THE ACCOUNTABILITY OF CORPORATE SOCIAL RESPONSIBILITY IN THE SEAFOOD INDUSTRY – A FOCUS ON TRANSPARENCY TOOLS

by

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ABSTRACT

This dissertation explores corporate social responsibility (CSR) accountability and practices in the wild seafood industry, focusing on mid-chain seafood companies. Mid-chain companies, especially large ones, are thought to play an influential role in dealing with the social and environmental impacts of fisheries. The Sustainable Seafood Movement (SSM) emerged as an approach to hold seafood companies accountable for their social and environmental impacts through CSR using social and market mechanisms (e.g., campaigns, eco-labels). This research examines the CSR accountability systems developed by the SSM and the CSR activities these systems lead to among mid-chain seafood companies. To do so, I critically examine three elements of accountability systems: 1) standards; 2) information and monitoring systems and 3) sanctions and rewards. I also examine the CSR practices these accountability systems lead to. To do so, Chapter 2 provides a desktop review of the accountability systems developed by the SSM. Chapter 3 and 4 take a deep dive into two kinds of information and monitoring systems, with Chapter 3 looking at CSR reports and Chapter 4 looking at traceability systems. Chapter 3 also provides an analysis of the leading CSR practices in the seafood industry. Finally, Chapter 5 reflects on the role of social networks and social capital in improving CSR accountability in the seafood industry, using the example of Fishery Improvement Projects. Chapter 6 synthesizes the findings and concludes with opportunities to improve CSR accountability. I conclude that the SSM has made companies more accountable for their social and environmental impacts. However, the extent to which CSR accountability mechanisms and CSR practices can contribute to social and environmental improvements is constrained due to power asymmetries, poor information systems, weak sanctions, risks of co-optation between NGOs and companies, and a market for sustainability that is limited to certain parts of the world's market and consumers. Therefore, I suggest that improving CSR accountability and practices will require 1) stronger social capital between stakeholders; 2) more participatory and democratic processes to design CSR standards and policies; 3) pluralistic forms of accountability that are not only focused on market leverage points but also financial and regulatory leverage points and; 4) integrated reporting.

LIST OF ABBREVIATIONS USED

Abbreviation	Description
CSR	Corporate Social Responsibility
NGO	Non-Governmental Organization
ASC	Aquaculture Stewardship Council
BSCI	Business
CDT	Catch Documentation and Traceability
eNGO	environmental Non-Governmental Organization
ETI	Ethical Trade Initiative
FAO	Food and Agriculture Organization
FIP	Fishery Improvement Project
GDST	Global Dialogue for Seafood Traceability
GPN	Global Production Network
GSSI	Global Sustainable Seafood Initiative
ICT	Information and Communication Technologies
ILO	International Labour Organization
IOG	Institute of Governance
ISO	International Standards Organization
ISSF	International Sustainable Seafood Foundation
IUU	Illegal, Unreported and Unregulated
MDPI	Masyarakat dan Perikanan Indonesia
MSC	Marine Stewardship Council
NWO	Nederlandse Organisatie voor Wetenschappelijk Onderzoek
ODP	Ocean Disclosure Project
PVR	Pro-active Vessel Registry
SA	Stakeholder Analysis
SALT	Seafood Alliance for Legality and Traceability
SDG	Sustainable Development Goals
SeaBOS	Seafood Businesses for Ocean Solutions
SEAFDEC	Southeast Asian Fisheries Development Center
SFP	Sustainable Fisheries Partnership
SIMP	Seafood Import Monitoring Program
SNA	Social Network Analysis
SSF	Small-scale fisheries
SSI	Seafood Stewardship Index
SSM	Sustainable Seafood Movement
TCE	Transaction Costs Economics
UN	United Nation
USAID	United State Agency for International Development
WCPFC	Western and Central Pacific Fisheries Commission
WTO	World Trade Organization
WWF	World Wildlife Fund

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CHAPTER 1 INTRODUCTION

1.1 CORPORATE SOCIAL RESPONSIBILITY (CSR)

Over the past two decades corporate social responsibility (CSR) has become increasingly important due to rising public awareness of the negative social and environmental impacts of corporate activities and that legal requirements are often not enough to satisfy the public's concerns. Although scholars have studied this concept, CSR, the central concept of this dissertation proves hard to define. Definitions vary across disciplines as well as among CSR practitioners, from businesses, to civil society organizations, and governments. CSR is an elusive and complex concept that describes the relationship between business and society and refers to a company's voluntary activities to meet stakeholder demands and address its negative environmental and social impacts (Carroll, 2008; Dahlsrud, 2008).

In his review of 37 CSR definitions, Dahlsrud (2008) found five key CSR dimensions, namely the environmental, social, economic, stakeholder, and the voluntariness dimensions. The environmental dimension refers to environmental stewardship and mitigation of negative environmental impacts. The social dimension refers to the impact of business on the well-being of society. The economic dimension refers to the necessity for companies to be profitable to exist and contribute to economic development. The stakeholder dimension embodies the fact that companies have responsibilities not only towards their shareholders but other stakeholders that are impacted by their activities including local communities, employees, suppliers, customers and some would say, society

at large. Finally, the "voluntariness" dimension refers to the fact that CSR goes beyond what is required by the law (Blowfield and Frynas, 2005).

This last dimension means that CSR is affiliated with policy models that support corporate self-regulation, as opposed to models advocating mandatory regulation to ensure responsible business practices. CSR is therefore intrinsically connected to the debate on voluntary versus mandatory approaches to regulate businesses, suggesting that CSR is not only a business phenomenon but also a political phenomenon. According to Sadler and Lloyd (2009), the CSR movement and agenda supports the neo-liberal political model of state-market-society relations. Therefore, defining CSR goes beyond a simple technical exercise but also a normative and ideological task as it is inherently related to how the political economy is organized to constrain corporate behaviour and power. As a result, CSR lends itself very well to questions and insights that are fundamental to political science disciplines which can contribute to the analysis and wider debate of the role of business in society and as arena of political contestation and negotiation.

As economic activities have become global and value chains have expanded all over the world, the scope of CSR is changing to not only include issues related to company's direct activities but also those activities that take place within its value chains (Andersen and Skjoett-Larsen, 2009; Blowfield and Frynas, 2005; Maloni and Brown, 2006). As a consequence of modern information and communication technologies and the growing awareness of the negative impacts of economic activities, there has been increasing pressure from a number of stakeholders, such as NGOs and engaged consumers, on companies with global reach to mitigate the negative impacts of their operations and their value chains (Mol, 2006; Vogel, 2008). Consequently, many global companies with public

or consumer-facing profiles are being asked to develop and implement "upstream" CSR programs to ensure that their value chains and operations are compliant with stakeholders' expectations (Kogg and Mont, 2012).

Many global value chains are governed by key actors or lead companies– often large multinational companies – that have the power to control (i.e., govern) how and when goods are produced and who produces them (Gereffi et al., 2005). Through private governance systems, NGOs aim to use the power of lead companies to influence global production and consumption practices through non-state market driven approaches (Cashore, 2002). CSR, as a voluntary set of rules and practices that companies implement largely as a result of NGO, public and consumer pressures, can thus be defined as a form of non-state market driven governance approach to regulating corporate behaviour. One question that arises from the voluntary nature of CSR and its reliance on social and market pressures as incentives for corporate action is the extent to which NGOs, consumers and the wider public (including stakeholders that directly suffer from the negative impacts of business activities) are able to hold companies accountable to their demands and expectations. CSR accountability is thus a central element to the ability of CSR to transform corporate social and environmental practices.

In the academic community, CSR research has predominantly been the area of business and management disciplines, analyzing how CSR can be managed and how CSR influences brand value, reputation, employee relations, investor relations or financial performance. Under these disciplines, CSR is seen as an instrument to achieve greater economic returns (Carroll, 2008; Frynas and Yamahaki, 2016; Lee, 2008). In the last two decades however, CSR has caught the attention of social and political scientists who seek to understand the

antecedents and implications of this rising corporate interest in social responsibility and environmental sustainability (Bair and Palpacuer, 2015; Banerjee, 2008; Frynas and Stephens, 2015). Unlike business and management researchers, social scientists aim to take into account the institutional causes and political consequences of CSR (Brammer et al., 2012; Matten and Moon, 2008).

This dissertation takes an interdisciplinary perspective to the study of CSR and CSR accountability in the wild seafood industry and aims to evaluate CSR accountability, CSR practices and the potential contribution of CSR for improving the environmental and social performance of wild seafood production. In the following section, I will present how CSR emerged as a result of the Sustainable Seafood Movement (SSM) and how CSR accountability relates to the SSM's theory of change.

1.2 THE SUSTAINABLE SEAFOOD MOVEMENT

1.2.1 Why did Seafood CSR and the Sustainable Seafood Movement emerge?

In the past 20 years, NGOs have played a key role in highlighting the negative social and environmental impacts of fishing and seafood production activities and putting pressure on businesses to change (Sutton and Wimpee, 2008). As a result, there has been a sharp increase in voluntary efforts by companies involved in the harvesting and production of seafood, often in collaboration with those same NGOs, to develop policies and processes to address their impact on society and the environment, activities which I describe using the term seafood CSR. A growing number of companies are subscribing to CSR. For instance, over 8000 corporations (including seafood companies) have become members of

the UN Global Compact's principles, a list of 10 business commitments to social responsibility and environmental sustainability (UN Global Compact, 2000).

In the seafood sector, this rise in seafood CSR is closely linked to the rise of the Sustainable Seafood Movement (SSM), which emerged in the late 1990s. The SSM emerged for several reasons. Chief among them were the alarming reports from the Food and Agriculture Organization's of declining global fish stocks and the abrupt collapse of cod fish stocks in the western Atlantic in 1993. In addition to the rising awareness of declining global fish stocks, various other factors explain the increasing involvement of NGOs (and consumers) in advocacy and corporate regulation and the associated upsurge of CSR activities. Chief among them is globalization which has had a profound impact on processes of public and private governance. The internationalization of seafood value chains means that much of the global seafood production is beyond the reach of national governance institutions in developed states. At the same time, developing countries, which represent 60% of global seafood export volumes (FAO, 2020), often lack the capacity to regulate fishing and processing activities in their jurisdictions due to lack of experience, regulatory capacity and weak governance structures. Moreover, many developing countries are interested in attracting foreign investments and increasing export related income which often means lax regulations. In other words, the national government system built to regulate activities within national boundaries has, in many parts of the world, proven inadequate to create global regulations within an increasingly fragmented and unrestricted global economy.

Meanwhile, international social and environmental regulations for the seafood sector are weak. United Nations (UN) institutions such as the FAO and the International Labour Organization (ILO), have very limited power to enforce instruments such as the UN Fish

Stocks Agreement, the Port State Measures Agreement and the universal principles for Working in Fishing Convention, which largely remain voluntary measures. Trade institutions such as the World Trade Organization (WTO) on the other hand have more power but have shown rather shy efforts to integrate social and environmental issues in seafood related policies (Campling and Havice, 2013). As such, changes in how the international economy is organized has led to a regulatory vacuum or deficit (Kobrin, 2008).

The regulatory vacuum created by globalization together with the rise of powerful market actors opened up new possibilities for private governance (Mayer and Gereffi, 2010). Indeed, social activists and civil society organizations, frustrated at the lack of governmental action, began targeting their efforts towards firms (Gutiérrez and Morgan, 2015; Sutton and Wimpee, 2008). In response, companies, in partnership with NGOs, began developing various private regulatory arrangements to fill the governance gap, leading to a new global governance regime that includes both public and private approaches (Bernstein and Cashore, 2007; Konefal, 2013; Roheim et al., 2018). Another factor related to globalization that has contributed to the growth of NGO power is the rise of information and communication technologies (ICTs) which NGOs have used to mobilize the public opinion and raise awareness about the negative impacts of seafood production activities (Mol, 2008). NGOs shifted and increased their efforts mobilizing business and market forces to drive change in seafood production practices (Pattberg, 2005). This market-based approach to drive change, also called private governance, is the operational model of the SSM (Barclay and Miller, 2018; Jacquet and Pauly, 2007; Roheim et al., 2018). These developments led several environmental NGOs to rally around the issue of sustainable

seafood, while some continued to target their advocacy efforts towards governments, others focused on market-based forms of regulations; the latter being the focus of the Sustainable Seafood Movement.

