with representatives from each stakeholder group participating. Due to safety concerns and travel restrictions for COVID-19, interviews were conducted remotely using the video conferencing apps Skype and Zoom, or WhatsApp. While restrictions due to COVID-19 may have contributed to a smaller sample than in-person, field-based research, the sample

was representative of fisheries stakeholders in the region and sector, and saturation was reached. During interviews, questions asked were focused on the established set of indicators (see Table 9). Example interview questions can be found in Appendix B. The purpose of these interviews was to gain knowledge of working conditions (onboard vessels and onshore subsectors), concerns and areas of improvement, and progress to operationalize decent work in the shrimp and groundfish fishery. Interviews generally lasted for 60-90 minutes. IRB approval was obtained from Arizona State University (see Appendix A.3). Interview transcripts were coded and analyzed using key words of the indictors in Table 9.

Results

The results of the regional assessment are presented below including findings from the desk review and interviews. For each national assessment, a summary of key findings is presented, with particular focus on priority areas or issues identified by interviewees. For every indicator, exemplar quotes or statements are presented in the respective tables.

Legal instruments for decent work in fishing

Guyana, Suriname, and Trinidad and Tobago have ratified all ILO Core

Conventions (see Table 10). All countries have yet to ratify Work in Fishing C188

which would establish the specific laws, regulations, and measures for work on board

vessels including wages, safety, and accident prevention. Guyana has not ratified the

UN Trafficking in Persons (TIP) Protocol but has acceded to it, maintaining the same

binding legal effect of a ratification. Suriname has acceded to both the UN TIP

Protocol and UN Convention on the Elimination of All forms of Discrimination Against

Women (CEDAW). Guyana and Trinidad and Tobago are parties to the Port State

Measures Agreement (PSMA) establishing binding commitments to combat IUU

fishing. All countries have yet to ratify the International Maritime Organization (IMO)

Cape Town Agreement (CTA) and the IMO Convention on Standards of Training,

Certification, and Watchkeeping for Fishing Vessel Personnel (STCW-F) showing a

key gap in legislation related to working conditions and safety in the fisheries sector.

International Legal Instrument	Guyana	Suriname	Trinidad and Tobago
Freedom of Association and Protection of the Right to Organize Convention, 1948 (C087)	25 Sep 1967	15 Jun 1976	24 May 1963
Right to Organize and Collective Bargaining Convention, 1949 (C098)	08 Jun 1966	05 Jun 1996	24 May 1963
Forced Labor Convention, 1930 (C029)	08 Jun 1966	15 Jun 1976	24 May 1963
Abolition of Forced Labor Convention, 1957 (C105)	08 Jun 1966	15 Jun 1976	24 May 1963
Minimum Age Convention, 1973 (C138)	15 Apr 1998	15 Jan 2018	03 Sep 2004
Worst Forms of Child Labor Convention, 1999 (C182)	15 Jan 2001	12 Apr 2006	23 Apr 2003
Equal Remuneration Convention, 1951 (C100)	13 Jun 1975	04 Jan 2017	29 May 1997
Discrimination (Employment and Occupation) Convention, 1958 (C111)	13 Jun 1975	04 Jan 2017	26 Nov 1970
Work in Fishing Convention, 2007 (C188)			
UN Protocol to Prevent, Suppress and Punish Trafficking in Persons, (TIP Protocol) 2000	14 Sep 2004*	25 May 2007*	6 Nov 2007
UN Convention on the Elimination of All forms of Discrimination Against Women (CEDAW), 1979	17 Jul 1980	01 Mar 1993*	12 Jan 1990
FAO Agreement on Port State Measures to Prevent, Deter, and Eliminate Illegal, Unreported, and Unregulated Fishing (PSMA)	13 Sep 2016		24 Oct 2019
IMO Cape Town Agreement (CTA)			
IMO Convention on Standards of Training, Certification, and Watchkeeping for Fishing Vessel Personnel (STCW-F)			

Table 10. Ratifications and Accessions* by Country Related to Decent Work in Fisheries.

National Assessment: Guyana

Guyana has national legislation establishing a minimum wage, working hours, minimum employment age, equal rights for men and women, workplace safety and health standards, and social security (ILO, 2011a, 2017). National legislation prohibits human trafficking and forced labor and protects worker's rights to association and to collective bargaining. Enforcement of these laws varies significantly and, in many instances, fails to protect workers, particularly fishers. The fisheries sector and informal workers are not covered under many of the national laws and policies such as social security. Similarly, wages and working hours or safety and health standards have not been adequately adjusted to work in the fisheries sector. Improving social protection and addressing inequality are two of the main objectives in the Decent Work Country Programme 2017 to 2021 (ILO, 2017). While there are no sector-specific outcomes for fisheries, improving conditions for non-standard and informal forms of employment are central to the country's decent work agenda.

Indicator	Guyana
(a) Earnings and benefits	"How would you tackle that in terms of artisanal, in terms of compensation? Because their system of pay is a unique one where they would go out and whatever they catch, the captain gets half. The owner gets the other half." (Fisheries Officer, Fisheries Department)
(b) Adequate rest	"You can put me upon a boat and then the mattress I have to sleep on in the boat is dirty, and you refuse to buy a new one. We say that when the condition is bad, the workers leave the boat." (Fisher and cooperative member)
(c) Trafficking and forced labor	"Then, you'll get rare cases that an owner might beat a worker because he doesn't want to work more" (Fisher)
(d) Child labor	"Well, basically you wouldn't find many children, but when you finish school at 16 in Guyana, they would still be considered children because they aren't 18, which is the legal age. You do have in terms of that age, but I wouldn't say that they're children because they already finished school." (Fisher)
(e) Discrimination	"No, we don't have it. What we find, I will say in terms gender, females are not being discriminated in any part of the industries at our areabut we're finding that if the woman is not so willing to take up the role in management, they're comfortable with being more informal, selling their fish, or buying the fish as vendor." (Fisher)
(f) Equitable opportunity to benefit	"I would say I know the perception which is being created is just based on the numbers which we're seeing, but their role [women] is much more important than is being perceived." (Fisheries Officer, Fisheries Department)
(g) Occupational safety and health	"You don't need to even show if you have safety equipment or anything. Right when you sign up you get a licenseI don't think there is any which is enforced because in the first place, you don't have no one patrolling the waters. Nothing would be enforced." (Fisher)
(h) Social protection	"We had made several attempts to extend benefits to our fishers. Guyana has something you call the NIS, National Insurance Scheme, where it's compulsory. Here for joining the NIS, you have to have documentsMany of the owners were not willing to go and get the documentation for the workers." (Cooperative committee member)
(i) Freedom of association and collective bargaining	"There are so many advantages to being part of a co-op. Within a co-op, you won't be exploited." (Cooperative committee member)
(j) Worker engagement and collaborative management	"In terms of engaging with the fisher himself, we need to be more in the ground, have more communication and dialogue outside, host more meetings, give them the opportunity to raise their concerns in a way that they feel that they're heard, and they can see meaningful results coming out from the conversations that they would have with the officials who are supposed to represent them, and not only from the department, but from all of the agencies as well." (Fisheries Officer, Fisheries Department)
(k) Grievance mechanism or procedures	"They come and we have a complaint book. We take their reports, what can be handled in house" (Cooperative committee member)
(I) Food security	"Their role in terms of food security especially for Guyana and the entire Caribbean at large is extremely important, because I think if you look at our export data, it is fairly high compared to other Caribbean countries, especially our neighbors, Suriname in terms of our output." (Fisheries Officer, Fisheries Department)
(m) Illegal, Unreported, and Unregulated (IUU) fishing	"The illegal fishing in terms that yes, because a lot of people want to come in the industry and enough licenses have not been issued so they delay, go out fish without licenseThe enforcement is not there, and because of that, you will have these illegal fishing activities taking place." (Fisher)

Table 11. Representative Statements for Each Indicator from Interviews with Stakeholders in Guyana.

Trafficking in persons and bonded labor were identified by interviewees as two critical concerns for the fisheries sector. Fishing vessels are known to engage in trafficking of persons and goods according to interviewees. Anecdotally, one interviewee noted at the time of this study, border closures due to COVID-19, had increased trafficking activities between neighboring countries like Venezuela and Brazil. However, there was no specific evidence outside of these anecdotes to corroborate that labor trafficking is occurring within the sector. Bonded labor was reported to occur in the artisanal sector. One interviewee, a fisher, described situations in which they have been forced to work with no pay to account for lost or damaged gear, and they have experienced abuse and harassment over unpaid debts (see Table 11, c).

Women are found at every stage of the fisheries value chain in Guyana, predominantly in processing, retail, and as vessel owners. A recent gender assessment found that the role of women was considered informal and in positions of limited decision-making or leadership (Maison & Perch, 2019). This role is maintained by cultural norms, societal views, and common industry practices. Discrimination of women in employment, including opportunity to participate in an industry, is not exclusive to the fisheries sector, but is a challenge at the national level (USDS, 2020a). However, three interviewees considered women to have many opportunities to participate in the sector in management roles but prefer to engage in processing and retail (see Table 11, e).

Improving worker representation and engagement was identified as a priority to operationalize decent work by all stakeholder groups. Cooperatives have historically been encouraged to represent and advocate for workers, as well as a mechanism for bargaining collectively. There are three active fishermen's cooperatives—Upper Corentyne Fishermen Cooperative Society Ltd, Rosignol

Fishermen Cooperative Society Ltd, and Essequibo Island/West Demerara Fishermen Co-operative Society Ltd—operating at various levels of organization. However, even with a widespread understanding of the benefits of organized cooperatives, most fishers and fishworkers are not part of cooperatives limiting representation (see Table 11, i). Thus, worker representation is limited across the sector.

There are no formal mechanisms for worker engagement, such as public consultation or advisory groups. Instead, engagement between the Fisheries Department and fishers and fishworkers occurs ad hoc. The limited engagement by the Fisheries Department is due to dispersed landing sites, limited capacity, and budget. One fisher stated that their input and ideas were not often heard by the Fisheries Department, and cooperation at the Department could improve. An interviewee from the Fisheries Department agreed with this and cited the need for "more communication and dialogue" and "opportunity [for fishers] to raise their concerns in a way that they feel that they're heard" (see Table 11, j). Conversely, very few fishers and fishworkers consistently participate in meetings and other activities. The disengaged relationship between these groups presents challenges for effective management and compliance of the fisheries sector. Furthermore, there are no established mechanisms for workers to raise grievances within the sector. One exception is a cooperative level mechanism referred to as a "complaint book" for reporting within the Upper Corentyne Fishermen's Co-operative Society that was described by one interviewee as effective to remediate minor issues (see Table 11, k).

Safety at sea is a concern for fishers in the fishing sector. Vessels lack the minimum safety equipment and inspection, and enforcement of safety regulations is limited. Two fishers emphasized poor access to health and safety training including basic first aid, fire safety, and accident prevention. Registered vessels have

designated requirements established in the Fisheries Act, however less than half of the artisanal sector is registered presenting a major challenge for adoption and monitoring (see Table 11, m). Thus, addressing IUU, especially in the artisanal sector continues to be a priority. While Guyana has ratified the PSMA establishing binding commitments to combat IUU fishing, implementation has shown limited progress. In fact, Guyana was identified as engaging in IUU activities during 2018-2020 (Coit & Spinrad, 2021) and one of the ten worst performing countries in terms of responses by state to reduce IUU fishing (Poseidon Aquatic Resource Management Ltd. & Global Initiative Against Transnational Organized Crime, 2021). All stakeholder groups cited IUU fishing as a threat to fisher safety and national and regional food security.

National Assessment: Suriname

Surinamese law defines standards for labor such as a national minimum wage, acceptable hours of work, occupational safety and health, collective bargaining, and social protection, and prohibits discrimination and unacceptable forms of work like forced and child labor (ILO, 2011). Like neighboring Guyana, laws do not account for informal types of employment or migrant workers, and inspections and enforcement do not adequately protect workers. Guyanese fishers make up most of the harvesting workforce in the Surinamese sector. National priorities defined in the Decent Work Country Program include modernization of existing labor legislation, such as safety and health conditions at work, strengthening of labor inspections, and securing social protection for workers (ILO, 2019).

Indicator	Suriname
(a) Earnings and benefits	"I'm not sure how we can improve that [wages] because of the way some fisheries operate." (Project Manager, IGO)
(b) Adequate rest	"I think it has six, seven people sometimes, pretty small boats, living, eating, working, sleeping in very small spaces. Very hard work, less sleep." (Project Manager, IGO)
(c) Trafficking and forced labor	"fishermen have been involved and in years before where fishing vessels have been involved in drug trafficking, and also trafficking of people, bring people, for instance, during the COVID lockdown when the situation was exposed a bit in March and in April." (Fisheries Officer, Department of Fisheries)
(d) Child labor	"Sometimes you have children involved in fishing. It has to do with fishermen who are not able to send the children to school due to the costs, but also due to the access, or the area where they live." (Fisheries Officer, Department of Fisheries)
(e) Discrimination	"I wouldn't say there's a lot of discrimination within the system." (Fisheries Officer, Department of Fisheries)
(f) Equitable opportunity to benefit	"Most of them are Guyanese because for some reason, the Surinamese, they don't want to go out at sea. They think because it's beneath themThat's because artisanal fishing doesn't get the recognition that it's supposed to get." (Fisher and fisherfolk organization member)
(g) Occupational safety and health	"Many of the things are missing, but the vessel has a certificate, a safety certificate we call it. The problem is not the standards. The standards are, I think, quite okay, but there is no enforcement or continuous enforcement of these standards." (Fisheries Officer, Department of Fisheries)
(h) Social protection	"The problem is Social Security benefits; they have certain terms that people have to meet. The problem is the situation in Suriname, our situation is that most of the fishermen who partake in the artisanal fisheries come from another country. A lot of Guyanese fishermen end up fishing and working in Suriname. To have access to Social Security and social benefits, you have to be a Surinamese." (Fisheries Officer, Department of Fisheries)
(i) Freedom of association and collective bargaining	"It's mixed and I must say it's the idea of being in a collective is very weak in Suriname. I think it lacks the professionality of the fisherman or some fishermen trying to run it." (Fisheries Officer, Department of Fisheries)
(j) Worker engagement and collaborative management	"there's still a large part of fishermen who have to come from Guyana to work in small-scale fisheries. One of the things that we recognize is that it's sometimes or mostly difficult to collaborate or to engage with fishermen." (Program Coordinator, NGO)
(k) Grievance mechanism or procedures	"There should also be systems of how measures are taken and how Suriname and Guyana will be dealing with these issues." (Fisheries Officer, Department of Fisheries)
(I) Food security	"We see a decline because there are more and more boats coming from Guyana. That's starting to be a problem [fish being landed in Guyana] like I said, so we have to see how we're going to deal with that." (Fisher and fisherfolk organization member)
(m) Illegal, Unreported, and Unregulated (IUU) fishing	"It has proven to be a very tough and very challenging project because we knew of a lot of IUU activity going on across the border, within the border, within zones, having to do with fishing gear and supports. A lot of IUU." (Fisheries Officer, Department of Fisheries)

Table 12. Representative Statements for Each Indicator from Interviews with Stakeholders from Suriname.