1.2.2 The Sustainable Seafood Movement's Evolving Theory of Change

Since the early days of the SSM, the movement has undergone various transformations in terms of its theory of change, who is involved in driving the movement and how it defines sustainability (Roheim et al., 2018). The SSM, as the name would suggest, is in fact not a clearly delineated movement but rather, describes an evolving group of private actors (including NGOs, consumers, buyers, seafood companies, producers and producer organizations, auditing bodies and standard-setting organizations) that drive the development and implementation of private forms of regulations and accountability (e.g., eco-labels and certification) and employ market and social pressures to improve the sustainability and social responsibility in the seafood industry. The SSM has been evolving over time in terms of who is involved, and the strategies used by different actors to drive change. Gutiérrez and Morgan (2015) provide a rich description of the different actors involved in the SSM, identifying multiple objectives and roles (Table 1.1). Two kinds of organizations were critical in the initial organization of the movement: eNGOs and funders. Environmental NGOs such as SeaWeb, initially were the primary organizers of the movement and brought together disparate organization to build a common and coherent vision. As the movement evolved, retailers and industry have also increasingly shared this role. Philanthropic foundations such as Pew and the David and Lucile Packard Foundation, have played the role of providing strategic direction to the movement and the financial

means for the movement to grow and maintain momentum. Today, the movement continues to be mostly funded by a small number of private philanthropic foundations. As the movement built up, environmental NGOs (eNGOs) and foundations built relationships with certification schemes (e.g., MSC) as well as auditing organizations, retailers, food service companies, chefs and the fishing industry. Foundations have also supported the media and eNGOs (e.g., through public awareness campaigns) in diffusing the movement's vision and mission among consumers and throughout the industry.

The initial phase of the movement consisted mostly of eNGOs such as Greenpeace, WWF, Pew and the Monterey Bay Aquarium driving the movement by carrying out a number of market campaigns focused on specific species boycotts or blaming-and-shaming specific brands and retailers (Sutton and Wimpee, 2008). In 1997, Unilever (at the time the largest seafood retailer in the world) and the World Wildlife Fund (WWF) entered a landmark partnership to form the Marine Stewardship Council (MSC), a non-profit standard-setting organization, to set the first market-based standard for wild-capture seafood (Ponte, 2012). Following the formation of the MSC and aggressive market campaigns, a number of large retailers such as Walmart in 2006, started making sustainable seafood sourcing commitments using the MSC as a standard to define the sustainability of seafood products. From that point on, momentum started to build for fisheries to get MSC certified and a wave of MSC certification occurred in the mid to late 2000s (mostly industrial fisheries in the Global North) until buyers and seafood companies realized that a large number of their source fisheries (mostly in the Global South) would need more time to improve and become certified. Consequently, NGOs developed a new concept: Fishery Improvement Projects (FIPs) (Cannon et al., 2018). FIPs are multi-stakeholder projects that aim to improve a

fishery with the goal of obtaining MSC certification. Following the development of FIPs, a number of retailers and seafood companies modified their sourcing commitments to also accept products from FIPs. FIPs typically require the involvement of public and private actors in improving the sustainability performance of a fishery which leads to direct interactions between the SSM and governments.

Overtime, the SSM has grown to include a wide range of actors from both the public and private sector, each playing different role. On the private sector side, there has been a growing involvement of actors from different parts of the value chain, including retailers, food service companies, seafood companies (processors, importers, exporters), fishing companies and fishers. However, little attention has been given to the role of seafood companies in the SSM (indeed it is missing from Table 1.1), hence the focus of this thesis on mid-chain seafood companies. On the public sector side, governments have always played a central role to the movement, not as drivers per se but certainly as necessary actors to be involved to implement improvement in fisheries management.

		ACTORS									
OBJECTIVES	**ROLES**	**ENGOs**	**Foundations**	**Certification schemes**	**Verifiers**	**Retailers/Food Service providers**	**Chefs**	**Fishing industry**	**Academics**	**Media**	**Consumers**
Initial movement organizers	Movement organizers/ bridge builders	X				X		X			
	Movement funders		X								
Improve the sustainability of the seafood supply chain	Shaming advocates	X								X	
	Sustainable business partners	X	X			X	X	X			
	Administrators of sustainability			X	X						
	Watchdogs/vocal critics	X						X	X		
	Public educators	X		X		X	X	X	X	X	
	End users										X
Use the pressure of the seafood supply chain to improve the sustainability of the fishing industry	Partners in fisheries improvement	X	X	X	X	X	X	X			
	Supply chain gate keeper			X	X	X	X				
Use the pressure of the seafood supply chain and the fishing industry to improve government regulations	Advocates for government reform	X	X	X	X	X	X	X	X	X	X

Table 1.1. Objectives and roles of the Sustainable Seafood Movement by actor (adapted from Guttierez and Morgan, 2015)

The SSM has also evolved in terms of the tools to measure fisheries sustainability as well as the aspects (social, economic, ecological) of fisheries sustainability being measured. Indeed, another assessment tool that has gained prominence in North American and European markets are seafood ratings (e.g., Seafood Watch, the Good Fish Guide), which use a traffic light system to rate the sustainability of a fishery. Unlike MSC, these ratings are not based on third-party assessment. Rather, they are based on an NGO's assessment of a fishery against its own sustainability standard. A number seafood rating organizations have also partnered with buyers who include ratings in their sourcing commitments as a complement to their commitment to MSC certified of FIP seafood. Since the development of the first market standards, which were primarily focused on environmental issues, the SSM has developed additional standards for other aspects of seafood sustainability including traceability and social responsibility (e.g., Fair Trade USA wild-capture seafood standard, the Responsible Vessel Fishing Scheme, the Global Dialogue for Seafood Traceability standards). However, despite criticisms and the development of competing standards and eco-labels (Foley and Havice, 2016; Froese and Proelss, 2012; Miller and Bush, 2015), the MSC still remains the 'gold standard' defining sustainable fisheries.

The SSM's theory of change has evolved overtime and moved through 3 versions (Roheim et al., 2018). The original version of the theory of change is based on mobilizing consumer demand in developed countries to create economic incentives for sustainably managed fisheries. However, as consumers turned out be to be weak demanders of sustainability, NGOs shifted their focus on retailers and food service companies which resulted in number of NGO-business partnership and sourcing commitments. However, this theory of change also failed to drive improvements given that many fisheries around the world were not able

to meet buyers' sourcing criteria, hence the emergence of FIPs. This led to the third iteration of the SSM's theory of change with the introduction of FIPs, some of which have succeeded in achieving certification. However, FIPs have also led to a number of challenges in terms of verification and that not all FIPs aim for certification, thus opening the door to definitions of sustainability that go beyond those defined by narrow market standards. Roheim et al. (2018), present 4 potential scenarios of the next phase of the theory of change: status quo, race to the bottom, state intervention and risk mitigation (Table 1.2).

THEORY OF CHANGE	DRIVERS	MAIN SUSTAINABILITY STANDARDS	DOMINANT ROLES OF NGOS	FAILURE OR RISK
ORIGINAL	Consumers	MSC, Seafood ratings	Consumer educator, watchdogs	Lack of consumer demand
V2.0.	Consumers, Retailers	MSC, Seafood ratings	Watchdogs, retailer partners	Lack of available certified seafood
V3.0.	Consumers, Retailers	MSC, Seafood ratings, FIPs, Fair Trade USA, ISSF	Retailer partners, retailer advisors.	Confusion created by many standards and lack of verifiability of FIPs.
V4.0. STATUS QUO	Same as V3.0.	Same as V3.0.	Same as V3.0.	NGOs fail to take into account economic constraints faced by retailers to comply with commitments.
V4.0. RACE TO THE BOTTOM	Same as V3.0.	Same as V3.0.	Same as V3.0.	Retail-NGO partnerhip develove intro relationships of convenience
V4.0. STATE INTERVENTION	Same as V3.0.	More state standards e.g., ASMI-RFM and IRFM, undermining market-based standards.	Undetermined.	Greater state intervention by developing their own standards.
V4.0. RISK MITIGATION	Same as V3.0.	Undetermined.	Sustainable Seafood Aggregator (SSA) – providing advice to retailers and exposed to financial risk or poor advice.	Undetermined.

Table 1.2. Evolution of the Sustainable Seafood Movement's Theory of Change (adapted from Roheim et al. 2018).

Broadly speaking, the SSM aims to create market incentives for companies in seafood value chains to voluntarily change their practices in a way that supports sustainable seafood production (Barclay and Miller, 2018; Gutiérrez and Morgan, 2017). The theory of change of the SSM, graphically presented in Figure 1.1, is the following: NGOs mobilize consumers to demand sustainable seafood by developing information tools such as eco-

labels and seafood consumer guides. This leads to an increase in consumer demand for sustainable seafood. NGOs may also organize campaigns to highlight companies with poor practices ("blame-and-shame"). As a result, retailers and brands are pressured to make seafood sustainability commitments, often in partnership with NGOs (Cashore, 2002; Gutiérrez and Morgan, 2015; Ponte, 2012). Seafood commitments have initially been focused on environmental sustainability but in recent years increasingly include commitments to traceability, legality and social aspects related to human and labour rights (Kittinger et al., 2017; Nakamura et al., 2018). To ensure commitments are met, consumers and NGOs hold retailers and brands accountable for their commitments. Consequently, seafood suppliers are pressured to change practices in their operations and work with their value chains and fisheries they source from to implement changes. This "chain reaction" (in theory) eventually leads to improved social and environmental practices in seafood value chains. As such, the SSM aims to generate economic incentives (market premium, market access) and socio-political incentives (lost social license to operate, reduced public trust and reputation) for companies involved in the production and distribution of seafood to take voluntary actions (i.e., CSR) to improve their social and environmental performance.

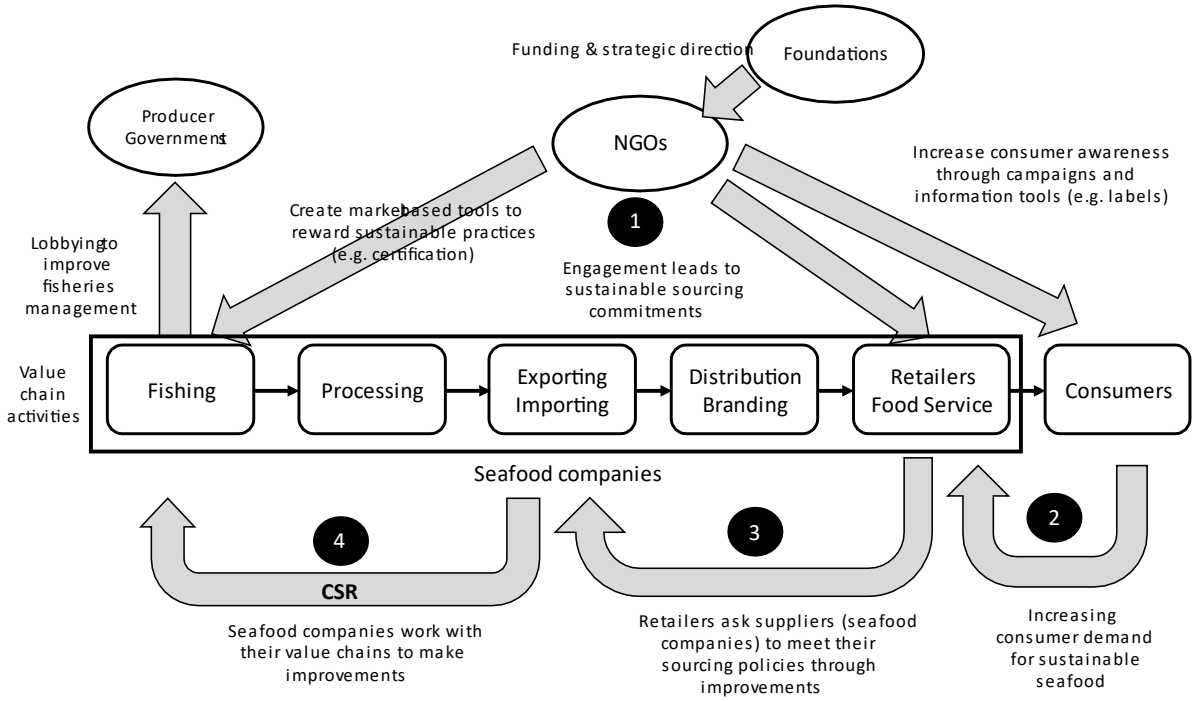

Figure 1.1. Summary of the theory of change of the Sustainable Seafood Movement. The numbers indicate the order in which the theory of change gets executed.