Paralleling Guyana, two interviewees identified fishing vessels to be engaging in illegal activities like trafficking, which was cited as a concern as it introduces

unnecessary risk to the fisheries sector (see Table 12, c). Illegal vessels activities, as well as a high prevalence of IUU fishing characterized by unlicensed fishing by Guyanese vessels, continue to occur due to poor monitoring and enforcement. IUU fishing has resulted in income loss for Suriname, making it a priority to tackle (FAO, 2021a). The Coast Guard is responsible for monitoring illegal activities such as drug and human trafficking and IUU fishing, but, according to four interviewees, high fuel and operating costs and poor distribution of monitoring responsibilities, limits effective enforcement.

Workers' rights to association and to bargain collectively are regarded as well-protected. Fishers and fishworkers are represented by the Suriname National Fisherfolk Organization (SUNFO). There are five artisanal fisher collectives that are part of SUNFO, although they operate independently. Cooperatives or collectives were cited by an interviewee as a positive mechanism to communicate social concerns for fishers and fishworkers and disseminate management updates and policies throughout the sector. However, participation is not widespread (see Table 12, i).

Engaging with fishers and fishworkers is one of the main concerns or areas of improvement for decent work. There are no formal mechanisms for worker engagement, or grievance reporting. Limited capacity and budget and dispersed fleets present challenges to improve engagement. However, two interviewees cited the predominantly Guyanese workforce as the biggest challenge for engagement (see Table 12, j). Existing national law is designed to engage with and direct measures towards Surinamese license holders, failing to incorporate much of the sector, which includes Guyanese fishers and fishworkers. In the past several years, several initiatives have focused on providing some level of legal working status to Guyanese fishers, yet these efforts have had little, if any, success.

The dominant presence of Guyanese fishers creates risks for the local economy and local food security. Locally, fishing is not a highly regarded occupation (see Table 12, f). One interviewee emphasized a need to shift this perspective and encourage more Surinamese to enter the fisheries sector. Similarly, more opportunities need to be designated for women who continue to have restricted access to roles with higher economic returns. Licensed and unlicensed Guyanese boats were cited as an impact to local food security, although there is no evidence to confirm the extent of impacts (see Table 12, I). Instead of focusing on the risks related to Guyanese vessels, one interviewee indicated more investment and increased capacity should be directed at local operations, including processing and retail subsectors.

National Assessment: Trinidad and Tobago

Trinidad and Tobago legislation establishes a national minimum wage, acceptable hours of work, occupational safety and health, collective bargaining, and social protection, and prohibits forced and child labor (ILO, 2011b). Trinidad and Tobago shares many similarities with Guyana and Suriname in terms of few sector-specific labor standards, lack of attention for informal employment, and limited monitoring and enforcement. Despite legislation, Trinidad and Tobago has struggled to address trafficking, widespread IUU, and discrimination and inequities around gender in the fisheries sector.

Indicator	Trinidad and Tobago
(a) Earnings and benefits	"It depends on the kind of fishing it is. In the artisanal, it's worse than the industrial because the industrials can still make a lot of money compared to an artisanal fisher who, if he has to share one share out of a very little bit of money, it's not a lot of money taken home for a very long one day's work." (Fisheries Officer, Fisheries Division)
(b) Adequate rest	"Yes, some kind of minimum terms, I think would be good, like sleeping hours. I don't think boat rollers, if they're hauling fish, they would sleep at all. Like I said, it depends on how much you catch." (Fisheries Officer, Fisheries Division)
(c) Trafficking and forced labor	"We've had an influx of migrants, both legally and illegally and fishing vessels are notorious for transporting migrants illegallywe know it happens especially onboard fishing vessels." (Fisheries Officer, Fisheries Division)
(d) Child labor	"In the new draft bill, the requirements will be 16 and over because that's what labor requires and that's on the labor arrangements. Now, the fishermen have a problem with it because they say that they have kids who fish in family-type arrangements, and they want it to include in the bill." (Fisheries Officer, Fisheries Division)
(e) Discrimination	"Yes, a lot of the Venezuelan women, they have it really hard. They're coming in with kids and they're being forced into a lot of things, prostitution, whatever else, being taken advantage of by the fishermen, by the owners of the port." (Fisheries Officer, Fisheries Division)
(f) Equitable opportunity to benefit	'Yes, the whole sector is male-dominated but you do see one or two fisher-women now beginning to own the boats." (Fisher)
(g) Occupational safety and health	"There are some standards for industrial companies, sure. But for the fishers' vessels, there are no standards that I'm aware of. Even if they did pass standards, there's no enforcement for a whole range of other standards. It's one thing to have a standard on paper. It's quite another thing to have it empowered by an institution that can do something about it." (Program Manager, NGO)
(h) Social protection	"I don't think there are very many fishers, if any at all, who pay that premium and go to National Insurance and pay it. That is a problem, but the facility is there for self-employed persons if they wish to get up there. Each individual fisher would have to be identified as a self-employed person and will have to make his own contributions to that system in order to qualify." (Fisheries Officer, Fisheries Division)
(i) Freedom of association and collective bargaining	"I think the association, if they're structured properly with a cooperative type of arrangement, could actually provide financial and economic support to the families of these crew members." (Fisheries Officer, Fisheries Division)
(j) Worker engagement and collaborative management	"they [Fisheries Department) don't come to address fishermen issuesthe working issues." (Fisher)
(k) Grievance mechanism or procedures	"I have an open-door policy. The fishermen come in, and they see me, and I am not in a meeting, I will meet with them." (Fisheries Officer, Fisheries Division)
(I) Food security	"As a matter of fact, sometimes of the year, we don't have enough for our local consumption." (Researcher, Fisheries Division)
(m) Illegal, Unreported, and Unregulated (IUU) fishing	"We just signed on to the Port State Measures Agreement which is a FAO agreement that is mandatory that allows us to now monitor ports for IUU fishing. After our bill gets passed next year, we may be in a better position to actually go and inspect these boats, the foreign boats, and see what the working conditions are like on it." (Fisheries Officer, Fisheries Division)

Table 13. Representative Statements for Each Indicator from Interviews with Stakeholders from Trinidad and Tobago.

Addressing illegal activities and organized crime in Trinidad and Tobago's territorial waters has been an ongoing challenge. Trafficking (drug, sex, and labor) is a national concern as the country is a destination and transit point for trafficked victims (USDS, 2020b, 2021). Victims arrive by sea, and there is evidence of fishing vessels participating in transport according to two interviewees (see Table 13). Additionally, there is evidence that law enforcement and coast guard officials facilitate certain activities (USDS, 2020b). Corruption and oversight for these issues extends risk for fishers and fishworkers. In 2012, Indonesian fishers were rescued from trafficking and forced labor conditions on vessels in Trinidadian territorial waters (IOM, 2016). Despite recently becoming a party to the PSMA, Trinidad and Tobago has struggled to address systemic IUU fishing, receiving a yellow card (or formal warning) from the European Union (EU) as a non-cooperating country in the fight against IUU fishing (IUU Watch, 2020). Moreover, Trinidad and Tobago is listed as one of the worst performing countries for general state responsibility, based on indicators such as corruption, trade, EU carding, and media reports of IUU (Poseidon Aquatic Resource Management Ltd. & Global Initiative Against Transnational Organized Crime, 2021). Two interviewees considered the signing of the PSMA to be beneficial in addressing IUU (see Table 13, m).

There is no Trinidadian law that requires equal pay for equal work indicating a gap in protection from discrimination, particularly for women. As a result, there are inequities around wages in regard to gender, and across informal and formal employment (USDS, 2020b). Women are underpaid in the majority of sectors, especially informal sectors like fishing. In the fisheries sector, unlike Guyana and Suriname, fewer women participate in the value chain. Two interviewees described the post-harvest sectors, like processing and retail as male dominated (see Table 13, f). Women face constraints to enter and derive benefits from the sector, and it is not

uncommon for women to be discouraged or shamed for participating (Perch et al., 2020). However, gender mainstreaming was not considered by interviewees to be a priority to advance decent work in the fishing sector.

Improving worker engagement has been a collaborative effort and the focus of recent NGO-led projects in Trinidad and Tobago. Like Guyana, engagement is *ad hoc*, and there is considerably less organization among fishers and fishworkers into cooperatives or associations compared to neighboring countries. Fishers typically come together to address collective issues or concerns, such as piracy or overfishing. Stakeholders are aware of the benefits that cooperatives can provide for fishers, especially as a more formal mechanism for engagement and grievance reporting. There is room for improvement for worker engagement in Trinidad and Tobago, particularly around addressing social issues, or "fishermen issues" in the fishery (see Table 13, j).

Discussion on shared challenges and a way forward

This evaluation identified shared, regional challenges that must be addressed to achieve decent work, protect the rights of fishers, and ensure long-term benefits from the shrimp and groundfish fishery spanning the countries assessed in this study. Guyana, Suriname, and Trinidad and Tobago have made notable commitments such as ratifying conventions to protect human and labor rights of workers (Table 10). Despite these commitments, protections often do not extend to the fisheries sector, creating a gap between ratification and meaningful implementation at the worker-level. Informal workers, seasonal workers, women, and migrant workers do not possess the same safeguards or legal status in regard to wages or social protection. The region has yet to ratify sector-specific conventions like C188, IMO CTA, and IMP STCW-F, that were developed to address critical needs like improved safety and health, social protection for informal workers, and reducing

illegal activity. Additionally, there is a need for increased adaptation of legislation for work in the fisheries sector, as well as updating outdated laws and policies. Fisheries policies and resources management plans have yet to adequately incorporate social issues compared to environmental sustainability issues. This disjuncture has maintained poor awareness and understanding of decent work across the region, and how it is related to environmental outcomes.

The poor implementation and enforcement of standards related to decent work is linked to two issues: trafficking and IUU fishing. Interviewees in Guyana, Suriname, and Trinidad and Tobago identified trafficking to be occurring with frequency, including the trafficking of goods, sex, drugs, and humans (Table 11c, 12c, 13c). Trafficking here introduces significant risk to the sector where issues like piracy and at-sea violence have been an existing concern. While all nations in this evaluation have made binding commitments to prevent and deter trafficking, at-sea monitoring and enforcement are limited due to constrained budgets and decreased law enforcement capacity allowing crimes to go unseen and unpenalized.

Similarly, IUU fishing was described as "allowable" in these countries due to its prevalence and overall lack of enforcement. Illegal fishing activities are diverse in the region including unlicensed vessels and fishing outside territorial waters. IUU fishing was identified as the most pressing concern as it threatens regional food and livelihood security, the safety of fishers, and sustainability of fisheries resources. Here, IUU fishing was predominantly characterized by unlicensed fishing, fishing outside territorial waters, overharvesting and unreported catches, and was associated with illegal activities like trafficking of drugs and persons. IUU fishing was linked to other issues like poor safety and health standards for vessels, offering some validation of existing concerns related to the links between IUU fishing and poor working conditions. Guyana and Trinidad and Tobago have both ratified the PSMA,

committing to addressing IUU in their ports. While efforts are in their preliminary stages, progress has been slow calling into question whether there is sufficient capacity and enabling factors for effective implementation. Currently, there is no oversight or standards for the overwhelming number of unregistered vessels. Without a formalized, registered fleet it is difficult to enforce safety standards or implement new policies. The cases of trafficking and widespread IUU fishing indicate weaknesses of the regional legislation and sector standards. Without effective monitoring and penalties to deter recurring violations there are few incentives to comply. Low compliance and perceived lack of monitoring and penalties are obstructing enforcement efforts in a region where resources and capacity designated for fisheries are scarce.

Improving worker representation, a key aspect of decent work, was both an identified area of progress and continued area of improvement in the region. The rights to freedom of association and collective bargaining are established and protected in Guyana, Suriname, and Trinidad and Tobago, however a historically strained relationship between workers and government officials has obstructed meaningful engagement in all three countries. There are no formal mechanisms, or unions, for fishers and fishworkers in these countries to participate in the decision-making, design, development, and implementation of fisheries policies. Additionally, there are no special considerations for women and migrant workers across the region. Moreover, there are no sector-wide mechanisms for fishers or fishworkers to report grievances. Cooperatives or collectives were identified as a mechanism to advance decent work, as they can promote representation and engagement, and establish community-level grievance mechanisms or procedures. Historically, cooperatives and collectives have provided the infrastructure for organization and participation. In Guyana and Suriname, investment and efforts have been directed in

recent years to revive cooperatives. In addition to promoting ratification and implementation of international agreements for decent work in fisheries, cooperatives and collectives can operationalize aspects of decent work from the bottom-up.