1.2.3 Mid-chain Seafood Companies

Given that the latest theory of change of the SSM is that buyer requirements drive improvements in seafood value chains, it is important to understand how value chain actors are responding to those requirements, starting with first-tier suppliers or seafood companies. Therefore, the analytical focus of this dissertation is on the CSR practices of seafood companies. Seafood companies directly sell to lead buyers (retailers, food service companies) and therefore are key actors in the value chain dealing directly with market requirements while at the same time dealing directly with local suppliers and fishing companies. Seafood companies are typically located in the middle of the value chain (Figure 1.1) and involved in processing activities by owning processing plants to produce and package end-consumer seafood products. Vertical integration varies, with some seafood companies outsourcing some of the primary processing activities, some owning

fishing operations, some owning brands. Therefore, seafood companies implement CSR programs to improve environmental and social practices in the operations they control (typically processing, sometimes fishing) as well as operations they do not control (primary processing and fishing). As a result, seafood suppliers must implement a mix of CSR activities targeting both internal operations as well as those of their suppliers (what some have called upstream or value chain CSR) in order to meet the environmental and social standards of their buyers.

Seafood companies are not a homogenous group of companies and vary in their characteristics (e.g., size, species and product forms, vertical integration, corporate culture and markets) and organizational context (e.g., stakeholder relationships, geographic location, political and social context). According to the resource-based view of the firm, firm-level differences are likely to create different triggers for investing in CSR and CSR practices (Barney, 1991). For example, large vertically integrated brand owning seafood companies are likely to face higher reputational risks than smaller companies and may be powerful leverage points to improve practices in seafood value chains (Österblom et al., 2015). Smaller seafood suppliers may not have the same means and market power necessary to drive change in their value chains and the fisheries they source from. Thus, compared to large powerful seafood suppliers, smaller companies may take a different approach to drive improvements in their value chains and the fisheries they source from.

Given the differences in issues faced by aquaculture and wild-capture fisheries value chains, the focus of this thesis will be wild-capture fisheries value chains and the mid-chain seafood companies embedded in those.

1.2.4 CSR accountability and the Sustainable Seafood Movement

The extent to which the SSM is driving improvements in seafood value chains is unclear (Bailey et al., 2018; Jacquet et al., 2010; Roheim et al., 2018). Indeed, the portion of fish stocks that are within biologically sustainable levels has continued to decrease since the SSM started in the 1990s from around 80% to 65.8% in 2017. Moreover, today only 20% of fisheries by volume are sustainably certified and there is mixed evidence that fishery improvement projects are having the desired impacts "on the water" (Froese and Proelss, 2012; MSC, 2017; Sampson et al., 2015). Additionally, recent reports on human and labour rights abuses suggest that these issues are more common than previously thought and need to be addressed in combination with environmental and economic issues (Greenpeace, 2018; Marschke and Vandergeest, 2016). It is also unclear whether the market-based incentives and the accountability system created by the SSM are enough given that many commitments made by buyers, mostly in the global North, continue to go unmet, without any major consequences (e.g., Walmart, 2006). This raises questions on the potential of market-based approaches in regulating and holding accountable seafood value chains for social and environmental impacts.

The SSM's theory of change is based on a "soft" accountability system that relies on market incentives and social pressure to get seafood value chain actors (retailers, seafood companies and fishers) to implement changes and take action on a voluntary basis, i.e., that is not legally required. As such, CSR and CSR accountability are at the centre of the SSM's theory of change. Indeed, what CSR actions companies take as a result of the SSM's market and social accountability determine the extent to which the SSM leads to social and environmental improvements. Understanding the effectiveness of the SSM and the validity

of its theory of change therefore requires understanding the accountability system that the SSM has created and whether these lead to CSR practices that improve environmental and social impacts. This dissertation aims to **investigate the CSR accountability systems created by the SSM to hold mid-chain seafood companies accountable for their CSR practices** in order to better understand the extent to which the SSM and CSR can contribute to a socially responsible and environmentally sustainable seafood industry.

1.3 RESEARCH AIMS AND QUESTIONS

In this thesis, I aim to examine the accountability of seafood CSR and the CSR practices of seafood companies that result from the accountability mechanisms developed by and through the SSM. I ask what level of CSR accountability has the SSM created to hold seafood companies accountable and whether the CSR practices that result from it are likely to lead to the social and environmental improvements that the SSM is demanding, and in some ways claiming. Based on these questions, I reflect on how CSR accountability can be improved to further drive social and environmental improvements. The following central questions are used to guide this research:

1) **What is the level of CSR accountability of mid-chain seafood companies created by the SSM through standards, monitoring and sanctions?**
2) **What CSR practices result from this accountability system and what is their potential to lead to improvements?**
3) **What are key opportunities to improve CSR accountability and CSR practices?**

Given that CSR is at the heart of the SSM's theory of change, considering how CSR accountability systems and practices drive change allows me to reflect on the SSM's theory of change more broadly and its contribution to making the seafood industry more socially responsible and environmentally sustainable. The focus of this thesis is on mid-chain seafood companies involved in the production of seafood from wild-capture fisheries, as keystone actors, and their role in governing environmental sustainability and social responsibility in seafood global production networks through CSR. Given the prominence of CSR in dealing with the social and environmental ills in the global seafood industry, examining how CSR unfolds and the practices that result from it are key to understanding the extent to which CSR can contribute to a sustainable and responsible seafood industry.

1.4 CONCEPTUAL FRAMING

In this section I outline the various theoretical concepts which I draw from, to address the central questions of this thesis. These include theories and concepts that pertain to CSR, network governance and informational governance.

1.4.1 CSR theories

In the same way that there is no single definition of CSR, there is no unified theory of CSR. Many frameworks have been developed within the CSR field such as corporate citizenship, Caroll's pyramid of responsibility or Elkington's triple bottom line (Carroll, 1991; Elkington, 1998; Garriga and Mele, 2004; Gerrish and Nazroo, 2010). These do not constitute theories as they do not capture the observed uniformities of social behaviour and are not general enough to cover a range of phenomenon. Indeed, theories are usually not

field specific and can be applied to various fields (Bacharach, 1989; Gelman, 1996; Weick, 1989). Frynas and Yamahaki (2016) offer a useful categorization of theories that have been used to explain and describe the phenomenon CSR, differentiating between theories that explain the external and the internal drivers of CSR, which can be complementary of each other.

Theories of external drivers include stakeholder theory, institutional theory and resource-dependence theory, which focus on the relationships between a firm and its environment (Freeman, 1984; Matten and Moon, 2008; Suchman, 1995). Theories of external drivers of CSR all have in common that they place emphasis on the role of actors external to firms in defining acceptable corporate behaviour either by communicating specific stakeholder expectations or wider institutional norms. As such, CSR is seen as the outcome of a firm's social relationships and societal norms. On the other hand, theories of internal drivers of CSR (e.g., agency theory and the resource-based view of the firm) focus on internal processes inside the firm by understanding firm management and the social values of the individuals inside the organization (Jensen and Meckling, 1976). As such, CSR is seen as the outcome of managerial decisions and economic calculations of ethical values and judgments. Similarly, Bair and Palpacuer (2015) differentiate between external and internal perspective on CSR. The external perspective on the other hand looks at how CSR is shaped by the firm's environment i.e., how corporations respond to their institutional environment and external stakeholder pressures. The internalist view focuses on organizational level factors to explain CSR, often looking for a business case for CSR or the link between CSR and financial performance (Carroll and Shabana, 2010; Weber, 2008).

1.4.2 CSR and sustainability governance

The institute of governance (IOG) defines governance as "how society or groups within it, organize to make decisions", and suggests that most definitions rely on three dimensions: authority, decision-making and accountability (IOG, 2020). There are different kinds of governance depending on the qualifying adjective used in front of it. For instance, *corporate governance* describes the rules and practices by which firms are directed and controlled. *Market governance* refers to the governmental and non-governmental institutions that shape the behaviour of market and market actors (Mayer and Gereffi, 2010). As a result of globalization and the subsequent dispersion of production activities between different firms*, industrial governance* is required to coordinate the relationships between actors in global value chains. However, the fast pace of globalization of production activities has not been matched by the development of global regulatory institutions akin to national state legal regimes, leading to the so-called governance gap (Kobrin, 2008). *Global governance* refers to how this governance gap is being filled and by whom (Eberlein, 2019; Haas, 2017). Non-state actors such as international NGOs and multi-national corporations have been playing an increasing role in filling the governance gap, under what has been labelled *private governance*.

Network governance and accountability

The participation of non-state private actors in the development of rules and standards to regulate global economic activities has led to a shift from state-centered government towards less formal processes based on *networks of inter-dependent public and private actors*, the so-called shift from "government to governance" (Rhodes, 1997). Indeed, the governance of economic activities has become organized around global and transnational

networks of public and private actors and institutions that interact through complex political processes to shape, influence, decide and enforce rules. Networks differ from markets and hierarchies in that they are not based solely on contracts, authority and rules of law but also on trust and diplomacy (Rhodes, 2007). In the realm of production, these networks, called *Global Production Networks* (GPNs), are thus both political and economic phenomena, where markets and value chains are embedded in wider social and political institutions (Coe et al., 2008; Levy, 2008). CSR, as a form of private governance whereby non-state actors (civil society and corporations) contend to define the social responsibilities of business, is thus a central phenomenon to the network governance of GPNs (Bair and Palpacuer, 2015; Levy, 2008). Indeed, CSR reflects a process of redefining the roles and responsibilities of business in society not through the law but through voluntary rules and self-regulation, thus subject to continuous negotiation and political contestation between a network of actors (Albareda, 2008; Vogel, 2008). CSR is used by businesses and NGOs as a tool to fill global gaps in legal regulation and moral orientation and contribute to solving global social and environmental issues (Utting, 2005). In the case of the seafood industry, this network governance through CSR is embodied by the Sustainable Seafood Movement.

The growing expectations and role of corporations in filling the governance gap has led some authors to conclude that businesses have become important political actors in society (Eberlein, 2019; Scherer and Palazzo, 2007). As such, *political CSR* refers to "an extended model of governance with business firms contributing to global regulations and providing public goods" (Scherer and Palazzo, 2011, p. 901) and is based on the understanding that civil society organizations and corporations have become prominent actors in the regulation and control of global economic activities. Given the political nature of CSR, its

role in global governance networks and regulating markets and economic activities, CSR reflects a process of negotiations or contestation between different actors of society. Indeed, some authors describe CSR as "a societal backlash against the externalities and excesses of corporate power" and therefore an "ongoing process of contestation about the role of business and society" (Bair and Palpacuer, 2015, p. 8).