Many of the challenges identified in this evaluation are multifaceted and relevant across the region, because of the transboundary nature of the shrimp and groundfish fishery. Looking forward, there are several recommendations for the region to advance decent work. First, addressing IUU fishing is a priority. Addressing IUU, particularly in the small-scale sector, can not only formalize the fishery and increase legality, but also improve compliance with safety standards and issues like fishing vessels engaging in trafficking. A comprehensive effort to address IUU should incorporate various dimensions from widespread registration and licensing, especially in the small-scale sector, to at sea monitoring ensuring vessels are adhering to the appropriate requirements. Next, all countries should work towards ratifying fisheryspecific conventions like C188 to establish minimum standards and requirements for labor in the sector. Addressing decent work in the shrimp and groundfish fishery will require increased commitments and collaboration at the regional level. A transboundary regional approach to decent work in the fisheries sector is recommended, facilitated by a regional taskforce with representatives from government, IGOs, and NGOs, and worker representatives. Taking a regional approach, there needs to be a shared, minimum standard for decent work that extends to all fishers and fishworkers in the supply chains. This includes standards and policies for women and migrant workers operating in a neighboring country like Guyanese fishers in Suriname. This action can extend protections to all workers, as well as increase opportunities for engagement and improve participation in fisheries activities like management, training, and other workshops. This established standard

of decent work in the region must be monitored and enforced at both country and regional level. Finally, increasing awareness of human and labor rights in fisheries is critical to advance decent work. It ensures rights are being protected and respected by all those engaged in the shrimp and groundfish fishery activities, and it is necessary for fishers and fishworkers to better understand their own rights, such as their rights to collective bargaining.

Lastly, this study piloted a novel evaluative framework for assessing, monitoring, and improving decent work in fisheries. The framework was built on the ILO's Decent Work Indicators and incorporated elements and criteria from the C188, the Monterey Framework for the Seafood Sector and associated SRA tool and protocol, and the SSF Guidelines (Appendix A.1). As a result, the framework was holistic, addressing gaps existing in one single instrument and incorporating criteria for food security, IUU, and grievance mechanisms that are not consistently included in decent work evaluative frameworks. More so, the indicators selected based on the three instruments were established with the specific context of the fishery being assessed and its known characteristics. In the case of this assessment, the indicators did not only identify gaps in protections for fishers and fishworkers or key areas of improvement like safety and worker engagement but provided important information on the relationship between these concerns and other issues present in the fishery like IUU. Applying this evaluative framework in the shrimp and groundfish fishery with its complex transboundary nature, limited social data, and varied supply chain, was an ideal pilot and opportunity to assess its applicability and usability. However, due to COVID-19 restrictions and safety precautions, key limitations of this study include a limited sample size and remote data collection. Saturation was reached during interviews, but additional interviews with fishers and fishworkers may have provided additional insights into the conditions of the sector. Additionally, in-person

data collection including in-person interviews and direct observations are recommended as best practices for a sensitive topic like human rights or labor conditions, and to validate or triangulate sources of data.

In order to further develop and validate this evaluative framework, it should be applied in additional fisheries and geographies. Recommended data sources and example interview questions for assessors are provided in Appendix A.2. Because the framework can be tailored to the specific context of a fishery, an assessor can adapt the framework to include all the indicators analyzed in this study, or a subset of indicators that are relevant for the fishery being evaluated. Furthermore, if there are elements of decent work or linked social issues that are pertinent for the fishery being evaluated but were not included in this study, they should be analyzed, and assessors should provide guidance on their analysis. Additional pilots of the evaluative framework can provide important feedback and critique of the approach that will be critical to formalize the framework as a tool to evaluate decent work.

Conclusion

Fishers and fishworkers in the shrimp and groundfish fishery are at increased vulnerability and instability due to COVID-19, impacts of the oil and gas industry, and other environmental threats like climate change. Therefore, achieving decent work is imperative now more than ever. Ensuring decent work in fisheries is complex and multifaceted, requiring in-depth knowledge of working conditions and effective implementation of legal frameworks and interventions. This study, as the first comprehensive evaluation of working conditions in the shrimp and groundfish fishery, provides the foundation of information on labor in the sector and initiates efforts to promote decent work across the region. With a tailored evaluative framework drawing on diverse guidance for decent work in fisheries, this evaluation shed light on areas of improvement to be addressed collaboratively at the regional

level: illegal activities including trafficking and IUU fishing, safety for vessels, and worker representation. Guyana and Trinidad and Tobago have ratified the PSMA, taking critical steps to address IUU. However, unregistered and unlicensed vessels, especially in Guyana's small-scale sector, present challenges for widespread monitoring and enforcement of vessel standards such as safety. Looking forward, the region could immediately act to improve working conditions and protection of fishers and fishworkers including: establishing regional standards and enforcing policies to effectively protect *all* fishers and fishworkers throughout the supply chains regardless of employment type or nationality; ratify conventions like C188, establishing minimum standards and requirements for labor in the sector; foster worker organization and participation in cooperatives and collectives; and adopt a transboundary regional approach to decent work. This study advances decent work contributing to literature on human rights and labor conditions in the context of diverse fisheries by developing and applying a novel evaluative framework.

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Chapter 4

HUMAN RIGHTS IN A SEA OF MARKET-BASED APPROACHES: EVALUATION OF MARKET-BASED TOOLS TO ADVANCE SOCIAL RESPONSIBILITY IN THE SUSTAINABLE SEAFOOD MOVEMENT³

Abstract

Social responsibility in the Sustainable Seafood Movement has accelerated in the past several years as human rights and labor issues are increasingly being integrated into market-based approaches such as certifications, fishery improvement projects (FIPs), and buyer sourcing commitments. There is skepticism around the ability to address the full suite of human rights with these market-based approaches, which were originally designed for environmental sustainability. Experts have also raised concerns about the voluntary nature, the reliance on social audits, poor enforcement mechanisms, and limited worker representation of these interventions. This study presents a comprehensive evaluation of the most prevalent market-based interventions, and their efficacy in addressing human and labor rights and other social issues (e.g., livelihood security), drawing on a comprehensive review of existing initiatives and via expert interviews. The overarching purpose of this analysis is to improve our understanding of how human rights are being implemented into seafood sustainability globally, as well as the movement's challenges to advance social responsibility and opportunities for improvement. Results suggest that while certifications can be a useful intervention in establishing a minimum level of compliance for the sector, they require improved accountability systems and continuous, internal monitoring led by workers. The model of fishery improvement projects (FIPs), requiring continuous change and improvement over

³ Manuscript submitted to *Sustainable Production & Consumption* with co-author Elena Finkbeiner. I contributed to the conceptualization, development of methodology, investigation, analysis, writing – original draft, writing – review & editing, and project administration. Finkbeiner contributed to this paper by advising on the methodology, writing – review & editing, and supervision.

time, can be an alternative to the certification model contingent on the adoption of strong enforcement mechanisms. Finally, buyer sourcing commitments can be a strategy to address human rights violations as they have the potential to hold businesses accountable, but evidence shows that voluntary commitments often lack tangible action, like human rights due diligence, to protect fishers and workers. Despite the potential of market-based approaches, this chapter argues that it is critical to address the current limitations of voluntary approaches and move towards mandatory human rights due diligence, better practices for worker engagement, and stricter mechanisms to ensure accountability. As the first landscape analysis of emerging tools integrating social responsibility into the Sustainable Seafood Movement, this chapter contributes to the academic literature of: 1) market-based approaches for sustainable seafood; and 2) social responsibility, inclusive of human rights, labor rights, and social issues.

Introduction

Embedding social responsibility in the Sustainable Seafood Movement has accelerated in the past several years as human rights and labor issues are increasingly being integrated into market-based approaches such as certifications, fishery improvement projects (FIPs), and buyer sourcing commitments. In 2014, the movement reached a tipping point, driven by investigative journalism and media reports, which drew attention to widespread labor rights violations, human trafficking, forced labor, and other abuses, even in fisheries and supply chains that were considered sustainable (EJF, 2014; Hodal & Kelly, 2014; Mason et al., 2015; McDowell et al., 2015). Since 2014, there has been increasing evidence of systemic human rights abuses and labor concerns in the seafood sector. For example, Thailand was known as a hotbed for exploitative labor practices, involving some of the world's leading seafood companies like Thai Union Group PCL (Marschke &

Vandergeest, 2016). At the time, Thai Union was listed on the Dow Jones Sustainability Indices, a highly regarded metric that evaluates the sustainability of companies (McDowell et al., 2015). In 2019, there were allegations of human rights violations occurring in a FIP that was reporting on FisheryProgress (Hogan & Ish, 2021). Then, in 2020, the Marine Stewardship Council (MSC) came under scrutiny following the death and suspected murder of a fisheries observer on a Taiwanese vessel in a certified fishery (Human Rights at Sea, 2020). These events shed light on the shortcomings within the Seafood Sustainability Movement to address the full suite of "sustainability" issues facing fisheries, and further created the impetus to adapt existing approaches to effectively safeguard fishers and workers.

The increasing evidence of abuses and exploitative labor practices led to a shift in the Sustainable Seafood Movement's objectives from solely focusing on environmental sustainability to addressing social responsibility (a broad term used by the Sustainable Seafood Movement to encompass human rights, labor rights, and economic development) in seafood supply chains around the world, particularly with market-based approaches. Since its inception in the late 1990s, market-based approaches for environmental sustainability have become increasingly embraced by conservation non-governmental organizations (NGOs) (Gutiérrez & Morgan, 2015; Konefal, 2013; Roheim et al., 2018). Conservation NGOs and industry actors began developing and implementing a wide array of market-based interventions based on the theory that shifting market demand could generate incentives for more sustainable practices down the supply chain (Jacquet et al., 2010; Kittinger et al., 2021). One of the first notable market-based interventions that emerged was the MSC certification that assesses and certifies fisheries against strict environmental criteria. To date, market-based approaches in seafood have multiplied and include certification and rating systems, benchmarking, and verification systems, ecolabels

and seafood guides (Jacquet et al., 2010; Roheim et al., 2018; Ross Strategic et al., 2020). Furthermore, the FIP, a multistakeholder initiative to address environmental challenges in fisheries, emerged as a valuable approach, especially in developing countries, incentivizing producers to work towards certification by awarding access to preferential markets (Barr et al., 2019; Roheim et al., 2018; Sampson et al., 2015). Additionally, large retailers and other major buyers, especially in North America and Europe, are committing to sustainability, and referring to seafood standards to guide their sourcing and purchasing (Kittinger et al., 2021).

As a result of mounting evidence around human and labor rights issues in the seafood sector, in the past several years, social responsibility has become a priority focus of the Sustainable Seafood Movement in efforts to address the sector's poor human rights record and reduce risk. Social responsibility has been increasingly integrated into existing interventions like certifications, FIPs, and buyer sourcing commitments, resulting in the proliferation of new tools to address human and labor rights and economic development (Ross Strategic et al., 2020). In 2017, the Monterey Framework for Social Responsibility was developed to define social responsibility in the sector and align efforts (Kittinger et al., 2017). The holistic, consensus framework has since been adopted by over two dozen businesses and numerous organizations working on human rights in the seafood sector including conservation NGOs, human rights organizations, alliances, consultants, and academic institutions (Conservation International, 2018).

Guidance specific to human rights due diligence in the seafood sector, aligned with the United Nations Guiding Principles for Business and Human Rights (UNGPs), has emerged such as the Social Responsibility Assessment (SRA) Tool, a human rights risk-assessment tool for use in seafood supply chains, co-developed by Conservation International and other stakeholders and based on the Monterey

Framework (Conservation International, 2021). Similarly, the Roadmap for Improving Seafood Ethics (RISE), a free online resource to assist companies in their due diligence activities, was recently developed by FishWise to support industry efforts (*Roadmap*, n.d.). In 2021, FisheryProgress, the hub for verified information on global FIPs, including tracking and monitoring progress, launched its first Human Rights and Social Responsibility Policy, with the objective to reduce the risk of human and labor rights abuses in FIPs reporting on FisheryProgress (FisheryProgress, 2021). The policy would, in some cases, require certain FIPs to implement human rights due diligence using the SRA. So far, 27 FIPs have adopted the new policy.

Existing certification schemes are revising their approach and criteria to incorporate human rights and other social elements and new industry-led and NGOled interventions are being introduced, underpinned by international instruments like International Labor Organization (ILO) Core Conventions and Work in Fishing Convention (C188), the 1946 Universal Declaration of Human Rights (UDHR), the 1966 International Covenant on Civil and Political Rights (ICCPR), and the International Covenant on Economic, Social, and Cultural Rights (ICESCR). Notably, the Fair Trade USA Capture Fisheries Standard was one of the first certifications to support social responsibility, having provisions for the fundamental human rights of fishers and workers involved in the fishery including criteria for discrimination, protection of children, and occupational safety and health (Bailey et al., 2016; Fair Trade USA, 2018; Teh et al., 2019). In 2018, the Seafood Task Force (STF) Code of Conduct was introduced as a voluntary standard applied to entire supply chains of Task Force members. The industry-led STF Code of Conduct has criteria such as child labor, forced labor, employment contracts, freedom of movement, workplace equality, grievance procedures, wages and benefits, working hours, worker training,

and health and safety (Seafood Task Force, 2018). In 2020, the NGO-led Responsible Fishing Vessel Standard (RFVS) was launched as the next iteration of Seafish's Responsible Fishing Scheme (RFS). The voluntary vessel-based certification "enables commercial fishing operations to provide assurance of decent working conditions and operational best practice through independent, third-party auditing" (Global Seafood Assurances, 2020). The RFVS has been commended for its collaborative and transparent engagement process that included input from industry and NGOs (Kearns, 2020). Another recent example is the industry-led Fairness, Integrity, Safety and Health (FISH) Standard for Crew. The FISH Standard, introduced in 2021, is a voluntary labor certification adapted from C188 for commercial fishing vessels or fleets, to identify and distinguish vessel owners or companies that operate with fair and socially responsible labor practices (FISH SC, 2021).

While the momentum around social responsibility efforts is positive, there is skepticism around the ability and appropriateness of market-based approaches, originally designed for environmental sustainability, to address the full suite of human rights. In particular, human rights experts have criticized current market-based approaches for their overreliance on ineffective verification and accountability mechanisms in identifying abuses. For example, social audits, specifically third-party audits, have emerged as the preferred approach to verify compliance or non-compliance, and to assess and monitor supply chains despite evidence of their failure to identify violations, and ineffectiveness to prevent and remedy violations in other sectors (Outhwaite & Martin-Ortega, 2019). Furthermore, the limited visibility of supply chains (particularly in seafood), lack of transparency, and limited incentives for suppliers, present challenges to fully understand and address the risks and issues present in supply chains (Shift, 2013). Third-party auditors may lack knowledge of

the local context and conduct audits without adequate protection for workers facing potential retaliation after disclosing information (Sinkovics et al., 2016).

Other emerging concerns around market-based approaches include the limited scope and framing of human rights issues in seafood. First, some interventions only address the most visible and severe human rights abuses and labor violations such as human trafficking, forced labor, and child labor with less attention to decent working conditions, living wages, food security, and gender equity. In March 2019, MSC released new requirements for their Chain of Custody (CoC) certification, with criteria for forced labor and child labor in onshore operations (MSC, n.d.). However, the MSC CoC program has been critiqued for its required application only in the case of high country-level risk, failing to identify human rights violations and protect seafood workers working in "lower risk" geographies (Human Rights Watch, 2019).

Furthermore, some critics have called for greater alignment with human rights due diligence processes as set forward in the UNGPs and for a greater role for seafood workers and their representatives in these processes. For example, NGOs, such as Greenpeace, have expressed concern that other interventions like the STF Code of Conduct, do not meet international labor standards and urged for more human rights due diligence at the vessel level (Godfrey, 2017). In 2021, the Seafood Working Group, a coalition of human rights, labor, and environmental organizations have cautioned buyers and retailers about the FISH Standard indicating it would not be effective in identifying labor abuse onboard vessels as the standard lacks a meaningful role for workers and/or their representatives, represents only a selective application of international standards, and fails to recognize the power imbalance between employers and workers (Seafood Working Group, 2021).

Social responsibility has become a priority focus within the movement and there continues to be significant investment and resources being applied to advance market-based approaches. As efforts continue and new market-based interventions emerge, it is imperative to evaluate the efficacy of approaches to address human rights and labor issues and create meaningful change on the ground. To date, there has been limited to no scientific research on current social responsibility efforts in the Sustainable Seafood Movement, specifically on how human rights and labor issues are being addressed in the variety of recognized market-based approaches and their efficacy. This study aims to address these gaps by improving our understanding of how social responsibility is being integrated into market-based approaches within the sustainable seafood movement, as well as challenges to integration and opportunities for improvement. First, an evaluation of recognized market-based interventions that include criteria for human rights, labor rights, and/or social issues, illustrates the diversity of tools, as well as their alignment with human rights instruments, and other elements like worker representation. Second, we provide a critique of three approaches - certifications, FIPs, and buyer commitments - including their potential and limitations to address human and labor rights concerns in the seafood sector. Finally, we identify shared challenges to advance social responsibility and actions to improve the efficacy of efforts in the Sustainable Seafood Movement.

Methods

A desk-based review was conducted to identify the landscape of market-based interventions being used to advance social responsibility in the seafood industry. Publicly available information was reviewed to compile a comprehensive list of interventions. To narrow the scope of inquiry, interventions had to: 1) be characterized by generating incentives for supply chain improvements or mobilizing market-focused policy changes; 2) have defined criteria or elements focused on

social issues, human rights, labor rights, and/or working conditions; and 3) have information on program, methodology, or protocol that is publicly available. Next, each intervention and its associated protocol was reviewed to determine the type of intervention, scope, referenced human rights instruments and guidance, criteria for worker engagement, processes for remediation, and compliance and verification.

Interventions were categorized by their characteristics which included: 1) type of intervention (third-party certification; risk assessment tool; benchmarking tool; online platform; or code of conduct/practice); 2) whether they were NGO-led, industry-led, or both; and 3) scope of the intervention such as small- or mediumscale or industrial fisheries, certain aspects of the supply chain, or subsectors such as processing. The human rights instruments and guidance for each intervention was examined with specific attention to ILO Core Conventions (Freedom of Association and Protection of the Right to Organize Convention, 1948 (C87); Right to Organize and Collective Bargaining Convention, 1949 (C 98); Forced Labor Convention, 1930 (C29); Abolition of Forced Labor Convention, 1957 (C 105); Minimum Age Convention, 1973 (C138); Worst Forms of Child Labor Convention, 1999 (C182); Equal Remuneration Convention, 1951 (C100); and Discrimination (Employment and Occupation) Convention, 1958 (C111) (ILO, 1998)); ILO C188; ILO Maritime Labor Convention; UDHR; ICCPR; ICESCR; UN treaties, conventions, and declarations; UNGPs; International Maritime Organization (IMO) Convention on Standards of Training, Certification and Watchkeeping for Fishing Vessel Personnel (STCW-F) and the Torremolinos International Convention for the Safety of Fishing Vessels; and additional guidance from the FAO. Remediation processes included: 1) mechanisms or procedures to report grievances; and 2) any guidance or policies to address reporting grievances or any identified human or labor rights violations. Lastly, the method or mechanism to verify compliance with standards for interventions was

examined, including regular audits, self-assessments, and other accountability systems, or whether the intervention was completely voluntary.

Next, semi-structured interviews were conducted with key informants engaged in social responsibility in the Sustainable Seafood Movement. Twenty-four interviews were conducted remotely via Zoom or phone to accommodate safety and travel concerns of the COVID-19 pandemic. Key informants interviewed included representatives from environmental NGOs, human rights organizations, philanthropic organizations, certification bodies, benchmarking organizations, seafood businesses, trade union federations, and consultancies in the United States, Latin America, and Europe. An initial sample of informants was selected and recruited based on existing contacts. This initial sample included individuals from each of the implementing organizations of the interventions identified in the desk-based review. Snowball sampling was then used to identify additional interviewees. Interviews were conducted until saturation was reached or no new data were found. Interview questions focused on perceptions around current social responsibility efforts, challenges, and areas of improvement to advance social responsibility using marketbased approaches, specifically certifications, FIPs, and buyer commitments. Interviews typically lasted for 60-90 minutes. IRB approval was obtained from Arizona State University (see Appendix B.1.). Interview responses were analyzed using MAXQDA, a qualitative data analysis software. Data was analyzed using grounded theory approach, in which themes and concepts emerge inductively (Corbin & Strauss, 2015).

Results

Market-based interventions for social responsibility

The proliferation of interventions that have incorporated elements of social responsibility in seafood is evident in Table 14. This compilation is comprehensive,

although not exhaustive. The variety of interventions address a vast scope inclusive of small-scale and industrial fleets and post-harvest and onshore operations. There are examples that address specific commodities, like the Atun de Pesca Responsible (APR) certification, and those that are linked to specific suppliers like the Thai Union Vessel Code of Conduct and the STF Vessel Code of Conduct and Auditable Standard.

Market-based intervention	Characteristics	Referenced human rights instruments	Worker engagement	Remediation process	Compliance & verification
NGO-led Fair Trade USA Capture Fisheries Standard	Third-party - certification program from Fair Trade USA; for small and medium-scale fisheries	ILO Core Conventions and C188; UN Palermo Protocol	Limited during audits. Workers are involved in the identification and selection of community issues to address with premium.	Required grievances mechanism; Remediation policy for zero tolerance issues.	Annual third- party audit.
Marine Stewardship Council (MSC) Chain of Custody Standard	Third-party certification program from MSC; applies to companies operating in the supply chain of the certified fishery	ILO C188, C105, C182, C29; UN Palermo Protocol; UN Slavery Convention; Port State Measures Agreement (PSMA); SA8000; ITUC Global Rights Index; ILAB's List of Goods	No requirements.	No remediation guidance or policy.	Annual audit or self-assessment depending on determined country-level risk.
Naturland Sustainable Capture Fishery Standard	Third-party certification program from Naturland; for small-scale producers	ILO C105 and C182; UN Convention on the Rights of a Child; UN Declaration on the Rights of Indigenous Peoples	Limited during audits.	No remediation guidance or policy.	Annual third- party audit.
Responsible Fishing Vessel Standard (RFVS)	Third-party certification program from Global Seafood Assurances (GSA); for any single commercially licensed fishing vessel or fleet	International Bill of Human Rights; ILO Core Conventions and C188; IMO International Convention on Standards of Training, Certification and Watchkeeping for Fishing Vessel Personnel (STCW-F); Cape Town Agreement; IMO/ILO/FAO Code of Safety for Fishermen and Fishing Vessels; ISO/IEC 17065:2012	Limited during audits.	Worker voice and grievance processes.	Annual third- party audit.

Market-based intervention	Characteristics	Referenced human rights instruments	Worker engagement	Remediation process	Compliance & verification
		Conformity Assessment; and UK Fishing Safety Management Code; PSMA			
Friend of the Sea Wild Sustainable Fisheries Standard	Third-party certification program from Friend of the Sea; applies to operations engaged in the wild capture fisheries, regardless of scale or vessel size. Excludes enhanced fisheries.	ILO C138, C95, C155, C154, C29, C111, and the Maritime Labor Convention	Auditors seek stakeholder input during the certification process, including fisher representatives or fishing associations.	No grievance mechanism requirements or remediation policy.	Annual third- party audit.
Social Responsibility Assessment Tool (SRA)	Risk assessment tool from Conservation International (CI); for small-scale to industrial fisheries and fleets, and onshore operations if applicable	Monterey Framework; ILO Core Conventions and C188; UN Convention of the Rights of the Child; UN Declaration on the Rights of Indigenous Peoples; UNGPs; UN Palermo Protocol; UDHR; FAO & WHO Rome Declaration on Nutrition, FAO An Introduction to the Basic Concepts of Food Security	Recommends worker-driven approach to assessing labor conditions— workers/fishers/f armers and their representative organizations should be involved in the evaluation and in the design of the FIP workplan.	Grievance mechanisms are assessed; All high-risk indicators require immediate attention and remediation channels should be activated if criminal activity is found; In FIPs, remediation processes should be enabled through effective grievance mechanisms.	Does not apply as assessments are voluntary.
Seafood Slavery Risk Tool (SSRT)	Risk assessment tool from Monterey Bay Aquarium Seafood Watch, SFP, Liberty Shared; tool covers the full seafood system including fishing and processing	ILO Core Conventions and C188; UN Palermo Protocol; PSMA	Does not apply.	Provides a qualified opinion on the risks in the seafood system.	Does not apply.
On-board Social Accountability (OSA) Technical Framework	Risk assessment & benchmarking tool from OSA International; applies to commercial vessels.	ILO Core Conventions, C188, C138, C182, and Maritime Labor Convention; SA8000; UNCLOS; FAO Code of Conduct	No specific requirements.	Grievance mechanism and associated policies assessed.	OSA tracks improvements in social accountability over time.

Market-based intervention	Characteristics	Referenced human rights instruments	Worker engagement	Remediation process	Compliance & verification
Roadmap for Improving Seafood Ethics (RISE)	Online platform & resource repository from FishWise; intended for companies initiating or continuing human rights due diligence.	UNGPs; ILO Core Conventions and C188; Monterey Framework Pillar 1; Guidance from organizations such as Ethical Trading Initiative (ETI), International Labor Rights Forum (ILRF), SHIFT, and VERITE	Specific guidance to support worker engagement such as encouraging freedom of association and collective bargaining for workers.	Remediation follows guidance from the UNGPs, ILO General Principles and Operational Guidelines for Fair Recruitment; Migration for Employment Recommendation (R86), C188.	RISE supports mandatory or voluntary due diligence. There is currently no mechanism for compliance.
FisheryProgress Human Rights Code of Conduct (part of the Human Rights and Social Responsibility Policy)	Code of conduct from FisheryProgress; applies to all FIPs reporting on FisheryProgress	ILO C105, C182, and C188; ICCPR, ICESCR; UDHR; UNGPs	Assessment is conducted in consultation with fisher and their trade unions or organizations, where these exist. If these do not exist, the FIP lead must confirm that fishers or representatives are consulted.	FIPs are required to have a publicly available grievance mechanism.	Annual or 3-year reporting dependent on risk; Risk assessment reports must be publicly available.
PAS 1550:2017	Code of practice from the British Standards Institution (BSI); applies to EU importers, processors, and buyers	ILO Core Conventions, C188, C81, C122, C129, C144; UNGPs; Modern Slavery Act; PSMA; FAO International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing.	Guidance for engagement with workers or those affected by working conditions.	Companies should have remediation policies and procedures in place (UNGPs)	Does not apply as the code is voluntary.
Industry-led Fairness, Integrity, Safety and Health (FISH) Standard for Crew	Third-party certification program by FISH SC.; applies to all workers onboard a) small vessels (<24m and/or voyage <3d) or b) large vessels (>24m and/or voyage >3d)	ILO C188 and guidance R199; UDHR; IMO Torremolinos International Convention for the Safety of Fishing Vessels; IMO International Convention on Standards of Training, Certification and Watchkeeping for Fishing Vessel Personnel (STCW-F)	No specific requirements.	Required grievance mechanism; policies for identified child labor.	Regular third- party audits.

Market-based intervention	Characteristics	Referenced human rights instruments	Worker engagement	Remediation process	Compliance & verification
Atun de Pesca Responsible (APR)	Third-party certification program by AENOR; applies only to freezer purse seine tuna vessels	UNE-195006 standard; ILO C188; RFMO Trade and Catch Documentation Schemes	No specific requirements.	Corrective action taken by the company to correct violations.	Annual third- party audit.
SSCI At-Sea Operations (ASO) Framework	Benchmarking framework by GSSI, with Consumer Goods Forum (CGF) and Sustainable Supply Chain Initiative (SSCI); covers all wild-capture activities that take place at sea including harvesting, processing, transshipment, and small-scale operations.	ILO Core Conventions and C188; UNGPs; UDHR; FAO Guidance on Social Responsibility in Fisheries and Aquaculture Value Chains; CGF Priority Industry Principles on Forced Labor	Broad criteria for worker engagement and knowledge.	Required grievance mechanism.	Regular third- party audit.
Thai Union Vessel Code of Conduct	Code of conduct by Thai Union; applies to all vessels that supply to Thai Union	ILO Core Conventions, C188, and Maritime Labor Convention; UNGPs; UDHR; RFMO Trade and Catch Documentation Schemes (for Atlantic Tuna)	No specific requirements.	Required grievance procedure; suspension or discontinued purchasing for critical violations.	Annual third- party audit.
Industry & NGO- led	Code of conduct by STF; applies	oplies and C188; re applicable in of national labor	No specific requirements.	Required grievance procedure.	Regular third- party audits.
Seafood Task Force (STF) Vessel Code of Conduct and Auditable Standard	 to the entire supply chain of STF members. 				