This view of CSR as embodying a form of political contestation is related to Levy's view of global production networks (Levy, 2008). Levy describes GPNs as entangled with social and political issues and as "characterized by contestation as well as collaboration among multiple actors, including firms, states and international agencies, NGOs and industry associations, each with their own agenda" (Levy, 2008, p. 943). As such GPNs are "complex political economic systems in which markets are constructed within, as well as actively shape, their socio-political context" (Levy, 2008, p. 943). For political economists and economic geographers, understanding the organization of economic and market activities must include an examination of the power relations within the networks. Based on this political understanding of global production networks, voluntary self-regulation through CSR such as private sustainability standards and certification is the outcome of negotiations between civil society and firms to regulate corporate activities, while avoiding stricter and more formal forms (i.e., legal) of regulation. This means that CSR, as a form of social regulation of business, carries inherent risks of co-optation and giving in to the power of business (Banerjee, 2008; Fuchs, 2007; Newell, 2005; Ponte, 2019). It is important to keep those limits and risks into account when reflecting on the potential of CSR to solve global social and environmental issues and filling the governance gap (Bendell, 2005; Vogel, 2005)

Given the shortfall of traditional government-led management, political CSR and governance networks have also emerged in the seafood sector (Gibbs, 2008). Private philanthropic foundations, environmental NGOs and seafood businesses have become active participants in the governance of fisheries and seafood production through private approaches such as certification and Fishery Improvement Projects (FIPs). As such, the SSM is a governance network made of public and private actors that continuously interact and negotiate to govern seafood sustainability, giving rise to a more decentralized and networked form of governance where both public and private actors are engaged in what has been described as a governance "concert" (Barclay and Miller, 2018; Gutiérrez and Morgan, 2017). Indeed, the SSM and CSR have become an integral part of how seafood global production networks are governed (Barclay and Miller, 2018; De Vos and Bush, 2011; Gutiérrez and Morgan, 2017; Roheim et al., 2018; Sutton and Wimpee, 2008).

As multi-sectoral governance networks have grown in numbers, the operationalization of accountability in those governance networks has been the subject of academic research and debate. Optimists argue that putting together public and private resources can improve the collective capacity for problem solving and increase participation (Wolf, 2001). On the other hand, skeptics question whether cooperation between representative and non-representative organizations (e.g., NGOs, multi-national corporations and international organizations) can contribute to effective and legitimate global governance (Sørensen and Torfing, 2005). More fervent critics argue that governance through networks are increasingly controlled by private interests, undermining democracy (Cerny, 1999).

Better understanding accountability in governance networks is useful for two reasons. First, it helps understand the extent to which networks contribute or undermine the effectiveness

and legitimacy of global governance. Second, it triggers us to critically examine conventional accountability mechanisms and how accountability in networks may require new approaches. Indeed, networks as weakly institutionalized structures, do not lend themselves to conventional accountability mechanisms (e.g., electoral and hierarchical accountability). Alternative accountability mechanisms are thus necessary to ensure accountability in and of networks. As Benner and her colleagues (2004) explain, accountability in networks will likely require a combination of accountability mechanisms such as peer accountability, reputational accountability, market accountability, fiscal accountability and legal accountability.

Informational governance

Informational governance refers to the idea that information (and associated processes, technologies, institutions and resources linked to it) is restructuring environmental governance processes, institutions and practices of governance (Mol, 2006). Under informational governance, information is a source of power that can be used by various actors engaged in environmental governance. The transformative powers of information are not derived from the content of information but rather from the enhancement of information collection, processing and transmission and the "time-space compressing" of information flows enabled through new information technologies that allow an increasing number of people to access and make use of the information at times and places distant from where and when the information originated. Consequently, environmental governance increasingly consists of struggles over access to, production and verification, and control over environmental information. Due to the value of firms' reputational capital, the legitimatory capital of NGOs, the central role of the media in environmental politics,

and the power and influence of accountability mechanisms, informational governance has become an integrative part of global environmental governance (Auld et al., 2010; Gupta, 2008; Mol, 2015; Watts, 2015).

The accountability of individual actors is of particular importance in networks to avoid for instance in the context of sustainability, greenwashing and free-riding. Networks are only as legitimate as the actors that form that network. Therefore, mechanisms to hold individual actors in the network accountable, such as peer accountability and public reputational accountability, are of particular importance. Transparency (i.e., access to information about the behaviour of actors) is key to put those mechanisms to work, and therefore information and information systems play a key role in accountability. For example, information systems such as the internet are powerful tools through which information can be made widely available and thus enhance the ability of those holding other to account to assess performance against expectations and identify wrongful behaviour. As such transparency of information on the performance of networks participants and of the network themselves are central elements of any system of accountability, hence the focus on transparency tools in relation to CSR accountability in this thesis.

Together, CSR, network governance and informational governance come together at different intersections to provide context as well as explanatory elements to the various sections of my dissertation. Not all of them are fully present in all chapters, but they are all important in their own way for framing and understanding CSR accountability in the seafood sector within this dissertation and in the larger literature.

1.5 THESIS OUTLINE

This thesis consists of four research chapters (Chapter 2-5) and one concluding chapter (Chapter 6). Each research chapter is written as a stand-alone research article. Figure 1.2 shows how each chapter contributes to answering one or more of the 3 central research questions.

Chapter 2 further expands on the framing of the SSM as an accountability movement that works to hold the seafood industry and individual companies accountable for their social and environmental improvement using market and social accountability mechanisms. In this chapter, I critically analyse the various elements of accountability (standards, monitoring and sanctions) and thus the ability of the SSM to hold private actors accountable. To do this analysis, I use a *principal-agent framework*, which provides a heuristic framework to position NGOs as principals and companies as agents.

Chapter 3 dives deeper into one kind of transparency tool: CSR reports. In this chapter, I conduct two kinds of analysis: how CSR is disclosed and presented and what CSR practices are evident in the world's largest 25 seafood companies involved in the fishing, processing and trading of wild seafood. As such, the analysis looks at three aspects of CSR: 1) how it is internally governed and communicated; 2) what social and environmental issues are being addressed by companies' CSR activities and 3) the approach companies use to deal with those issues (e.g., sourcing policies, advocacy, supplier code of conduct). Based on this analysis, I reflect on the potential of CSR in addressing social and environmental issues.

Chapter 4 dives deeper into another kind of transparency tool: catch documentation and traceability (CDT) systems. In this chapter, I use a case study approach to examine the implementation of a CDT system in an export oriented small-scale tuna value chain in Indonesia and what effects it has on the relationships among actors in the value chain and the implications for seafood sustainability governance. I do so by conceptualizing CDT systems as a site of governance located at the intersection of *informational governance* of the environment and chain governance in *global production networks*.

In **Chapter 5,** I look at a specific kind of *governance networks*: Fishery Improvement Projects and explore conceptually the potential of social capital to enhance the effectiveness of FIPs in addressing sustainability issues in fisheries and fisheries value chains.

In **Chapter 6,** I draw on all chapters to reflect on the challenges and opportunities of current CSR practices and accountability mechanisms in the seafood industry.

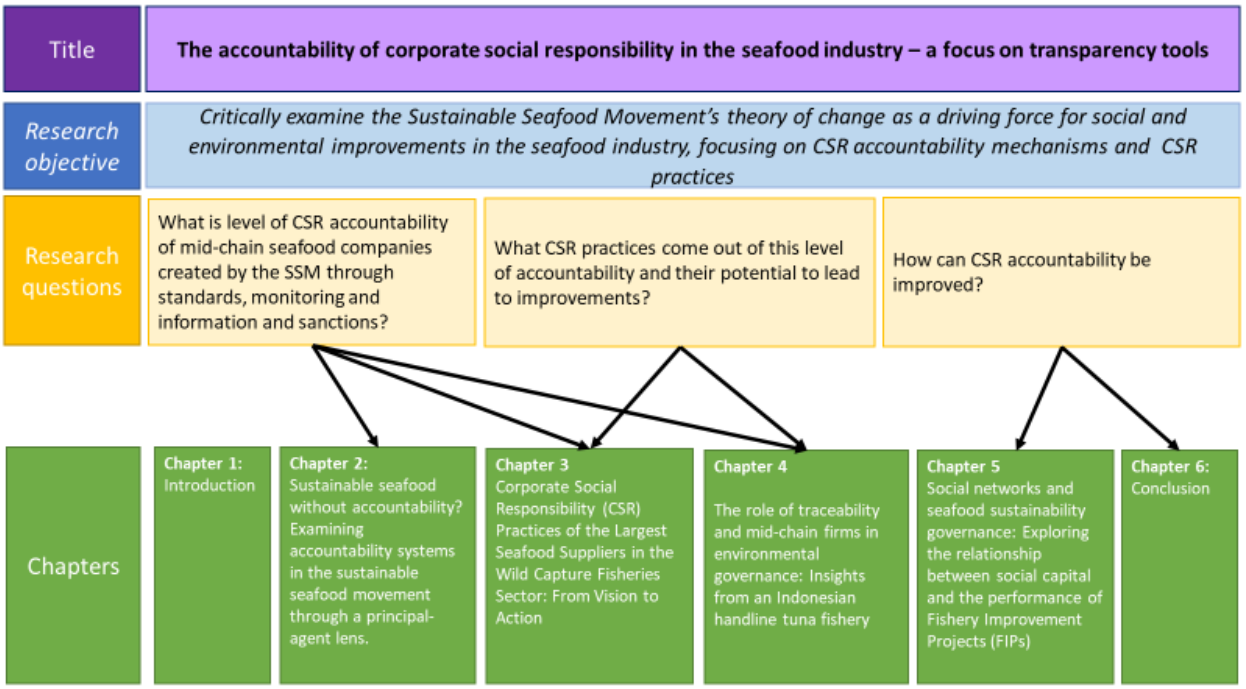

Figure 1.2. Thesis structure.

CHAPTER 2 SUSTAINABLE SEAFOOD WITHOUT ACCOUNTABILITY? EXAMINING ACCOUNTABILITY SYSTEMS IN THE SUSTAINABLE SEAFOOD MOVEMENT THROUGH A PRINCIPAL-AGENT LENS

2.1 INTRODUCTION

Today, the companies that make up seafood value chains are increasingly being held accountable for the social and environmental impacts of their activities, leading to a rise in seafood corporate social responsibility (Bailey et al., 2018; Iles, 2007; Packer et al., 2019). This is in part due to the rise of information and communication technologies (ICTs), which have helped make the public more aware of the impacts of seafood production and consumption, and increased expectations that seafood companies and their value chains should operate responsibly and sustainably. As in many other industries, the social contract between society and business has been shifting towards greater expectations that businesses, as a social actor, must contribute to sustainable development (Byerly, 2013). Whereas a few decades ago businesses were simply expected to provide seafood products at a reasonable price and quality, today, businesses are expected to produce and sell seafood products according to certain social and environmental standards. Additionally, the contemporary global seafood sector has seen non-governmental organizations (NGOs) play an increasingly crucial role in re-defining and enforcing this new social contract by informing and mobilizing the public about business practices. In the seafood sector, NGOs such as Greenpeace, the World Wildlife Fund for Nature (WWF) and the Sustainable Fisheries Partnership (SFP), to name a few, have been at the forefront of this effort

educating the public about seafood sustainability and working with businesses to meet new societal expectations.

The social contract between business and society is enforced through three types of accountability systems: those associated with public governance, those associated with markets, and those associated with the non-governmental, non-market social realm (Chan and Pattberg, 2008; Mashaw, 2006). Public governance consists of state-led regulations that are defined and enforced by government through legal mechanisms. For example, society can democratically elect a government that then defines limits on fishing efforts or catches to ensure fish stocks remain at sustainable levels. In the market realm, stakeholder groups with an economic relationship with the firm can constrain its behaviour through their market contracts e.g., employees, customers, and shareholders. Market-based or private regulations are enforced through market transactions and fiscal accountability: customers can choose to deal or not with a company based on whether it operates in line with their interests and values. Finally, non-governmental and non-market actors such as NGOs and citizens can also exercise influence on business behaviour through social accountability processes. For example, NGOs can influence the reputation and public image of a firm through public awareness campaigns or members of the public can organize and take part in public protests against specific companies or industries. The three accountability systems do not operate independently and usually influence each other. For example, as the norms and values of society evolve to include new environmental and social concerns, these will be reflected in changes in public and private regulations.