Table 14. Market-Based Interventions and Their Elements Related to Social Responsibility.

A review of the human rights instruments and guidance that underpins each tool shows that there is consistency across the tools evaluated in Table 14. ILO C188 has become the primary standard for working conditions in fisheries, and is referenced most widely across interventions, in the criteria of 14 of 16 tools excluding Naturland Sustainable Capture Fishery Standard and Friend of the Sea Wild Sustainable Fisheries Standard. ILO Core Conventions are also referenced often in nine of the tools, establishing basic labor rights and protections for workers. In the

absence of reference to the full suite of ILO Core Conventions, in tools such as the STF Vessel Code of Conduct and Auditable Standard, there are still specific references to forced labor and child labor conventions, C105 and C182. A very limited number of tools (six) include guidance from the UNGPs, indicating that there may be critical gaps in preventing and addressing human rights risks in business activities across supply chains. Furthermore, there are two certifications that make specific considerations for fisher and vessel safety, the RFVS and the FISH certifications, citing several IMO conventions for safety of vessels and fishers including the International Convention on Standards of Training, Certification and Watchkeeping for Fishing Vessel Personnel (STCW-F) and the Torremolinos International Convention for the Safety of Fishing Vessels. Finally, there is very limited reference to instruments related to Indigenous rights, food security, or gender. The SRA is one example that includes guidance from the UN Declaration on the Rights of Indigenous Peoples, the FAO & WHO Rome Declaration on Nutrition, and the FAO An Introduction to the Basic Concepts of Food Security.

The involvement and leadership of workers or workers' organizations during the design, implementation, monitoring, and enforcement of social responsibility initiatives, or referred to broadly here as worker engagement, is widely lacking from interventions. For many certifications that rely on third-party audits, there is limited engagement with workers beyond worker interviews, if any. One exception is the Fair Trade USA Capture Fisheries Standard in which workers are involved in the identification and selection of social improvements to be addressed with the received premium. The SRA includes specific recommendations for assessors to involve workers throughout the assessment process, as well as the subsequent development of the social workplan if engaged in a FIP. Similarly, FisheryProgress includes guidance in the Human Rights Code of Conduct for fisher engagement in the FIP.

In addition, each instrument's requirements for workers' access to grievance mechanisms was examined. Required grievance mechanisms or procedures were included in the compliance criteria or part of the assessment indicators for all but three tools: MSC Chain of Custody Standard, Naturland Sustainable Capture Fishery Standard, and Friend of the Sea Wild Sustainable Fisheries Standard. However, fewer tools have requirements for remediation policies if violations are found. These policies would aim to provide remedy to individuals or groups that have been harmed because of business operations or related activities. According to the UNGPs, remedies can include: "apologies, restitution, rehabilitation, financial or non-financial compensation, and punitive sanctions (whether criminal or administrative, such as fines), as well the prevention of harm through, for example, injunctions or guarantees of non-repetition" (United Nations, 2011). Thai Union, APR, FISH, and Fair Trade have policies for violations like forced labor or child labor. Roadmap for Improvement Seafood Ethics (RISE) and PAS 1550:2017 refer to the UNGPs for guidance on remediation.

Lastly, compliance or verification is primarily addressed by annual or regular audits. All third-party certifications utilize regular audits to assess whether certificate holders are meeting the program or scheme's criteria. Beyond audits there is limited information available on additional procedures for verification or accountability such as policies related to discontinuation of purchasing if compliance is not met. For specific interventions such as benchmarking or assessment tools like the SSRT or guidance like RISE, this category didn't apply as they are voluntary and do not include any established agreements.

Certifications

Certifications constitute the most commonly implemented market-based tool addressing social responsibility in seafood. However, many interviewees emphasized

concerns related to certification programs and their ability to effectively address human and labor rights. The primary concern was the audit-based approach that certifications utilize. Audits are conducted by private, accredited certification bodies, in which an auditor determines whether the company, vessels(s), fleet, etc. meets the minimum requirements for certification. One interviewee referred to this approach as "really dangerous from a human rights and labor perspective" (Environmental NGO). Interviewees suggested that audits are not always effective at identifying violations and potential risk. In the audit-based approach, workers often lack the agency and the safeguards to voice their concerns and raise issues in a timely manner, as audits provide information only via a snapshot in time. More so, auditors often lack the specific skills and local expertise to identify risk, particularly within the complexities of work in the seafood sector. In addition, worker representation, or meaningful engagement and consultation with workers in all phases of a project or program, is largely missing in audits. An interviewee emphasized the lack of worker representation and how in contributes to a power imbalance for workers, stating:

An auditor is never going to replace effective worker representation. A lot of the reasons labor abuses occur is because there's an improper power balance between business owners and then the people that they employ. Unless you rectify that, auditing doesn't do that, then you're going to continue to have these issues (Environmental NGO).

While many interviewees referred to criticism around the shortcoming of the audit-based approach to engage workers and enable improvement for workers, a few interviewees offered a different perspective, illuminating the effectiveness of audits as a potential tool. At a minimum, social audits provide a framework for a company to initiate human rights due diligence and set aside resources to address risks in their supply chains, as audits are often used to assess human rights risks and/or compliance with established standards. One interviewee described this saying,

An audit, in my mind, provides the framework for a company to take the time out of their very busy schedule and to set aside dedicated resources to say, "Let's do the due diligence, let's make sure that we are going through the checklist to be the best that we can be in every aspect that we know how to be" (Environmental NGO).

Some interviewees expressed, that when done effectively, audits do provide an opportunity to uncover violations. One interviewee provided an example in which it was not until an audit that risks and violations were identified such as debt bondage and the illegal use of recruiters. In short, problems are likely to be uncovered and more likely to be addressed with an audit versus no audit.

Additional findings from interviews suggest that the certification approach for environmental sustainability is not fit for the purpose for social issues such as human rights and labor rights. Unlike environmental sustainability that is measured by defined performance levels, labor violations are not always observable in the same way, particularly on fishing vessels with little oversight. For example, forced labor is not always "visible" via inspections and observation because it is nuanced and characterized by the relationship and dynamics between workers and employers (ILO, 2012). An interviewee made a point of this critical difference saying, "It's problematic to try to apply those same approaches in a situation where indicators are simply not observable or measurable in the same way that environmental metrics are. How do you measure the absence of slavery?" (Philanthropic Organization). Moreover, situations related to human rights are constantly changing over time on a vessel or in a facility, like workplace dynamics and employees.

Interviewees emphasized the need for seafood businesses to demonstrate a system of accountability, rather than rating operations based on certain levels or standards of performance. Without legally binding agreements and verifiable ways to account for impacts to fishers, workers, observers, or crew, it is difficult to evaluate

whether certifications are actually improving working conditions, well-being, or livelihoods.

However, some interviewees also considered certifications to have utility in creating pressure on local governments to improve compliance across their sector. Furthermore, interviews suggested that certifications can institutionalize better sustainability systems within a company. As one interviewee notes, "Certifications can be a tool to institutionalize the sustainability systems and procedures, and mindsets in businesses. That, to me, would be their real claim to fame because that's actually a difficult thing to do," (Consultant). In a similar way, an interviewee noted that certifications can also lead to the formalization of operations and organization of fishers and workers, which are factors that affect sustainability outcomes.

FIPs

When discussing FIPs, interviewees emphasized a few of the same shortcomings shared with certifications—poor enforcement mechanisms to ensure compliance, a need for more worker representation, and a lack of effective approaches to evaluate social improvement. Even so, FIPs were considered to be the innovation space of market-based approaches. FIPs are a multistakeholder initiative that utilizes the power of the private sector to address sustainability challenges in the fishery (Conservation Alliance for Seafood Solutions, 2021). FIPs are designed to drive improvements over time, and at diverse geographic scales or institutional levels—policy, national and international legislative, NGOs, business, fisher associations, and individuals. FIPs are broadly applicable, feasible for a wider range of fisheries like small-scale and medium-scale fisheries, and they are flexible enough to incorporate social issues and human and labor rights. Interviewees indicated that topics related to social responsibility have been a part of FIPs historically, "I think for fishery improvement projects, at least for the smaller scale ones, they have been

perhaps thinking about these topics longer, especially in terms of the community aspect, because some of these are community fishery level projects" (Seafood Consortium). Social responsibility in FIPs, however, is a nascent space as requirements to identify potential human rights and labor rights abuses and reduce risk have only recently been established in the new FisheryProgress Human Rights and Social Policy. The new policy is an important signal to the seafood sector, although its effectiveness in addressing human and labor rights will be clearer in time as the policy is implemented and evaluated.

According to interviewees, the continuous improvement model of FIPs offers a good alternative to the compliance model of certifications, driving incremental and timebound improvements identified during comprehensive assessments of the fishery. One interviewee described the potential of FIPs to improve well-being: "I think that's the crux of where an improvement process comes in, in that it's not a snapshot in time, it's going to be continuous. It's qualitative, it's more in-depth" (Environmental NGO). However, some interviewees did emphasize some concerns with the FIP model in addressing human rights. Currently, the FisheryProgress Human Rights and Social Policy only requires certain FIPs potentially experiencing a higher risk of forced labor and human trafficking to complete a human rights risk assessment using the SRA. Any high-risk category (i.e., working conditions, child labor) uncovered during the assessment should be prioritized in improvement plans, but no additional steps or penalties are taken beyond an annual follow-up assessment. Interviewees indicated that the FIP model needs to be better aligned with the human rights due diligence process to be effective, including mandatory due diligence for all FIPs, ongoing and iterative risk management, and cost sharing across the supply chains or operations.

An additional obstacle identified by interviewees, is that FIPs have been losing their effectiveness to drive improvements because of weakened market incentives. Previously, there was more pressure by market players to address deficiencies and work towards certification, and in cases of poor performance there were tangible penalties such as discontinuation of purchasing. Now, immediate access to preferential markets and lack of pressure to address deficiencies encourages fisheries to stay "forever in a FIP" achieving minimum performance improvement. One interviewee illustrated this challenge saying,

Especially if it's human rights and social, it needs to have some oversight in terms of appropriate actionable items that are time bound that aren't allowed to go on without someone saying, "If you don't do it by this date, I'm stopping. I'm not going to buy the product. When you get back on track, you can come and talk to me, but until then, you're delisted." That's not happening. That's the main linchpin of all FIPs since the very beginning of FIP-dome and that has disappeared (Seafood Business).

Addressing the challenges of FIPs, especially stronger enforcement mechanisms, alignment with human rights due diligence, and improved oversight and monitoring progress, will be essential to effectively address human rights and social issues beyond good intentions.

Buyer sourcing commitments

Buyer sourcing commitments can vary by company or brand, but commonly include a public commitment to sustainable seafood, typically accompanied by comprehensive assessments and/or monitoring of the sustainability of their supply chains, and then put into action via purchasing decisions. Buyer sourcing commitments were overall considered by interviewees to be the least effective of the three approaches, primarily due to their voluntary nature and lack of accountability. However, interviewees emphasized that commitments play an important role in social responsibility efforts, ensuring there are proper market incentives for certifications and FIPs. Results from interviews suggested that buyer commitments

can be a strategy to better integrate small-scale fisheries into global seafood markets which otherwise face certain challenges around market access such as production limitations (e.g., smaller volumes), high costs of certifications, and difficulty in meeting minimum requirements for certifications or FIPs. In small-scale fisheries, an end buyer can make long-term sourcing agreements with the fishery and provide the types of support and resources necessary to meet the demands of the retailer. One interviewee described how this strategy addresses the supplydemand challenges that small-scale fisheries face in the global seafood market stating,

I think there's potential for long-term sourcing agreements for some types of small-scale fisheries. I think there's always a little bit of a supply-demand problem. Depending on how much volume a retailer needs if they're willing to invest in some fishery or community for a special type of product and commit to that investment over a long term. I think that agreement can lead to essentially a fairer trading and fairer relationship between a retailer and supplier (Environmental NGO).

In the same way, commitments were proposed as a potential strategy to address particular social risks in supply chains such as responsible recruitment, a key driver of forced labor. An interviewee described a hypothetical approach in which a company commits to addressing a defined issue such as recruitment and establishes clear time bound actions with a mechanism for tracking their progress. They further discussed how buyer commitments are currently used to address specific environmental issues like IUU fishing and traceability and have shown some success.

Buyer sourcing commitments hold an incredible amount of potential, and power, because buyers carry legal, reputational, and supply risk associated with human rights violations in their supply chains, and therefore, it is in their best interest to meet the expectations and responsibility to mitigate that risk. If a buyer can commit to using human rights due diligence to proactively identify and manage human rights impacts, financially support necessary changes, and reward more

responsible products via higher premiums, these commitments have significant potential. However, currently there is an overwhelming lack of reporting and accountability across commitments. One interviewee emphasized concerns associated with this saying,

...buyers make commitments all the time, and if they're not verifying it, it's good press but it doesn't make any changes down the supply chain. I think that's really concerning when we think about using this incentive model of market-based commitments. Because the commitment must be meaningful and there must be a level of accountability to that commitment in order for it to make changes. Commitment without tangible change is too common in the seafood industry and there is still a major need for accountability and reporting (Environmental NGO).

One interviewee suggested that, unless verifiable, commitments can be of little value. Interviews further emphasized that commitments must have two key elements: 1) the quality of the commitment or what a company aims to do; and 2) the accountability to make changes, including monitoring and verification, and transparent reporting. Finally, commitments were cited as an integral market force for effective implementation of certifications and FIPs. Interviewees emphasized that need for commitments to play a larger role in sustainable seafood because change will not occur at scale without buyers committing to social responsibility.

Challenges to advancing social responsibility in seafood

Interviewees were asked to describe the most critical challenges (one or more) related to advancing social responsibility in seafood production (see Table 15). Responses were diverse and for conciseness they have been coded and categorized into five overarching categories: implementation, markets, capacity and awareness, seafood sector-specific, and alignment.