In the seafood sector, there has been a multiplication of social and market forms of accountability since the late 1990s, forming what is called the Sustainable Seafood

Movement (SSM) (Jacquet and Pauly, 2007; Kemmerly and Macfarlane, 2009; Leadbitter and Benguerel, 2014; Roheim et al., 2018). The theory of change of the SSM is that consumer education and retailer engagement will lead to an increasing market demand for sustainable seafood, creating market incentives for fishers and fishing companies (e.g., preferential market access, market premium) to improve their practices towards sustainability (Barclay and Miller, 2018; Gutiérrez and Morgan, 2015; Sutton and Wimpee, 2008) (Figure 2.1). In other words, the SSM contributes to re-defining and enforcing the new social contract through social (e.g., blame-and-shame campaigns) and market-based (e.g., ecolabels) accountability systems, combining market mechanisms with the credibility of civil society organizations. The goal of the SSM being that if a product or fishery does not meet a certain standard of sustainability defined by, in many cases, private standards and NGOs, it cannot be sold in certain markets and/or a company might find its brand image or reputation damaged. While initially focused on the environmental sustainability of seafood production, today the SSM also aims to address social issues that occur in harvesting, farming and processing activities including fair trade and labour and human rights. Market-based measures to combat illegally caught seafood, mislabelling and fraud are also being developed such as traceability and labelling standards (FishWise, 2018a, 2018b; Lewis and Boyle, 2017; Teh et al., 2019; WWF, 2015a). The movement's expansion in scope can be seen through the development of new standards and guidance for companies to address social and traceability risks in seafood value chains (e.g., Fair Trade USA's standard for capture fisheries, Global Dialogue for Seafood Traceability standard, and see Bailey et al., 2016). Therefore, fishing and aquaculture operations are no longer the only target of market and social accountability standards; seafood processors

and suppliers are now also expected to comply with social responsibility and traceability standards.

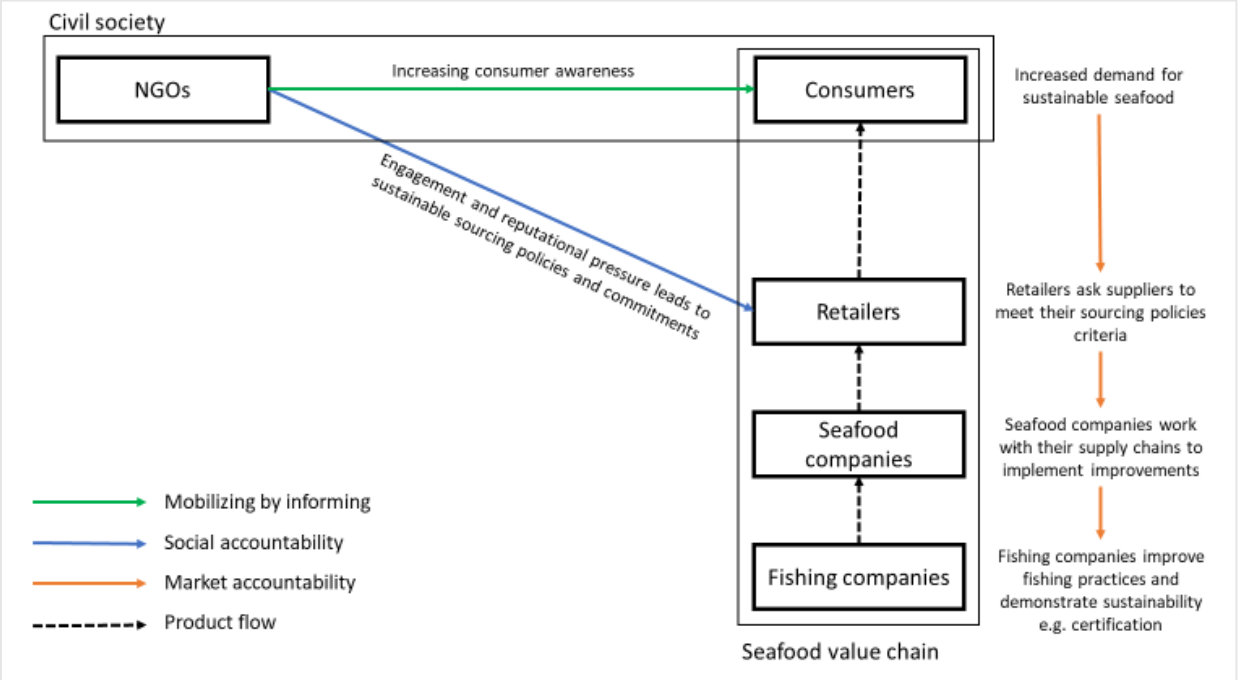

Figure 2.1. The SSM's theory of change to enforce the new social contract.

The effectiveness of the SSM in transforming seafood value chains towards environmental sustainability and social responsibility hinges on the social and market accountability systems it develops to hold companies accountable. An accountability system consists of three key elements 1) a ***standard*** that describes the behaviour or outcomes that the one being held to account is expected to meet or produce; 2) ***procedures to monitor*** the behaviour and outcomes of the one being held to account against the standard and; 3) ***means to reward and sanction*** the one being held to account depending on compliance. All these elements need to exist for an accountability system to be effective, to which information and transparency are central. In this article, we examine the social and market accountability systems developed within the SSM to hold companies accountable and

discuss their effectiveness in changing corporate behaviour in seafood value chains. To do so, we use a principal-agent framework as a heuristic device to examine the accountability relationships between companies and their stakeholders with a specific focus on NGOs and customers, including consumers. As such, we relax the principal-agent relationship to include any stakeholder relationship that governs or controls the social and environmental performance of companies in seafood value chains.

In the context of state-led fisheries management, the principal-agent framework has been used to analyse the relationship between resource owners (government) and resource users (fishers) and how incentive-based regulatory measures, such as transferable input (effort) and output (catch) controls, can reduce the incentive gap (Clarke and Munro, 1987; Grafton et al., 2006; Havice, 2013; Jensen et al., 2013; Vestergaard, 2010). In the context of the governance of firm behaviour and management, principal-agent theory has predominantly been used to examine the relationship between managers (agents) and owners (principals) (e.g., Bruhl, 2003). Finally, principal-agent theory has also been used to explain CSR "failures" in food value chains by portraying value chains as multiple tiers of principal-agent relationships between buyers and suppliers that are characterised by imperfect control, asymmetric information and unaligned incentives with regards to CSR implementation (Wiese and Toporowski, 2013). However, less attention has been given to alternative incentive-based approaches that operate outside of the government such as the market and social regulatory approaches developed by the SSM (Bailey et al., 2015b).

By placing companies as agents and their stakeholders as principals, we examine the extent to which the accountability systems developed by the SSM solve diverse and complex principal-agent problems by reducing information asymmetries and realigning incentives;

thus making seafood value chains fulfill the new social contract. Taking this approach offers a new way of explaining how the SSM works and its impact on business practices. Therefore, this article is guided by the following question: **to what extent have the social and market accountability systems developed within the SSM addressed the principal-agent problems between companies and stakeholders with regards to CSR behaviour?** In the first section, we present the principal-agent approach and its applicability to understand the relationship between firms and its stakeholders with regards to CSR accountability. In the second section, we present the main accountability systems developed by the SSM and use examples to evaluate how they have contributed to solving the principal-agent problem by holding companies accountable. We finish by drawing conclusions about the strengths and weaknesses of the SSM's accountability systems and make recommendations for improvements.

2.2 PRINCIPAL-AGENT THEORY

Principal-agent theory focuses on the relationship between one party (the principal) who delegates a task to another party (the agent), and it is usually assumed that the principal has ownership over something related to the agent's behaviour. The primary assumption is that the interests of the agent do not align with the interests of the principal (or owner), and that the agent will act based on self-interest (Jensen and Meckling, 1976; Ross, 1973). Consequently, principal-agent theory predicts that if the principal can perfectly control the agent, the "first best solution" is adopted, wherein the agent behaves exactly as the principal would like. But when this condition is not met, only the second-best solution is realized and there is said to be a "contract failure". The difference between the first- and

second-best solutions is called the "incentive gap". As a result of the incentive gap, two types of principal-agent problems have most often been analyzed, both dealing with information asymmetries: moral hazard and adverse selection. *Moral hazard* occurs when the principal does not have information about the agent's actions, or the product/services delivered by the agent and therefore the principal is not able to judge whether its demands were met. *Adverse selection* occurs when the principal does not have information about the ability, qualities, or motivations of the agent to deliver on the principal's expectations (the agent type if private) which leads the principal potentially hiring the wrong agent to execute the task or setting the wrong incentives for the agent to comply. Therefore, research using principal-agent theory focuses on finding mechanisms and actions that principals can implement to reduce the incentive gap and information asymmetries, such as incentive contracts, establishing standards, monitoring systems and various forms of positive rewards and negative sanctions. In other words, principal-agent theory focuses on finding mechanisms to hold the agent accountable to the principal. Indeed, given that principal-agent theory focuses on the responsiveness of the agent's decisions to the principal's goals and that this responsiveness is facilitated by actions available to each actor as well as the institutional setting in which they interact, it is a natural framework to study accountability.

Principal-agent theory is often described as a specific area of contract theory (Bolton and Dewatripont, 2004). Therefore, it has been suggested that applying principal-agent theory to the relationships between a firm and its stakeholders could be a promising avenue for investigating the influence of stakeholders on firm behaviour, including those behaviours related to CSR (Hill and Jones, 1992). Indeed, Hill and Jones (1992) suggest that many of the concepts and much of the language of agency theory can be used to describe stakeholder

relationships, such as the ones between companies and NGOs. Abzug and Webb (1999) also suggest that many bilateral (non-profit–for-profit) stakeholder relationships can also be modeled as principal–agent relationships. Yet at the same time, to the authors' knowledge, no such analyses exist to study the behaviour of seafood companies in response to stakeholders, be they customers, consumers or civil society actors.

The goal of this paper is therefore to use principal-agent theory to review the assumptions made by the SSM's theory of change, specifically that reducing information asymmetry about CSR performance and product sustainability between seafood companies and their stakeholders combined with social and market sanctions leads to re-aligned incentives and improved sustainability performance of seafood value chain companies.

2.3 THE SSM AS AN ACCOUNTABILITY MOVEMENT

The SSM can be described as an accountability movement whereby NGOs develop accountability systems and tools to hold companies along seafood value chains accountable for their social and environmental performance. Two categories of accountability or principal-agent relationships are central to the SSM's theory of change: those mediated through social accountability mechanisms and those mediated through market accountability mechanisms (Figure 2.2). The first category consists of the relationships between NGOs and various firms along seafood value chains including retailers, seafood companies (especially those with consumer-facing brands) such as processors, importers and distributors and, fishing firms. The accountability relationships between NGOs and companies are mediated through social accountability mechanisms that leverage the

reputation and public image of companies and the credibility of NGOs as watchdogs and standard setters.

The second category of principal-agent relationships important to the SSM's theory of change is the one between customers and suppliers within seafood value chains. For instance, consumers hold retailers and brands accountable through their purchasing decisions and retailers hold seafood companies accountable through their sourcing decisions. These principal-agent relationships exist within seafood value chains and are mediated through market accountability mechanisms (product market), i.e., the decision to deal or not. Another kind of principal-agent relationship that is mediated through market accountability that the SSM has started to focus on more recently is the one between companies and financial institutions such as banks and investors which are mediated through market accountability mechanisms (capital market). Indeed, if shareholders require companies to have sustainability programs in place, companies are more likely to engage in CSR (Jouffray et al., 2019). The third category, as introduced earlier, is public accountability mechanisms, which consist of formal government regulations and monitoring mechanisms are another way to constrain corporate behaviour. For instance, some importing countries have traceability requirements for imported seafood to mitigate risks of illegal seafood entering markets and prevent seafood fraud and mislabelling. However, here we define the SSM by its focus on private governance mechanisms i.e., market and social accountability mechanisms.

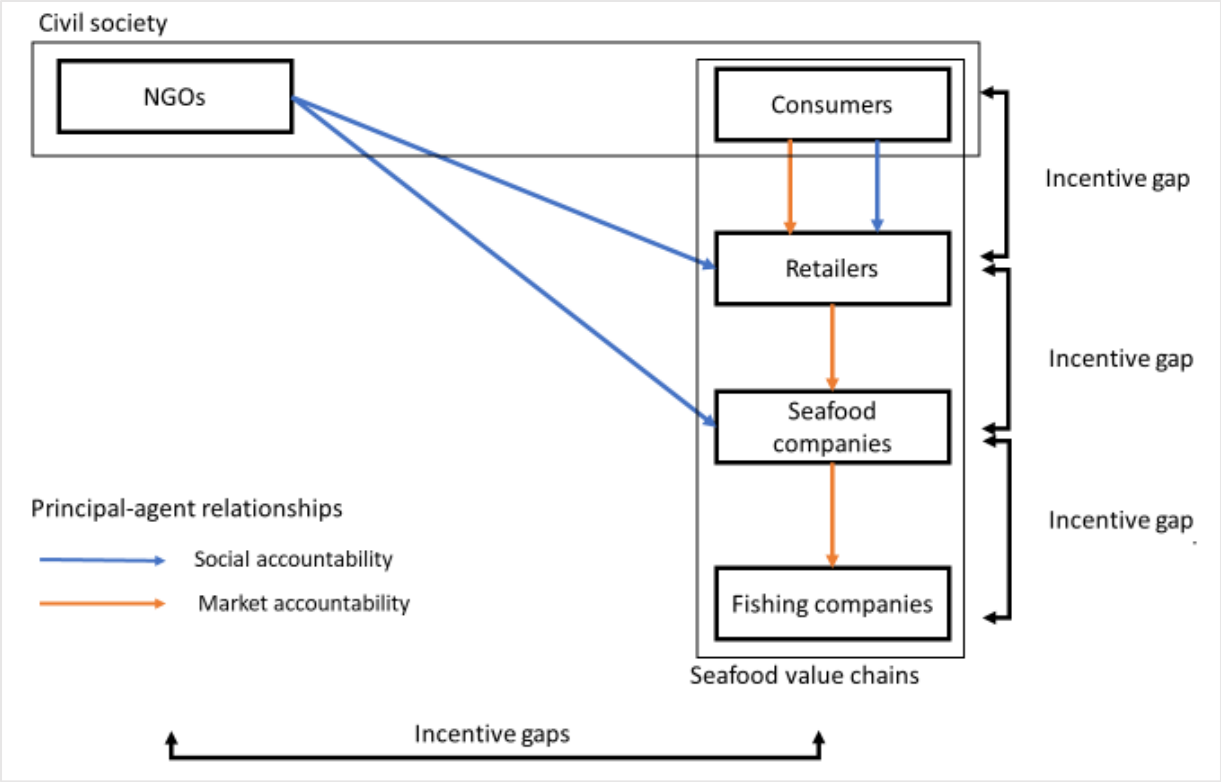

Figure 2.2. Principal-agent and accountability relationships in the SSM and the associated incentive gaps.

The goal of the SSM is to close the incentive gaps between civil society (including consumers and NGOs) and firms in seafood value chains by reducing information asymmetries and developing sanctions and rewards through social and market accountability systems (Table 2.1). Here civil society groups are treated as the principal, who is trying to incentivize agents (firms) to act in accordance with the principal's goals and values. The assumption is that by implementing accountability systems that reduce information asymmetries (i.e., monitor the performance of companies) and sanction (or reward) for unsustainable (or sustainable) behaviour, companies will improve. Market and social accountability systems are intrinsically linked given that social sanctions (e.g., damaged reputation and lost public trust) can lead to a market sanction (e.g., lost market share). Thus, the SSM uses social accountability systems to trigger market accountability

which together aim to solve multiple principal-agent problems by 1) reducing the information asymmetries between principals and agents so that principals can better "control" or govern agents and 2) create incentives for agents to behave in the best interest of the principals.

The focus of our analysis is therefore on both the principal-agent relationships between companies and NGOs (social accountability) as well as between companies and their customers (market accountability). Our analysis is structured based on the three key elements that make up accountability systems mentioned previously. First, we reflect on the standards and expectations set by the principals. Second, we identify different kinds of monitoring systems and discuss how these contribute to reducing information asymmetry between companies and stakeholders. Finally, we describe the social and market-based sanctions and rewards and use some examples to reflect on whether these lead to a closure of the incentive gaps.

2.3.1 Accountability Standards

Within the SSM, NGOs translate societal expectations such as the FAO Code of Conduct for Responsible Fisheries and the UN Sustainable Development Goals (SDGs) into specific social and environmental norms and standards that fisheries, aquaculture operations, seafood companies and buyers must meet in order to be considered socially responsible and environmentally sustainable. These standards cover one or several dimensions of seafood sustainability including environmental sustainability, traceability, illegal fishing and human and labour rights (Packer et al., 2019). Examples of environmental standards include certification standards such as the Aquaculture and Marine Stewardship Council

standards (ASC, MSC), seafood ratings standards such as the Monterey Bay Seafood Watch program and other auditable standards such as the International Sustainable Seafood Foundation's (ISSF) corporate conservation measures and commitments. In some cases where operations cannot readily meet a set standard, there are also standards to rate progress. For instance, fisheries can be given a rating based on how well they are progressing towards the MSC standard through a Fishery Improvement Project (FIP) progress (SFP, 2017).

With regards to traceability, standards include the Global Dialogue for Seafood Traceability (GDST) standards, the WWF's Traceability Principles for Wild-Caught Fish products and the MSC Chain of Custody standard. When it comes to human and labour rights, there are social certification standards, guidelines and frameworks for processing operations (e.g., SA8000, BSCI) and fishing operations (e.g., the Monterey Framework, Fair Trade USA standard for capture fisheries, SeaFish's Responsible Fishing Scheme). In addition to issue-specific standards, there has been a move towards developing comprehensive standards for sustainability that cover a range of different issues. For example, the Seafood Stewardship Index assesses seafood companies' contributions to UN Sustainable Development Goals, covering social, environmental and traceability expectations (WBA, 2019). Another example is a move towards triple impact FIP, addressing social, economic and environmental issues in seafood value chains and fisheries simultaneously (Ocean Outcomes, 2018).

As a result of NGO engagement and increasing consumer awareness, and in an effort to comply with societal expectations, retailers and food service companies are setting public sourcing commitments and policies. Today, most large retailers in North America and

Europe have made public sustainable seafood commitments and developed corresponding sourcing policies by partnering with NGOs such as the Monterey Bay Aquarium, MSC, WWF, SFP and FishWise (CEA, 2020a). Commitments are usually negotiated between retailers and their NGO partners based on retailers' pre-existing sourcing portfolios. Commitments can vary from specific timebound objectives to source a certain percentage of seafood products from certified or improving fisheries (e.g., Sainsbury's commitments "we aim to have 100% of our fish and seafood independently certified as sustainable by 2020" Sainsbury's, 2019) to looser commitments without specific timelines (e.g., "IKEA commits to only sell certified sustainable seafood to its 650 million visitors in 49 markets" MSC, 2015). Seafood companies also set themselves CSR goals and commitments. For example, the Seafood Business for Ocean Stewardship (SeaBOS) initiative, a coalition of the 10 largest seafood companies, has pledged to act towards 10 overarching goals such as improving traceability and engaging in science-based efforts to improve fisheries management. Another example of voluntary commitment is the 2020 Tuna Traceability Declaration signed in 2016 by retailers and seafood companies setting ambitious social, environmental and traceability goals for tuna fisheries and their value chains. Together, the various commitments set by buyers and seafood companies also contribute to setting a norm for how the seafood industry is expected to perform.

The standards and commitments developed by principals have contributed to clarifying expectations of agents. However, given that there are multiple principals (i.e., multiple NGOs, multiple customers) and that not all align in their expectations and standards, agents (retailers, seafood companies) are held accountable to multiple standards, some lower than others. For example, different retailers will set different commitments and different NGOs

may differ in their definition of sustainability. Today, there are over 30 standards available to assess and benchmark the sustainability of fisheries and aquaculture operations which suggests that there is still currently no single definition of seafood sustainability (Jonell et al., 2013). This diversity and therefore ambiguity allow seafood companies and buyers to pick and chose which standards is easiest for them to comply with. In other words, the diversity of standards creates confusion and opportunities to pick and chose (Parkes et al., 2010), and may facilitate a race to the bottom.

To mitigate this issue, the Global Sustainable Seafood Initiative (GSSI) was set up to develop a global benchmark for certification schemes assessing compliance with FAO guidelines. This contributes to creating a level playing field between certification standards, enabling customers to commit to sourcing from fisheries that are certified by GSSI-approved schemes rather than having to differentiate between them. The GSSI benchmark currently only assesses environmental certification schemes but is also developing a benchmark for social certification standards in collaboration with the Consumer Goods Forum. The GSSI is also in the process of developing a set of criteria to assess seafood sustainability initiative based on the UN SDGs with the goal of creating a more comprehensive definition of sustainability. Indeed, the UN SDGs provide a universal framework for sustainable development that encompasses all dimensions of sustainability and could help the SSM and the seafood industry redefine its goals and standards more holistically.

The standards and commitments of the SSM are often set through multi-stakeholder initiatives and dialogues, including industry. This is of course important to ensure that standards are practical and relevant and gain industry support. However, NGO-industry

partnerships also carry the risk of co-optation and a lowering of expectations (Baur and Schmitz, 2012; Bitzer and Glasbergen, 2015; Utting, 2008). For instance, 99% of ISSF member companies comply with ISSF requirements (ISSF, 2020). Does that mean these companies have nothing to improve on? Similarly, retailers often set sourcing commitments in partnership with NGOs but there is limited or no transparency on how these commitments are set and whether these represent an ambitious or significant effort for improvement or not. Besides, many sourcing commitments only cover certain categories of seafood (e.g., fresh and frozen) and do not set specify timelines (Packer et al., 2019). It is it therefore difficult to judge whether these sourcing commitments are "enough" to achieve the required improvements.

Following the recognition that many fisheries are not readily able to obtain certification either due to the costs of certification, poor data or low performance, buyers have expanded their sourcing criteria to also accept seafood from FIPs. This means that fisheries that set up a FIP continue to have access to markets while making improvements. However, given the initial lack of FIP monitoring and verification, there was a risk that fisheries would start a FIP and stall while still maintaining market access (Sampson et al., 2015). To mitigate this issue, SFP developed a methodology to rate FIP progress and differentiate between well and poor progressing FIPs. However, it seems that it is still possible for FIPs to have a good progress rating (and thus maintain market access) despite making slow progress, e.g., by uploading new information about the fishery (CEA, 2020b). For instance, the Yellowfin tuna Vietnam FIP is rated A despite being in place since 2014 and some scores having decreased. As such, the accountability systems of the SSM suffer from a devil's triangle whereby it has to balance continual improvement while keeping raising the bar and

also making it flexible and accessible by allowing for a range of sustainability definitions (Bush et al., 2013; Tlusty, 2012). While diversity in accountability approaches is good (Stoll et al., 2020), it also means that a diversity of assessments in the impacts of those approaches is required, something that has yet to be developed.