Implementation	Markets	Capacity & Awareness	Seafood sector- specific	Alignment
High costs and limited cost sharing (11)	Industry fatigue (4) Profit-driven	Limited or no social expertise, training, and	Complexity of the seafood supply chains (11)	Proliferation of tools and duplicative efforts (4)
sharing (11) Lack of enforcement mechanisms (6) Reliance on the social audit model (3) Over prescription has limited innovation (2) No best practices Poor inclusion of human rights organizations Poor reference of human rights standards No measurement of success or effectiveness Due diligence is a long-term process	Profit-driven purchasing model (2) Limited or no demand for socially responsible seafood (2) Systemic disempowerment of workers		Lack of transparency and traceability (8) Demand for cheap labor (7) Limited unionization and worker representation and associated lack of collective bargaining (5) Jurisdictional complexities around regulation and/or prosecution (4) Lack of data and information (fishery, vessel, and labor) (4) Distant water fishing (2) Migrant labor Consolidation of supply	
			chains	

Table 15. Interview Responses and Frequency of Responses for Challenges to Advance Social Responsibility in Seafood.

The seafood sector faces unique challenges relative to other sectors due to complexity of global supply chains (seafood is the most widely traded commodity), lack of oversight and transparency particularly for vessels at sea for long periods of time, and the demand for cheap labor as fish stocks and profit margins are squeezed. This category of challenges was the most widely cited by interviewees (35.8%; see Figure 2). For example, one interviewee describes the array of factors contributing to complexity of seafood supply chains saying,

That is usually one of the things I see mentioned first and foremost as the reason why in fisheries, they haven't been able to address it because, well, first, you don't see it because it's out far. It's hard to see even what's wrong. It makes it more expensive to enforce it. Of course, you also have jurisdiction issues and a lack of responsibility. There's already a question. It's under that flag. It's in the open seas. The crew is from this country. I think that gives countries a very good excuse to just not meddle and don't bother (Multi-stakeholder Platform).

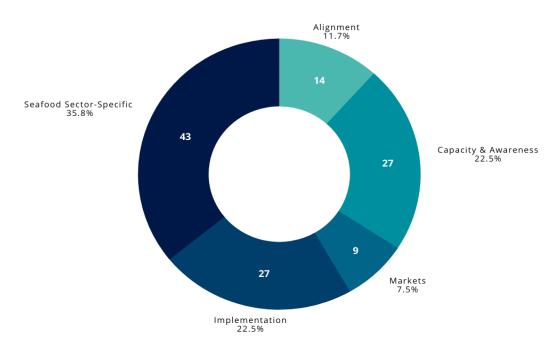


Figure 2. Challenges to Advance Social Responsibility Based on Interview Responses. The Frequency of Each Response is Indicated as a Percentage.

In addition to complexity, interviewees stressed the issue of transparency as a unique challenge in the seafood sector; "Transparency is still a huge, huge issue. It

is not just transparency like traceability, but it's also corporate transparency. I still think that we're in the dark ages on this. Literally, we're in the dark on what's happening within the supply chain" (Environmental NGO). Another challenge, particularly relevant for labor issues, was the industry-wide demand for cheap labor. An interviewee identified this challenge as part of a larger, global issue stating, "...as long as there are people that are poor and starving, there's going to continue to be a pool of cheap labor if you are willing to exploit it" (Environmental NGO).

The second most frequently cited category by interviewees was that of implementation challenges in social responsibility initiatives (22.5%; see Figure 2). The implementation challenges that were of biggest concern to interviewees were the high costs of interventions and limited cost sharing. An interviewee indicated, "We haven't done a good job of really addressing the cost issue and it's the number one challenge" (Environmental NGO). The overall lack of adequate enforcement mechanisms, a necessary element ensuring the efficacy of implemented interventions over time, was also emphasized:

At the end of the day, there are good intentions, very nice people, and with good ideas getting involved. Once you come to the enforcement, it's left on a voluntary basis in order not to push the big businesses so hard. I'm saying that even if we're also champions of human rights due diligence, self-declaration of social responsibility lacks the mechanism and enforcement to enforce the breaches (Trade Union Federation).

Capacity and awareness challenges were also commonly cited (22.5%; see Figure 2) including lack of knowledge, skills, competencies, and experience of actors (industry and non-profit) necessary to perform and address social responsibility. Limited or no social expertise, training, and capacity related to human rights and labor at organizations and businesses was a frequently stated concern during interviews. One interviewee described this challenge in relation to implementing the new Human Rights and Social policy for FIPs saying, "It has been tricky. First, we

don't have the profile or the social capacities to implement that tool. We are an environmental NGO, and actually until now, we have just focused on environmental issues" (Environmental NGO). Another pointed out the concerns with limited human rights expertise in the seafood space saying, "It's critical for environmental organizations to partner with labor and human rights organizations when entering the social space, and vice versa. Forging ahead without the necessary consultations and knowledge will undoubtedly lead to negative unintended consequences" (Philanthropic Organization).

Many interviewees cited a lack of alignment within and across NGOs and industry as a major challenge stalling uptake of social responsibility initiatives, including a lack of shared vision, goals, objectives, and collaboration (11.7%; see Figure 2). Likewise, the proliferation of tools and duplicative efforts was also regarded as a clear signal of the need for greater alignment. One described this challenge particularly in the NGO space saying,

To what you said at the beginning about the NGOs struggling to come together and do that because of the way they've been pitted against each other for the same funding sources, now fishing in the same pool, and now they all have their own tools, and they need to promote them. It's created a place where that is really challenging (Consultant).

Finally, interviewees cited market challenges related to global markets in general, including supply, demand, and purchasing dynamics, and specific issues related to businesses, buyers, and retailers (7.5%; see Figure 2). Industry fatigue was the most frequently stated reason for market challenges:

The only thing I would say is that I think companies are tired of talking. It's like they've been trying to figure out this social responsibility issue for a while now, and although some progress has been made, not enough, and NGOs, they keep banging the drum. I think companies are just tired of not having the right answer and struggling. I do worry about industry fatigue, and I don't have an answer for how to fix that (Environmental NGO).

In addition, issues around the profit-driven purchasing model were raised as it exacerbates human rights issues. This challenge was described simply by one interviewee, "the whole business model is built around this drive for short-term profits, at the expense of all other concerns, and this both encourages and ensures labor and environmental abuses" (Philanthropic Organization).

Improving the efficacy of social responsibility efforts

Following a discussion on challenges to advance social responsibility, interviewees were asked to describe specific actions or enabling conditions to improve the efficacy of social responsibility (see Table 16). Responses again were coded and categorized into five overarching categories: effective implementation, industry leadership, developing capacity and awareness, addressing seafood supplychain dynamics, and driving alignment.

Requirements for Effective	Industry Leadership	Developing Capacity &	Addressing supply chain	Driving Alignment
Implementation	Leadership	Awareness	dynamics	Aligillient
Other trade-related restrictions (7) Increased government commitments to implement and enforce policy (5) Proper enforcement	New blood aka new leadership (4) Safe space for leadership and innovation (4) More early adopters	NGOs improve their understanding of business and industry practices (2) Educate fishers and workers on rights (3)	Worker voice (worker reporting and worker empowerment tools) (6) Worker representation and engagement with unions (4)	Increase dialogue between actors (6) More collaboration across sectors Public-private partnerships
mechanisms and verification (4) Mandatory human rights due diligence		Access to data and more publicly available information	Address power dynamics and empower workers (3)	partnerships Better alignment or a unified effort
Prescriptive tools for specific issues like gender (4)		Utilize consultants NGOs improve their	Better enforcement of foreign vessels and operations	
Guidance for remediation (2) Tools and guidance		understanding of human rights and labor issues	Global standard for supply chains and workers (i.e.,	
specific to small- scale fisheries Multi-stakeholder		Businesses improve their understanding	living wages, safety, and health)	
approach (9) Worker-driven approach (2)		of human rights and labor issues	Increase transparency	
Differentiate approaches for environmental and human rights due diligence (2)		Improve understanding of human rights in diverse cultures, geographies,		
Cheaper, more feasible interventions		and contexts		

Table 16. Interview Responses and Frequency of Responses for Specific Actions or Enabling Conditions to Improve the Efficacy of Social Responsibility.

More stringent requirements for effective implementation was the most commonly stated priority (46.3%; see Figure 3). Interviewees cited the need for

more stringent requirements related to policy and regulation, guidance and tools, and approaches such as worker-driven approaches. Embracing a multi-stakeholder approach was most often cited in this category, and one that works alongside law enforcement and government. One interviewee describes this potential approach:

I would love to see a multi-stakeholder approach working with law enforcement, governments, and businesses. A multi-stakeholder group to come up and say what are we doing here? We need businesses to weigh in because they are the actors that—and is it a law enforcement approach? You know what, we just need to make an example of somebody, send them to jail for 20 years and all of a sudden everybody's going to wake up and be like, "Wow, they're taking this seriously." Maybe that's the approach (Environmental NGO).

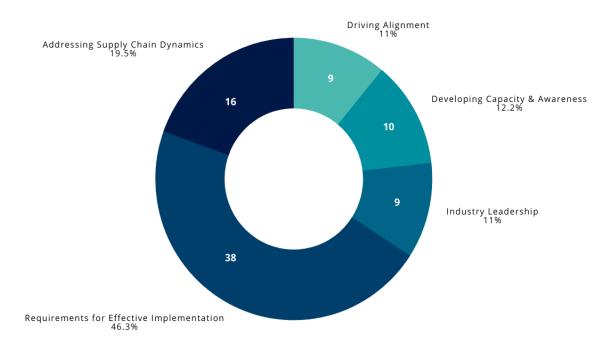


Figure 3. Actions or Enabling Conditions to Improve the Efficacy of Social Responsibility Based on Interviewee Responses. The Frequency of Each Response is Indicated as a Value and a Percentage.

Many also identified trade-related restrictions or import policies as effective strategies. One interviewee gave an example for Mexico and the United States saying:

I think one of the more effective, at least from what I see in Mexico, one of the more effective ones are import rules. Buyers or traders will respond to whatever, the EU or the US or Japan, the countries that pay high top dollar for seafood, what their requirements are. These

laws make it illegal to import into the US products with human rights violations (Environmental NGO).

Addressing supply chain dynamics was the second most cited category (19.5%; see Figure 3) to improve the integration of social responsibility, including conditions of labor and employment, enforcement, standards, and transparency. Improving worker voice, or workers' access and ability to voice concerns or issues in the workplace, including reporting mechanisms and worker empowerment tools, was most discussed as a constructive way of addressing supply chain dynamics. One interviewee stated, "If you want to know what's happening with workers, you have to ask the workers themselves and not in an extractive way where you're just getting information, and not doing anything about it" (Consultant). Similarly, empowering workers as a means to address power imbalances between employers and workers was also emphasized although there is uncertainty around what this practice should entail. One participant stated, "I think there should probably be more emphasis on empowering workers. I think in practice, people don't really even know what that means or how to do it."

Developing capacity and awareness, specifically improving the knowledge, skills, and competencies, and experience of actors to implement social responsibility received slightly less attention (12.2%; see Figure 3) even though interviewees cited limited or no social expertise, training, and capacity as a major challenge in the former question (22.5%; see Figure 3). Interviewees stated that both NGOs and businesses needed to improve their understanding of each other's practices. In addition, there needs to be more efforts to educate fishers and workers on their rights. One interviewee stated, "if we just start with fishers, for example, 'These are your rights, you must demand this'" (Environmental NGO). Another pointed out how critical this was regarding being heard and making demands saying, "Just like you or

I, we need to know our rights in order to claim them and we want to be listened to through a democratic process" (Environmental NGO).

Interviewees discussed the importance of strong industry leadership (11%; see Figure 3) to overcome challenges, with a focus on businesses, buyers, and retailers specifically. Interviewees discussed the need for a "safe space" for leadership and innovation. They also mentioned the need for new leaders driving forward social responsibility in the seafood industry. One described the need for new blood saying, "I feel like it's that way, we've got this old guard and we need some new blood" (Seafood Business). Another interviewee reiterated this need saying, "A lot of the CEOs, a lot of the senior people have been in the business 30 years, and they do things the same way they have...the industry needs to move being dragged into the 21st century" (Environmental NGO).

Finally, driving alignment across the space was offered as a tangible way forward by interviewees (11%; see Figure 3), included improvements related to collective action, shared vision and goals, and collaboration. Increasing dialogue between actors was considered a priority. One simply stated, "I think some dialogue is certainly taking place, but I think there needs to be more" (Environmental NGO). Another interviewee called for more than just dialogue, emphasizing the need for more trust and support, particularly between environmental NGOs and human rights organizations. They said, "There's a lot of work to do to build trust, I think, between those two different communities. I think there is even more work to do to demonstrate that environmental NGOs need that support. They need that consultation" (Consultant).

Discussion

Social responsibility in the Sustainable Seafood Movement is nascent, yet increasingly becoming a core element of market-based approaches for sustainable

seafood. However, market-based interventions are being developed and implemented to ensure human and labor rights in the seafood sector without evaluation of their effectiveness and suitability to address these complex issues. As social responsibility efforts advance is it critical to understand the adequacy of existing approaches, the limitations, and the areas in need of improvement to ensure that the rights of fishers and workers are upheld and protected. This study provides a timely examination of market-based approaches as an increasingly adopted strategy to address human rights. Our analysis shows that market-based interventions for social responsibility are diverse, and abundant, but are only one strategy of addressing human rights and labor rights in the seafood sector alongside policy and legislation or community development. Market-based interventions are only one tool in the toolbox yet may increasingly play a critical role in advancing social responsibility at scale and at pace. Our review of existing initiatives in addition to interviews with key informants suggests that market-based approaches such as certifications, FIPs, and buyer sourcing commitments should continue to evolve and improve. Based on our high-level findings, we discuss specific opportunities for improvement including, the need to increase the scope of existing initiatives to consider the full suite of human rights issues diverse fisheries face; meaningful involvement of fishers and workers in social responsibility initiatives; legally binding and mandatory enforcement and accountability mechanisms; and greater alignment across environmental and human rights NGOs, and with industry, thus enhancing capacity.