2.3.2 Accounting and Monitoring

In order to hold companies accountable, accounting and monitoring mechanisms are necessary to assess performance against the aforementioned standards and expectations (Bebbington and Unerman, 2017; Halpern et al., 2019). Disclosure of performance to stakeholders impacted by companies' activities is key for stakeholder accountability (Gray et al., 2006; Watts, 2015). Without information about performance, stakeholders (principals) are not able to judge how companies (agents) are meeting required standards and expectations. Four kinds of monitoring arrangements currently exist in the SSM depending on whether it is voluntary, the source of information used and the nature of the assessment (e.g., first or third-party).

The first monitoring arrangement is based on self-disclosure whereby companies signal their CSR performance through corporate communications (e.g., CSR reports, website, marketing campaigns). CSR disclosure is now increasingly common in the seafood industry, especially amongst the largest seafood companies but often lacks specific targets and meaningful reporting on progress (Packer et al., 2019). Moreover, the information disclosed in CSR reports is typically not verified by a third party, although some follow reporting guidelines and frameworks (e.g., Global Reporting Initiative or UN Global Compact Principles). To monitor retailer performance against their commitments, NGOs

may also set up systems to monitor retailer performance through self-reporting platforms (e.g., SFP's Seafood Metrics).

The second monitoring arrangement is verified voluntary self-disclosure. For instance, the FisheryProgress.org platform assesses FIPs based on their progress towards MSC certification based on bi-annual self-reports and supporting evidence. The information is then cross checked by FisheryProgress.org. As a result, seafood companies that are part of FIPs can make verified claims that their products meet a certain FIP standard. Some seafood companies may also produce a joint report with NGOs – e.g., Thai Union Europe and WWF progress report (Thai Union, 2019).

The third monitoring arrangement is voluntary third-party assessment (e.g., MSC or FairTrade USA certification). This consists of an independent third-party assessment which assesses performance against a standard. Third-party assessment is one of the more robust form of monitoring and is often based on a process of stakeholder input and peer-review. However, third-party assessments are typically costly and therefore not widely accessible to all operations and companies. Moreover, the assessment is commissioned by the company, which hires an auditing body to carry out the assessment. Therefore, the process has been questioned due to the potential conflict of interest between the auditing body and the company it is auditing (e.g., McVeigh, 2020). Moreover, not all certification assessment reports are made public (e.g., Fair Trade USA assessment reports) or have a stakeholder input process which means stakeholders do not have an opportunity for review and input.

Finally, a fourth monitoring arrangement is non-voluntary assessment such as Greenpeace's Supermarket ranking on seafood sustainability ("Carting Away the Oceans")

and the Seafood Stewardship Index (Pinsky and Mitchell, 2018; WBA, 2019). These assessments are based on publicly available information and company surveys and evaluate companies without prior consent. If the entity does not participate in data collection, the assessment is based purely on publicly available information. The advantage of this kind of assessment is its independence from the entity being assessed. However, this potentially limits the information assessors have access to and thus the assessment may not accurately reflect reality.

Traceability is key to monitoring and account for the environmental and social credentials of seafood products (Lewis and Boyle, 2017). In order for buyers to meet their sourcing commitments, they must be able to track the sustainability profile of the products they purchase. In the case of certified seafood, tracking sustainability is more straightforward as value chains that handle certified products must also obtain chain of custody certification, ensuring the integrity of certified products. However, tracking the sustainability of non-certified seafood requires retailers and suppliers to collect additional data about provenance such as gear, trip and vessel information, country of catch, catch certificates etc. To do so, seafood companies and retailers can implement traceability systems. Traceability systems are increasingly being implemented in seafood value chains, especially those providing products to the EU and North American market. However, it is unclear how retailers use the information collected through traceability systems to hold their suppliers accountable for meeting their sourcing policies and commitments as retailers typically do not report on their progress against sourcing commitments. Therefore, monitoring without enforcement limits the extent to which traceability can lead to increased accountability of seafood value chains.

In order to reduce the various information asymmetries, the SSM has developed monitoring systems that aim to increase transparency about the environmental and social credentials of seafood products as well as the companies themselves. To what extent have the monitoring systems developed reduced information asymmetry between principal and agents both with regards to the products they sell as well as their policies and actions to increase sourcing from sustainable sources? Certification and other types of independent assessment of fisheries, fish farms and companies regarding their social and environmental practices have contributed to reducing information asymmetries. However, there are still many operations and companies for which there is limited information about their performance. For instance, many seafood companies and buyers do not publicly disclose the origins and the sustainability of their seafood portfolio. Besides, much of the information that is available is self-reported by the companies themselves, making it difficult to verify. Investigative journalism has played an important role as an independent assessor and reducing information asymmetries, for example about human and labour rights abuses at sea (EJF, 2018; Kelly, 2018; Levitt, 2016). However, this information is often anecdotal and does not constitute a comprehensive assessment of the industry and individual companies.

The SSM has made great progress in getting companies to commit and/or recognize the importance of sustainability. However, this now needs to be complemented with more robust systems that monitor and disclose performance and risks in seafood value chains. Indeed, when a company's performance is assessed and presented publicly, companies are incentivized to improve. For instance, after 10 years of annual reporting, supermarkets listed on Greenpeace's ranking for seafood sustainability went from none having passing

scores to 20 out of 22 now having passing scores (Pinsky and Mitchell, 2018). Similarly, Greenpeace's tuna ranking shopping guide and associated campaigns against certain Thai Union brands led Thai Union to improve its sustainability programs and partner with Greenpeace, making a series of commitments tracked independently by an auditing body (MRAG, 2019).

Overall, information asymmetry is reduced for some products and some companies, but the lack of consistent, verified and standardized disclosure makes it difficult to assess progress and monitor performance across the industry. For instance, there is currently a plethora of corporate commitments with little or no public reporting mechanisms to independently assess how seafood companies and buyers perform against their commitments (Packer et al., 2019). Exceptions include ISSF's member audit process and the Seafood Stewardship Index. However, most pre-competitive initiatives such as the Seafood Task Force, SeaBOS and the Global Tuna Alliance have yet to publicly report how their member or partner companies are performing. Without information, it is simply not possible to impose appropriate rewards and sanctions. This lack of transparency and independent assessment is problematic for reducing information asymmetries and holding companies accountable. As a result, there is a difference between performance (which can be difficult to observe) and expectations. This difference leads to incentive gaps and risks of moral hazard between principal and agents. A potential solution to this issue would be to make non-financial disclosure compulsory for large seafood companies through regulations (e.g., the EU Directive 2014/95 on non-financial disclosure for large companies) or for principals to reward transparency better, whatever the performance. We further address the issue of sanctions and rewards in the next section.

2.3.3 Sanctions and Rewards

Incentives to comply, whether in the form of sanctions or rewards, are key for any accountability mechanisms to be effective. NGOs have developed social and market incentives for seafood producers, seafood companies and retailers to comply with standards and commitments. The effectiveness of those incentives depends on their strength and the extent to which they are enforced. Social incentives mostly consist of shaping the public image of companies (either negatively or positively) through blame-and-shame campaigns or endorsements. Given the value of reputation to brands and retailers, this kind of sanction has been effective in convincing companies to engage. For instance, Greenpeace's campaigns against multiple Thai Union canned tuna brands led to a shift in Thai Union's approach to sustainability and a partnership agreement between Greenpeace and Thai Union (Thai Union Group and Greenpeace, 2017). As a result of those campaigns, customers and consumers are inclined to buy certain seafood products over others, translating into market rewards and sanctions. In the case of Thai Union, the Greenpeace campaigns led certain retailers (e.g., Tesco and Waitrose) to drop some John West branded product, a subsidiary of Thai Union (White, 2016). Only a handful of NGOs (e.g., Greenpeace, Bloom) still sanction companies through blame-and-shame campaigns for not meeting their commitments or certain standards. Most NGOs however have been leaning towards more collaborative strategies by partnering with companies and rewarding positive actions rather than sanctioning poor performance. However, this positive reinforcement strategy creates a risk of not setting high enough incentives to push agents that perform poorly to perform better. Indeed, it is often unclear how NGOs monitor companies' performance against their commitments and if companies suffer any negative

consequences for not meeting their commitments given that very few provide publicly available quantitative and consistent reporting on their progress (Pinsky and Mitchell, 2018; SeaChoice, 2020).

Market sanctions consist of discontinuing a business relationship and market rewards consist of giving preferential market access to certain suppliers or paying price premium for seafood products deemed sustainable. In the case of price premium rewards, it is unclear whether any retailer-level price premium is transmitted to producers and thus whether the right incentives for improvement are created (Blomquist et al., 2015; Roheim and Zhang, 2018; Stemle et al., 2016). With regards to market access, if sourcing policies are enforced, suppliers that do not meet certain sourcing criteria face the risk being excluded from or at least not having preferential access to certain markets. However, the SSM endorses two different strategies to deal with poor performers (CASS, 2019). The first one is to stop sourcing from those sources until they meet certain criteria while clearly communicating what the issues are. The second strategy is to engage and partner with suppliers in a FIP.

For the second strategy to work, buyers must reward and sanction improvement by taking FIP progress ratings into account in their purchasing decisions. However, despite the existence of FIP ratings, it is unclear to what extent buyers are using them in their sourcing policies and leading to market sanctions for slow progressing FIPs. Only some retailers (e.g., Aldi) have explicitly committed to FIPs rated A, B or C however most commitments are either “from a FIP” or “from a well progressing FIP” without specifying ratings. Overall, given that retailers and other buyers with commitments to sustainable seafood are seldom reporting progress against their commitments, it is unclear to what extent they are incentivizing suppliers and producers to improve either through rewards (e.g., price

premium) or sanctions (e.g., reduced market access). Market rewards and sanctions can also be enforced by consumers who preferentially buy and/or pay more for sustainable seafood. However, consumer demand and willingness to pay for sustainable seafood varies. For instance, a 2018 Globescan study revealed that North American consumers rank sustainability as only the 10th most important criteria (after price and freshness) while European consumers ranked it 5th (before price) (Globescan, 2018). Even though there is a vast body of literature that suggests consumers prefer and are willing to pay more for sustainable seafood in several markets (Bronnmann and Asche, 2017; Johnston et al., 2001; Sogn-Grundvåg et al., 2013; Sun et al., 2017), it is unclear whether they actually demand more or whether it is the public opinion that drives retailers to demand sustainable seafood (Barclay and Miller, 2018; De Vos and Bush, 2011). Beyond the seafood sector, research shows weak consumer demand for sustainability (Devinney et al., 2010; Forrer and Mo, 2013; Mcdonald et al., 2012).

Overall, it seems that the social and market incentives set up by the SSM have led many companies in the seafood sector to start addressing social and environmental issues in their operations and value chains. This change can be seen through the multiplication of commitments, sustainability reports, partnerships with NGOs and participation in pre-competitive initiatives. However, what is currently lacking is performance evaluation and disclosure to allow stakeholders (i.e., principals) to hold companies accountable and impose sanctions on poor performing companies.