The proliferation of interventions and efforts around social responsibility is evident in Table 14. While the interventions analyzed here are by no means exhaustive, the interventions identified can be applied to the majority of fisheries operations at-sea and onshore in small-scale and industrial fisheries. It is critical that

there are options to address the latitude of fisheries operations, given the diversity and complexity of the seafood sector. Even so, with existing approaches, there tends to be a stronger focus on fishers and workers on vessels, potentially leaving gaps in protections for onshore workers, particularly women (Finkbeiner et al., 2021). In the same way, there is disproportionate attention to the most visible and severe human rights violations onboard vessels such as forced labor and child labor (Teh et al., 2019). Few tools include criteria for economic, social, and cultural (ESC) rights such as food and livelihood security, one exception being the SRA. While it is important to address the most salient human rights risks, there is limited criteria and guidance to address all risks and even root causes of abuses and exploitative work practices (Garcia Lozano et al., 2022). While there is ambition within the movement to better address these issues, there is poor consensus on how to address ESC rights and there is a need to improve the sectors' understanding of and how they align with broader sustainability objectives.

The importance of meaningful worker representation in social responsibility efforts has received increasing attention in the past few years with experts drawing attention to the lack of representation in current initiatives (ILRF, 2018).

Certifications have been central to criticisms related to worker representation due to their reliance on audits as the main approach to assess and mitigate human rights violations in supply chains (Nakamura et al., 2022). These concerns, which were reiterated in this study, have led to new approaches and models that place workers at the forefront of social responsibility activities. One notable example is the Worker-Driven Social Responsibility (WSR) in which worker organizations lead the design, monitoring, and enforcement of interventions that impact their conditions at work (Worker-Driven Social Responsibility Network, 2022). In 2011, the Fair Food Program (FFP) was launched across the Florida tomato industry, becoming the first

fully operational WSR model (The Fair Food Program, 2022; *Worker-Driven Social Responsibility Network*, 2022). The FFP utilizes the purchasing power of retailers to enforce compliance with "the most progressive labor standards" in the US agriculture industry (*Worker-Driven Social Responsibility Network*, 2022). The FFP model also includes worker-to-worker education on labor rights, a worker-driven complaint resolution mechanism or grievance mechanism, and a health and safety committee for each farm ensuring workers have a voice in improving their conditions at work.

In the seafood sector, the International Labor Rights Forum (ILRF) developed the four "Essential Elements of Effective Social Responsibility" built on the WSR model and lessons learned (ILRF, 2018). Elements for effective human rights compliance are: 1) genuine worker representation; 2) comprehensive and transparent risk assessment and verification of workplace compliance; 3) legally binding enforceable agreements; and 4) changes to brand purchasing practices. In 2016, ILRF launched the Independent Monitoring at Sea project, or IM@Sea, integrating the Essential Elements in the project's design and implementation (ILRF, 2018). The IM@Sea project utilized technology systems to enable effective workerdriven monitoring at sea onboard Thai fishing vessels. This project was pivotal demonstrating how worker-driven monitoring and worker-driven grievance mechanisms can operate on vessels. The WSR model or the Essential Elements are just two examples of approaches for worker representation, and it was emphasized that this can come in many different forms. Regardless of how worker representation is approached, there needs to be stronger demand and enforcement for meaningful representation to improve the efficacy of current approaches, and meaningfully improve the living and working conditions of fishers and workers on the ground. More so, if audits continue to be a widely utilized tool, how can they be effectively paired with true worker-driven approaches? It is important to point out that workers

and/or their representative organizations were not interviewed in this study as it was focused primarily on implementors, however, workers play a crucial role in our understanding of supply chains, working conditions, and the effectiveness of approaches and therefore, should be the focus on future research.

In WSR and similar approaches, buyers must sign legally binding agreements with worker organizations, establishing standards for business compliance and penalties for violations (ILRF, 2018; Worker-Driven Social Responsibility Network, 2022). However, this practice is still lacking in the seafood sector. Interviewees were outspoken about the dangers of poor enforcement mechanisms, or none at all. Without strong disincentives or penalties to comply, there is no way to address bad actors and poor compliance. This critical requirement was emphasized as a need across certifications, FIPs, and buyer commitments. Self-declaration of social responsibility or voluntary measures are not sufficient without consistent reporting, monitoring, and enforcement. This year's Social Transformation Baseline Assessment by the World Benchmark Alliance had stark findings on global companies' tangible progress to protect and respect human rights. The assessment evaluates 1,000 of the world's most influential companies on 18 social indicators including living wage and gender equality. The assessment found that more than three quarters (78%) of the 1,000 companies evaluated scored zero on indicators for human rights due diligence (World Benchmark Alliance, 2022). Furthermore, more than half (55%) of the companies have made public commitments to respect human rights, with few making tangible steps, such as due diligence, to protect workers. These findings emphasized the limitations of market-based, voluntary approaches and the need to move towards mandatory requirements and improved accountability systems.

Moving towards a more *responsible* seafood movement that is inclusive of social elements such as human and labor rights and broader social objectives such as

economic development will require collective action and continued commitment from all actors. Building the capacity, knowledge, and skills related to human and labor rights at organizations and businesses is paramount, as it is one of the biggest challenges to advance social responsibility. Training and education on human and labor rights, their relationship with environmental sustainability, and tools and resources available to the sector is a key first step. There is opportunity for crossorganization or cross-sector engagement in learning exchanges or workshops to improve awareness of how human rights are currently addressed by various actors. More so, human rights organizations' expertise can play a fundamental role in building capacity within conservation NGOs and industry. There has already been a growing demand for consultants with human rights expertise indicating a recognition of the need for more specific knowledge and specialized skills. Finally, there needs to be space for new leaders and innovation; the movement should make space for diverse experts, novel collaborations, and new approaches learning from other sectors or commodities that are more established in their social responsibility journey. Especially within industry, there needs to be a safe space for leadership and innovation, as well as room for trial and error and failures. Refining what social responsibility is and how it should be approached in the seafood sector to transition from a reactive approach to transformational change is a long-term process and one that will continue to require humility and the willingness to adapt and evolve.

Conclusion

Human and labor rights are being integrated into market-based approaches as the Sustainable Seafood Movement addresses the need to prevent violations and strengthen the protection of human rights in global fisheries. As social responsibility efforts accelerate, it is imperative to ensure that interventions are effective as human rights experts have voiced their concerns of the limitations and shortcomings

of market-based approaches. This comprehensive evaluation of market-based approaches identified areas of improvement for certifications, FIPs, and buyer sourcing commitments, especially proper enforcement mechanisms and worker representation. Even so, market-based approaches can play an important, necessary role to identify and prevent human rights violations, with particular potential in the improvement model of FIPs. The sector is transitioning to a more responsible seafood movement, but it is urgent to address the current limitations of voluntary, market-based approaches and move towards mandatory human rights due diligence, better practices for worker engagement, and stricter mechanisms to ensure accountability. The movement has taken important steps towards addressing human rights in the seafood sector, but there has yet to be a champion for responsible seafood, establishing a standard for the entire seafood industry to reach. Looking forward, the movement must build the capacity to effectively address human and labor rights, continue to evaluate, and adapt approaches and create a safe space for leadership to advance social responsibility, protecting the rights of fishers and workers globally. As the first landscape analysis of emerging tools for social responsibility, this chapter contributes to the academic literature market-based approaches and social responsibility in the context of the seafood sector.

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Chapter 5

SYNTHESIS AND CONCLUSION

Improving human rights in global fisheries is imperative to meaningfully protect and respect human rights of fishers and fishworkers and sustain the long-term benefits of fisheries resources. Efforts to address human rights violations and social issues in fisheries have accelerated in the past several years across diverse conservation initiatives led by government, IGOs, NGOs, and industry. It is increasingly important to examine current efforts and approaches to improving human rights in seafood supply chains to identify notable progress and areas in need of improvement, and to ideally, create transformative change at scale. In this dissertation, I critically analyzed current, recognized conservation and sustainability approaches in seafood production that have incorporated human rights, labor rights, and social issues, to better understand how they are being adapted to protect and respect human rights of fishers and fishworkers in global fisheries.

In Chapter 2, I conducted a preliminary, baseline human rights risk assessment of Guyana's artisanal fishery using the SRA methodology. I identify several high-risk concerns and areas of improvement for Guyana's artisanal fisheries sector, including inequities among stakeholders, especially women, to benefit from the fishery, and poor mechanisms for fisher and fishworker engagement. The assessment shows that there are potentially significant risks present in the fishery, and further in-person, primary data collection must be conducted to validate the desk-based findings and confirm issues to be addressed by fisheries management. Meaningfully engaging with fishers and fishworkers throughout the assessment process, and subsequent conservation activities, is a foundational element of the SRA to gain visibility into working conditions on the ground and detect violations. Chapter 4 findings also emphasize the importance of worker engagement and

representation, or fisher/worker-driven approaches, during the design, implementation, monitoring, and enforcement of activities that may impact fishers and fishworkers. Moreover, this research has identified that fisher and fishworker interviews for the SRA must be conducted by trained assessors with expertise and competencies related to human rights, labor conditions, and social science research. However, interviews I conducted for Chapter 4 of my dissertation elucidated that this knowledge and capacity requirement is perceived as one of the biggest challenges for environmental NGOs and businesses to advance social responsibility.

In Chapter 3, I evaluated the labor standards and working conditions of the transboundary shrimp and groundfish fishery of the Guianas-Brazil Shelf, focusing on Guyana, Suriname, and Trinidad and Tobago to understand how decent work in fisheries is being evaluated and how working conditions are being addressed. Utilizing a novel holistic evaluative framework I created drawing on the SRA, as well as the ILO C188, and the SSF Guidelines, my findings highlighted cross-jurisdictional challenges of the fishery at the country- and transnational-level, including trafficking, limited implementation, and enforcement of labor standards like vessel safety, and like Chapter 2 findings, poor worker representation in fisheries decision-making, planning, and monitoring. The region must address decent work in the shrimp and groundfish collaboratively, involving all stakeholders, with particular attention to women and migrant fishworkers. In addition, the evaluative framework was designed with the intention of addressing gaps of the limited, existing tools and guidance, and proved to be effective at identifying issues such as threats to food insecurity or the linkages between IUU fishing and human rights risks. Despite the proliferation of tools and interventions related to human rights identified in Chapter 4, there are no assessment tools to date specific to decent work or labor conditions. My evaluative framework was shown to be effective tailored to diverse fisheries contexts and

geographies and should be applied further to test its applicability and potential as a framework to evaluate decent work in fisheries.

In Chapter 4, I investigated how human rights are being integrated into market-based approaches for seafood sustainability. I found that the landscape of market-based interventions is diverse, with interventions addressing the full scope of fisheries operations from vessels at-sea to onshore processing and retail. Semistructured, key informant interviews highlighted different perspectives on the potential of market-based approaches for addressing human rights concerns, and areas in need of improvement moving forward. Key informants suggested that market-based approaches can be an effective strategy to improve human rights in fisheries, and the FIP model aligns most closely with human rights due diligence. However, to effectively protect fishers and fishworkers and create change on the ground, market-based approaches need proper enforcement mechanisms such as civil liability or purchasing penalties. More so, as similarly shown in the local and regional studies in Chapters 2 and 3, worker representation is notably lacking across market-based approaches, emphasizing the need for increased fisher/worker-driven social responsibility. While addressing the areas of improvement identified in this study can improve the efficacy of market-based approaches, shifting towards mandatory human rights due diligence requirements will be imperative to protect fishers and fishworkers throughout global supply chains.

In this dissertation, I have provided a comprehensive evaluation of diverse approaches that are addressing human rights in fisheries, emphasizing the progress, challenges, and areas in need of improvement to promote transformative social change in a sustainable seafood industry, and improving the lives of fishers and fishworkers. My dissertation has also provided important contributions to empirical and practical knowledge of human rights in fisheries through its contributions to the

nascent literatures of human rights due diligence, decent work, and market-based approaches in global fisheries. My dissertation demonstrates that to navigate the nexus between human rights and fisheries and effectively protecting and respecting the rights of fishers and fishworkers, it is imperative to address the shortcomings or limitations of current sustainability approaches. Immediate, tangible action must be taken to: 1) promote mandatory human rights due diligence; 2) improve fisher and fishworker representation and engagement; and 3) establish stricter mechanisms for enforcement and accountability. These recommendations can strengthen the efficacy of approaches in local and regional fisheries, as well as advance social responsibility efforts in the global seafood market.

Efforts to improve human rights in fisheries are nascent. While my dissertation contributes critical information to advance these efforts, there is still a considerable amount to learn and understand about the variety of approaches and initiatives. My dissertation is a point from which future work can begin. First, I intend to conduct in-person interviews with fishers and fishworkers in Guyana to complete the human rights risk assessment using the SRA. These interviews will provide clarity on issues and risks present in the artisanal fishery, but also provide an opportunity for engagement between stakeholders. Next, the evaluative framework to monitor and assess decent work must be utilized in future, upcoming research. My pilot study of this framework provided valuable insights to the effectiveness and potential of this tool, but it has yet to be implemented across diverse fisheries and geographies. Furthermore, it is important to continue to evaluate market-based approaches and their efficacy to address human and labor rights. My dissertation provides a comprehensive foundation of information on the array of tools, as well as key recommendations. Now, research must dive deeper into specific tools or certain elements of implementation and specific processes. Finally, these findings must be

widely shared, and recommendations must be considered by the experts and actors driving these efforts forward. In addition to successfully publishing these chapters in academic journals, I plan to utilize all outlets to share this important work, including but not limited to social media, blogs, working groups, and conferences. Creating meaningful change for fishers and fishworkers in global fisheries depends on collective action and innovative efforts. My dissertation provides a foundation of knowledge, but it is only just the beginning.

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APPENDIX A SUPPLEMENTARY MATERIALS FOR CHAPTER 2

A.1. Elements and criteria for sector-specific indicators, derived from ILO C188, the SRA, and SSF Guidelines (Conservation International, 2021; FAO, 2015; ILO, 2007)

ILO C188		
	SRA	SSF Guidelines
Fishers are paid regularly (Art. 23); the amount of wages and method of calculation is established in the fisher's work agreement (Annex II).	Wages and earnings are higher than the national minimum wage or are considered a living wage; women and men receive equal pay for equal work; wages and benefits are established in written contracts between employers and employees (p. 26).	
Fishers are given adequate rest; for vessels at sea for >3 days fishers have at least 10 hours of rest/24 hours or 77 hours/7 days (Art. 14).	Working hours meet national legal minimums; workers have a minimum of 10 hours of rest/24 hours or 77 hours/7 days; overtime is voluntary; onshore workers do not work more than 48 hours/week (p. 27).	
Forced Labor Convention, 1930 (C29) and the Abolition of Forced Labor Convention, 1957 (C105)	Industrial fisheries: there are no indicators of forced labor (e.g., (abuse of vulnerability, deception, restriction of movement, isolation, physical and sexual violence, intimidation or threats, retention of identity documents, withholding of wages, debt bondage, abusive living and working conditions, excessive overtime); the fishery has a policy prohibiting forced labor; fishers and workers do not pay recruitment fees; workers have access to grievance procedures (p. 18). Small-scale fisheries: fishers/workers are not	There is no forced labor or debt-bondage for women, men, and children (p. 9).
rari:fa Favoliri	regularly (Art. 23); the amount of wages and method of calculation is established in the risher's work agreement (Annex II). Fishers are given adequate rest; for vessels at sea for >3 days fishers have at east 10 hours of rest/24 hours or 77 hours/7 days (Art. 14). Forced Labor Convention, 1930 (C29) and the Abolition of Forced Labor Convention,	regularly (Art. 23); the amount of wages and method of calculation is established in the risher's work agreement (Annex II). Fishers are given adequate rest; for vessels at sea for >3 days fishers have at east 10 hours of rest/24 hours or 77 nours/7 days (Art. 14). Forced Labor Convention, 1930 (C29) and the Abolition of Forced Labor Convention, 1957 (C105) Forced Labor Convention, 1950 (E100) (E

Tudiosts	Elements and criteria derived from each instrument			
Indicator	ILO C188	SRA	SSF Guidelines	
		paying off debts to a cooperative, association, buyer, or permit holder (p. 19)		
Child labor	Minimum age for vessels in 16; minimum age for hazardous work is 18; work at night is prohibited for workers under 18 (Art. 9).	There is no evidence of hazardous child labor; children's schooling is not affected by work with family members (p. 21).	There is no child labor (p. 9); schooling is promoted (p. 10).	
Discrimination		There is no discrimination in recruitment, training, remuneration, joining cooperatives/unions, or access to benefits (p. 48)	There is no discrimination of any forms (p.2); specific measures have been taken to address discrimination against women (p. 12).	
Equitable opportunity to benefit		All individuals have equal access to participate and benefit from the fishery (p. 46).	There are measures in place to facilitate equitable access to fisheries resources (p. 6)	
Occupational safety and health	Vessels carry appropriate equipment; at least one fisher is trained in first aid and medical care; vessels are equipped with radio or satellite communication; fishers can receive medical treatment onshore; occupational accidents are prevented including risk evaluation, training, and on-board instructions for workers (Art. 29-31).	Workers have access to communication onboard (e.g., radio, cellphone); workers have adequate personal protective equipment (e.g., life jackets) provided at no cost; fishers/workers are trained in first aid, medical response; there is a written policy for safety and health (p. 33)	Occupational safety and health key elements of fisheries management (p. 9); implementation of safety laws is consistent with the ILC and IMO (p. 10).	
Social protection	Social security protection is available for all fishers; protection includes compulsory insurance, workers' compensation, and		Social security is promoted for workers in small-scale fisheries (p. 8).	

Indianta	Elements and criteria derived from each instrument			
Indicator	ILO C188	SRA	SSF Guidelines	
	other schemes (Art. 34-38).			
Freedom of association and collective bargaining	Freedom of Association and Protection of the Right to Organize Convention, 1948 (C87)	Fishers/workers are free to form organizations or unions; they can advocate for their rights and bargain collectively on conditions of employment or other issues related to work in the sector; women participate in such organizations (p. 23).	Traditional forms of associations are recognized; development of cooperatives is promoted in small-scale fisheries (p.11).	
Worker engagement and collaborative management		There is a mechanism for participation in decision-making, monitoring, enforcement, and conflict resolution in the fishery; fisher/worker input is considered and integrated into decisions; all groups are represented including women and migrant workers (p. 44)	Small-scale fishing communities, including women, vulnerable and marginalized groups, are involved in the design, planning, and implementation of fisheries activities or interventions (p. 7).	
Grievance mechanism or procedures		Fishers/workers have access to effective, fair, and confidential grievance mechanisms; they have knowledge of the procedures; remediation occurs in a timely manner; there is no retaliation for reporting grievances (p. 42).		
Food security		There is no food/nutrition insecurity in communities related to the fishery; industrial operations do not impact the availability of resources for local consumption (p. 52-53).	Effective fisheries management systems are in place to prevent impacts that affect food security and nutrition (p. 11).	

Indicator —	Elements and criteria derived from each instrument		
	ILO C188	SRA	SSF Guidelines
Illegal, Unreported, and Unregulated (IUU) fishing			Information related to IUU fishing is gathered and accessible (p. 16); management systems address illegal fishing practices (p. 7).

A.2. Recommended data sources and example interview questions

Indicator	Recommended data sources	Example interview questions
Earnings and benefits	Domestic labor laws for minimum wages, benefits, and overtime; employment contracts; ILO Decent Work Country Programs	What is your daily or weekly income?
benefits		Do you know how your earnings are calculated or divided amongst crew?
	Country (Tograms	Do you have a written contract that has terms about your earnings?
		Are you (women) paid for your work in the fishery? If yes, do you feel your earnings are equal to others doing relative work?
Adequate rest	Domestic labor laws for working hours and	How many hours do you work on average each day?
	overtime; employment contracts; ILO Decent Work Country Programs	How many days do you typically work each week?
		How much rest do you usually get each day?
		Do you work overtime? Is it voluntary?
Trafficking and forced labor	U.S. Department of State's (USDS) Office to Monitor and Combat Tradicional Combat Tradicional Combat Tradicional Combat C	Did you sign a written contract at the start of your employment? If yes, what terms were included?
	Persons 'Trafficking in Persons (TIP) Report; The Walk Free Foundation's	Have you ever paid any recruitment fees?
Global Countr Rights Intern (ILAB) Produc Forcec Work of domes ratifica	Global Slavery Index; USDS Country Reports on Human	Are you able to leave the vessel when in port?
	Rights Practices; Bureau of International Labor Affairs (ILAB) List of Good Produced by Child Labor or Forced Labor; ILO Decent Work Country Programs; domestic laws and ratifications prohibiting forced labor	Can you leave your position or employer? If yes, would there be any risk to you to do so?
		Are you in debt to a cooperative, buyer, or permit holder, or anyone else?
		How much of your income is typically held to pay off your debts?
		Are your debts decreasing over time?
Child labor	USDS TIP Report; USDS Country Reports on Human Rights Practices; ILAB List of Good Produced by Child Labor or Forced Labor; ILAB	Do any of your family members work alongside you? If yes, what are their ages?

Indicator	Recommended data sources	Example interview questions
	Findings on the Worst Forms of Child Labor; ILO Rapid Assessments on Child Labor; ILO Decent Work Country Programs; domestic laws and ratifications prohibiting child labor	(If below minimum age) Does this affect their ability to go to school or their attendance?
Discrimination	Domestic laws and ratifications prohibiting discrimination; fisheries policies; anti-discrimination	Are you aware of any discrimination that occurs in the fishery? If yes, please describe it.
	policies; ILO Decent Work Country Programs	How is discrimination being addressed?
Equitable opportunity to benefit	Fisheries policies; cooperative or association	What are the minority groups participating in the fishery?
bellefit	policies; ILO Decent Work Country Programs	How are these groups perceived in the fishery?
Occupational safety and health	Domestic laws for occupational safety and health; ILO Decent Work Country Programs; fisheries policies; training certificates	Do you believe the safety and health standards for the sector are adequate to protect workers?
		Do you feel like you are safe enough or protected enough during work, at sea or onshore?
		Do you have a communication device onboard? Life jackets? First aid?
		Have you ever received any training on first aid or medical care?
Social protection	Domestic laws for social security; ILO Decent Work Country Programs	Do fishers and fishworkers have access to social security benefits? If so, do they utilize these programs or services?
		Have you ever used social security benefits such as unemployment, disability, sick/injury leave, or old age pension?
Freedom of association and collective bargaining	International Trade Union Confederation's (ITUC) Global Rights Index; domestic laws establishing the right to organize and right to bargain collectively; ILO Decent Work Country Programs; cooperative or association policies	Are you part of a union, cooperative, or worker association? If yes, how is it beneficial to you?
		How can the organization address working conditions?

Indicator	Recommended data sources	Example interview questions
Worker engagement and collaborative management	Fisheries policies; management plans; cooperative or association policies; ILO Decent Work	Do you participate with agencies/ministries in decisions for the fishery? If yes, how are these interactions?
	Country Programs	Do you feel like your input was considered?
		Do you feel like the engagement was fair and that you had enough voice in the process?
Grievance mechanism or procedures	Fisheries policies; cooperative or association policies	Are you aware of any process or mechanism to report a complaint or issue you have? If yes, have you used it?
		Did you feel like there was any risk to you using it?
		Was your issue resolved or addressed?
Food security	FAO State of Food Security and Nutrition in the World;	What role does the fishery play in local food security?
	domestic food security programs or policies; food security assessments	Do you feel like you have access to healthy food?
		Do you feel like fishery operations have impacted the availability of or access to food in your community?
Illegal, Unreported, and Unregulated (IUU) fishing	The IUU Fishing Index	Is IUU fishing a common occurrence in the fishery?
		Do fishing vessels engage in illegal activities? How is the country combatting this?

A.3. IRB exemption



EXEMPTION GRANTED

Lekelia Jenkins

GF: Future of Innovation in Society, School for the (SFIS)

480/727-4521 Kiki.Jenkins@asu.edu

Dear Lekelia Jenkins:

On 9/4/2020 the ASU IRB reviewed the following protocol:

1 3/4/2020 the A30 IND reviewed the following protocol:		
Type of Review:	Initial Study	
Title:	Working conditions and social protection in the shrimp and groundfish fisheries in the Caribbean and North Brazil Shelf Large Marine Ecosystem (Guyana, Suriname, and Trinidad and Tobago)	
Investigator:	<u>Lekelia Jenkins</u>	
IRB ID:	STUDY00012402	
Funding:	Name: United Nations Development Programme (UNDP), Funding Source ID: UNJP/RLA/217/OPS	
Grant Title:		
Grant ID:		
Documents Reviewed:	 Contract for position and funding, Category: Sponsor Attachment; Email recruitment letter, Category: Recruitment Materials; Interview Guide, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); Participant Consent, Category: Consent Form; Recruitment flyer, Category: Recruitment Materials; Social Behavior Protocol, Category: IRB Protocol; 	

The IRB determined that the protocol is considered exempt pursuant to Federal Regulations 45CFR46 (2) Tests, surveys, interviews, or observation on 9/4/2020. In conducting this protocol you are required to follow the requirements listed in the INVESTIGATOR MANUAL (HRP-103).

If any changes are made to the study, the IRB must be notified at research.integrity@asu.edu to determine if additional reviews/approvals are required. Changes may include but not limited to revisions to data collection, survey and/or interview questions, and vulnerable populations, etc.

Sincerely,

IRB Administrator

cc: Gabrielle Lout Gabrielle Lout Lekelia Jenkins

APPENDIX B SUPPLMENTARY MATERIALS FOR CHAPTER 4

B.1. IRB exemption



EXEMPTION GRANTED

Kathleen Vogel

CGF: Future of Innovation in Society, School for the (SFIS)

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Kathleen.Vogel@asu.edu

Dear Kathleen Vogel:

On 9/3/2021 the ASU IRB reviewed the following protocol:

Type of Review:	Initial Study
Title:	Human rights in a sea of market-based approaches: Evaluation of market-based tools to advance social responsibility in the sustainable seafood movement
Investigator:	Kathleen Vogel
IRB ID:	STUDY00014436
Funding:	None
Grant Title:	None
Grant ID:	None
Documents Reviewed:	 Email recruitment letter, Category: Recruitment Materials; Interview Guide, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); Participant Consent, Category: Consent Form; Project summary and credentials, Category: Other; Social Behavior Protocol, Category: IRB Protocol;

The IRB determined that the protocol is considered exempt pursuant to Federal Regulations 45CFR46 (2) Tests, surveys, interviews, or observation on 9/3/2021.

In conducting this protocol you are required to follow the requirements listed in the INVESTIGATOR MANUAL (HRP-103).

If any changes are made to the study, the IRB must be notified at research.integrity@asu.edu to determine if additional reviews/approvals are required. Changes may include but not limited to revisions to data collection, survey and/or interview questions, and vulnerable populations, etc.

REMINDER - All in-person interactions with human subjects require the completion of the ASU Daily Health Check by the ASU members prior to the interaction and the use of face coverings by researchers, research teams and research participants during the interaction. These requirements will minimize risk, protect health and support a safe research environment. These requirements apply both on- and off-campus.

The above change is effective as of July 29th 2021 until further notice and replaces all previously published guidance. Thank you for your continued commitment to ensuring a healthy and productive ASU community.

Sincerely,

IRB Administrator

cc: Gabrielle Lout

APPENDIX C

PERMISSION STATEMENT TO USE PREVIOUSLY PUBLISHED WORKS

C.1. PERMISSION TO USE PREVIOUSLY PUBLISHED/PUBLISHABLE WORK

Chapters 2, 3, and 4 are in the process of being published. I am the sole author of Chapter 2, which has been submitted to *Society& Natural Resources*. I am the first listed author for Chapter 3 and 4. Chapter 3 has been submitted to *Marine Policy* with co-authors, Juno Fitzpatrick, Alejandro J. Garcia Lozano, and Elena Finkbeiner. I contributed to the conceptualization, development of methodology, investigation, analysis, writing – original draft, writing – review and editing, and project administration. Co-authors contributed to this paper by advising on the methodology and writing – review and editing. Chapter 4 has been submitted to *Sustainable Production & Consumption* with co-author Elena Finkbeiner. I contributed to the conceptualization, development of methodology, investigation, analysis, writing – original draft, writing – review & editing, and project administration. Finkbeiner contributed to this paper by advising on the methodology, writing – review & editing, and supervision. All co-authors have granted their permissions to use the articles as part of this dissertation.