	Principals	Agents	About what	Standards	Monitoring system	Information sources	Sanctions/Rewards
Social accountability	NGOs, civil society	Fishing companies	Fishing practices and fisheries management, on-board social practices.	Certification standards (MSC, Fair Trade), Fishery Improvement Project progress ratings, seafood guide standards (e.g., Monterey Seafood Watch), Social Risk Assessment Tool, Global Dialogue on Seafood Traceability standards (GDST), Seafood Task Force vessel code of conduct, Responsible Fishing Practices standard,	Third-party assessment, and self-reporting.	Certification reports, CSR reports, corporate website, FP.org platform, media	Reputational damage or NGO endorsement
	NGOs, civil society	Seafood companies	Sourcing practices, investment in improvements, due diligence, traceability	Seafood Stewardship Index, Seafood Task Force code of conduct, ISSF member commitments, SeaBOS pledges, Our Oceans commitments, UN Global Compact principles, social standards for seafood processing factories (SA8000, BSCI), Greenpeace canned tuna ranking, Tuna 2020 declaration.	Third-party assessment, and public self-reporting.	CSR reports, corporate websites, FP.org platform, Ocean Disclosure Platform (ODP), SFP Metrics Reporting System.	
	NGOs, civil society	Retailers	Sourcing practices, investment in improvements, due diligence and, traceability	Retailer commitments and sourcing policies criteria, Greenpeace rankings (e.g., "Carting away the Oceans" report), Tuna 2020 declaration	Third-party assessment, public self-reporting and private self-reporting to NGOs.	SFP Metrics Reporting, sourcing reporting, CSR reports, Ocean Disclosure Platform, NGO and media reports.	
Market accountability	Consumers	Retailers and seafood companies (brands)	Sourcing practices, including social and environmental aspects.	Certification standards (MSC, Fair Trade), seafood guide standards (e.g., Monterey Seafood Watch), Greenpeace rankings.	NGO recommendation, self-reporting, third party assessment, certification, traceability.	Eco-labels, NGO reports and assessments, CSR reports, ODP, media reports.	Price premium and preferential buying decisions for sustainable products.
	Retailers	Seafood companies	Sourcing and production practices, including social and environmental aspects.	Certification standards (MSC, Fair Trade), seafood guide standards (e.g., Monterey Seafood Watch), FP.org, Seafood Stewardship Index, SeaBOS pledge, ISSF membership, social certifications for seafood processing factories (SA8000, BSCI)	Self-reporting, third party assessment, certification, NGO partner recommendation, B2B monitoring and traceability.	CSR reports, ODP, FishChoice platform, SFP Metrics Reporting System, certification and benchmarking reports, media reports.	
	Seafood companies	Fishing companies	Fishing practices and fisheries management, on-board social practices.	Certification standards (MSC, Fair Trade), seafood guide standards (e.g., Monterey Seafood Watch), FP.org, Seafood Stewardship Index, Seafood Task Force, ISSF membership, ISSF PVR.	Self-reporting, third party assessment, certification, B2B monitoring.	Certification and NGO assessment reports, media.	

Table 2.1. Social and market accountability systems in the Sustainable Seafood Movement between various principals and agents

2.4 Conclusion

We examined accountability systems developed within the SSM, primarily led by NGOs, using a principal-agent framing which allowed us to describe who is accountable to whom and reflect on three dimensions of accountability: standards, monitoring and incentives for compliance. In our framing we place companies as agents that are beholden or accountable to their stakeholders (primarily NGOs and customers, including consumers) for a certain level of social and environmental performance. We find that the primary accountability arrangements are based on social and market mechanisms. These accountability arrangements have contributed to increasing the accountability of companies to stakeholders and the new social contract, as seen through the multiplication of corporate CSR commitments, increased participation in certification programs, improvement projects and multi-stakeholder partnerships. However, several aspects of these accountability arrangements limit their effectiveness in driving improvements.

First, the numerous and diverse set of sustainability standards and definitions set by different stakeholders set for companies means that there is a lack of a common benchmark against which companies and the industry as a whole can be consistently assessed against. Moreover, different standards allow companies to pick and chose which ones they hold themselves accountable to. To solve this issue, stakeholders need to align their asks from companies through efforts such as the Conservation Alliance for Seafood Solutions. Lastly, there are several standards for sustainable fishing and aquaculture operations such as the FAO Code of Conduct for Responsible Fisheries and the ASC standard (FAO, 1995). There is also a growing number of guidelines and standards for labour and human rights based on the UN ILO Working in Fishing Convention such as the Fair Trade USA and the

Responsible Vessel Fishing Scheme (Fair Trade USA, 2014; GSA, 2020; ILO, 2007). These standards apply to individual activities of the value chain (e.g., fishing, processing) but do not assess the overall performance of a seafood company with regards to its social, environmental and economic performance which means all too often companies push responsibility up their value chains. This is where standards such as the Seafood Stewardship Index, which focuses on the performance of seafood companies themselves and how they take responsibility for not only their own operations but also that of their subsidiaries and value chains, has potential in holding companies more directly accountable. Given the influence and therefore power that seafood companies have over their value chains, standards should focus on their performance as "stewards" of sustainability in seafood value chains.

The second aspect of accountability systems that is problematic is monitoring performance. Monitoring the environmental performance of primary producers and fisheries has become easier thanks to improvements in fisheries data and assessments. Aquaculture operations are easier to monitor given that they often located on or close to land. However, due to capacity challenges and difficulties of monitoring operations at sea, a number of fisheries remain data deficient and unassessed, whether by governments or NGOs. Moreover, monitoring companies has proven to be a challenging endeavour due to the lack of available and independent information on how those companies operate and where they source their products from. It is not only NGOs that face difficulties with monitoring. Downstream companies such as retailers and seafood companies also struggle to monitor performance within their own value chains as it often requires collaborating with suppliers as well as robust information systems, including traceability. Although there is increasing

pressure on companies to be more transparent about their performance, the bulk of the information available is mostly through self-disclosure and sustainability reports. Without transparent and independent information about corporate behaviour, the extent to which the SSM is holding companies in the seafood industry accountable to the new social contract will remain stunted. This brings us to question whether companies can be brought to accurately disclose their performance on a voluntary basis or whether non-financial disclosure should instead be mandated by governments to reduce information asymmetries so that all principals can have access to the information needed to hold agents accountable. To date, the SSM has led to reduced information asymmetries on the environmental performance of primary production but has had limited success in increasing transparency on social aspects and the behaviour of seafood companies in dealing with those issues.

The third aspect that weakens accountability in the SSM is the lack of or weak incentives to comply. The social and market incentives set by the SSM imply that the consequences of not complying are not important enough for companies to change their behaviour and prioritize sustainability over other product credentials. The strength of sanctions imposed by NGOs for not complying with the new social contract is a dilemma that most NGOs face between the desire to hold companies accountable and the desire to engage companies and work hand-and-hand. This dilemma is the key challenge that limits the SSM's ability to hold companies accountable and the reason why the SSM has struggled with putting in place robust monitoring and incentives mechanisms. Moreover, how strong incentives can be ultimately depends on the ability of the SSM to mobilize consumers and the public around issues of seafood sustainability which has proven to be challenging and often limited to a small percentage of the population.

Finally, because downstream companies are not subject to strong enough accountability, their incentives to apply market sanctions on their suppliers is also limited. Therefore, market and social accountability alone may not be enough to incentivize companies to change at the pace needed to achieve sustainability by 2030 as set by the UN SDGs. Greater focus should be place on the role of public accountability systems (through policies and regulations) in incentivizing companies to be more transparent about their social and environmental impacts and performance and ultimately improve. The role of NGOs may just be to raise awareness and initialize discussions on the importance of developing robust accountability mechanisms but not to be the ultimate principal. NGOs are one the of many principals of seafood companies and should thus work hand in hand with other principals (i.e., government) to develop robust and comprehensive accountability systems that utilize and combine social, market and regulatory mechanisms.

CHAPTER 3 CORPORATE SOCIAL RESPONSIBILITY (CSR) PRACTICES OF THE LARGEST SEAFOOD SUPPLIERS IN THE WILD CAPTURE FISHERIES SECTORS: FROM VISION TO ACTION

3.1 INTRODUCTION

Efforts by the private sector to improve the sustainability of seafood production practices using market-based approaches has been the focus of the Sustainable Seafood Movement since the 1990s (Jacquet and Pauly, 2007; Konefal, 2013; Sutton and Wimpee, 2008). Indeed, recognizing the decline of global fish stocks and the lack of response from government regulators, a group of actors including environmental non-governmental organizations (eNGOs), philanthropic foundations, certification bodies, standard setting organizations, members of the fishing industry, retailers, food service companies, restaurants, chefs and engaged consumers, have increasingly relied on non-state market-based tools to improve fisheries governance (Cashore, 2002). For instance, eNGOs developed market-based tools as incentives for retailers to differentiate themselves through sustainability credentials and philanthropic organizations saw this as a win-win approach that could accommodate both their own needs as well as those of nature and business. Using market-based tools such as consumer awareness campaigns, buyer engagement and certification schemes, the Sustainable Seafood Movement aims to incentivize consumers and seafood value chains to improve environmental aspects of production practices with an growing focus on social aspects (Sutton and Wimpee, 2008).

The Sustainable Seafood Movement's theory of change is that by using the purchasing power of consumers and end buyers to increase market demand for sustainable seafood, producers will respond by improving their fishing practices, and buyers will respond by improving their sourcing policies. Reputational risks and the potential for price premiums has indeed led many retailers and food service companies to partner with eNGOs to make sustainable seafood sourcing commitments and, develop sourcing policies that include sustainability criteria (Fuchs et al., 2011). As a result, the fishing industry has been under increasing pressure to demonstrate compliance with market requirements and develop improvement programs. In other words, the Sustainable Seafood Movement's market-based approach aims to get seafood value chains to take voluntary actions (e.g., sourcing commitments, certification, supplier codes of conduct and improvement programs) to improve their social and environmental performance in order to meet NGO and consumer demands.

The Sustainable Seafood Movement became CSR for the seafood industry. However, the effectiveness of the Sustainable Seafood Movement has come to rely on the voluntary actions of private actors to comply with NGO demands. Therefore, the concept of CSR offers a valuable lens to study how seafood value chain actors are taking part in the Sustainable Seafood Movement. According to Blowfield & Frynas (2005), CSR is ''an umbrella term for a variety of theories and practices all of which recognize the following: (a) that companies have a responsibility for their impact on society and the natural environment, sometimes beyond legal compliance and the liability of individuals; (b) that companies have a responsibility for the behavior of others with whom they do business (e.g., within value chains); and (c) that business needs to manage its relationship with wider

society, whether for reasons of commercial viability or to add value to society" (p. 503). The strategies set up by the Sustainable Seafood Movement reflect this definition of CSR. Indeed, many of the demands made by NGOs consist of aspects of environmental and social compliance, often with private standards that go beyond legal compliance. Moreover, the strategy of NGOs targeting end buyers assumes that they have the power and therefore responsibility to change the practices occurring in their value chains. Finally, growing transparency and media attention on seafood sustainability issues are threatening the reputation and legitimacy of seafood companies, which increasingly requires them to consider and manage their stakeholder relationships.

Given their global reach and position between end-buyers (who make sourcing commitments) and the fisheries (that supply raw material), it has been argued that large seafood suppliers have a key role to play in making the seafood industry sustainable (Österblom et al., 2015). However, except for companies that own brands, seafood suppliers are typically invisible to consumers and therefore subject to limited NGO and media attention. Consequently, it is unclear what role mid-chain seafood companies are currently playing in the Sustainable Seafood Movement. We ask two questions: 1. what are the current CSR practices of the largest 25 seafood suppliers? and 2. what potential do these practices offer to drive social and environmental improvements in seafood value chains and fisheries management?. In doing so, we review and critically analyse how the largest 25 seafood suppliers claim to address social and environmental issues in the fisheries industry using a CSR lens, their potential for being effective and transformative and potential gaps in the approaches currently taken. Based on CSR reports and corporate

websites, we analyze how CSR is internally governed, what issues CSR programs aim to address and what types of CSR activities are being implemented.

3.2 FRAMEWORK DEVELOPMENT

To answer our first question, related to what CSR activities these companies participate in, we analyzed internal CSR governance in the company, and assessed the strategies presented to address 4 categories of seafood CSR issues. The overall framework and its stepwise progression can be seen in Figure 3.1, with each step explained in detail below. The analysis was divided into four steps. First, we assessed the internal CSR framework for designing and planning CSR. We also assessed what platform was used to communicate CSR (i.e., website and/or CSR report). The second step was to assess objectives, monitoring and transparency for each of the issues and sub-issues. Finally, we assessed the implementation strategies or activities used for each of the issues and sub-issues. This multi-step framework was developed based on the CSR literature, existing frameworks, as well as iteratively, based on a preliminary analysis of the data.

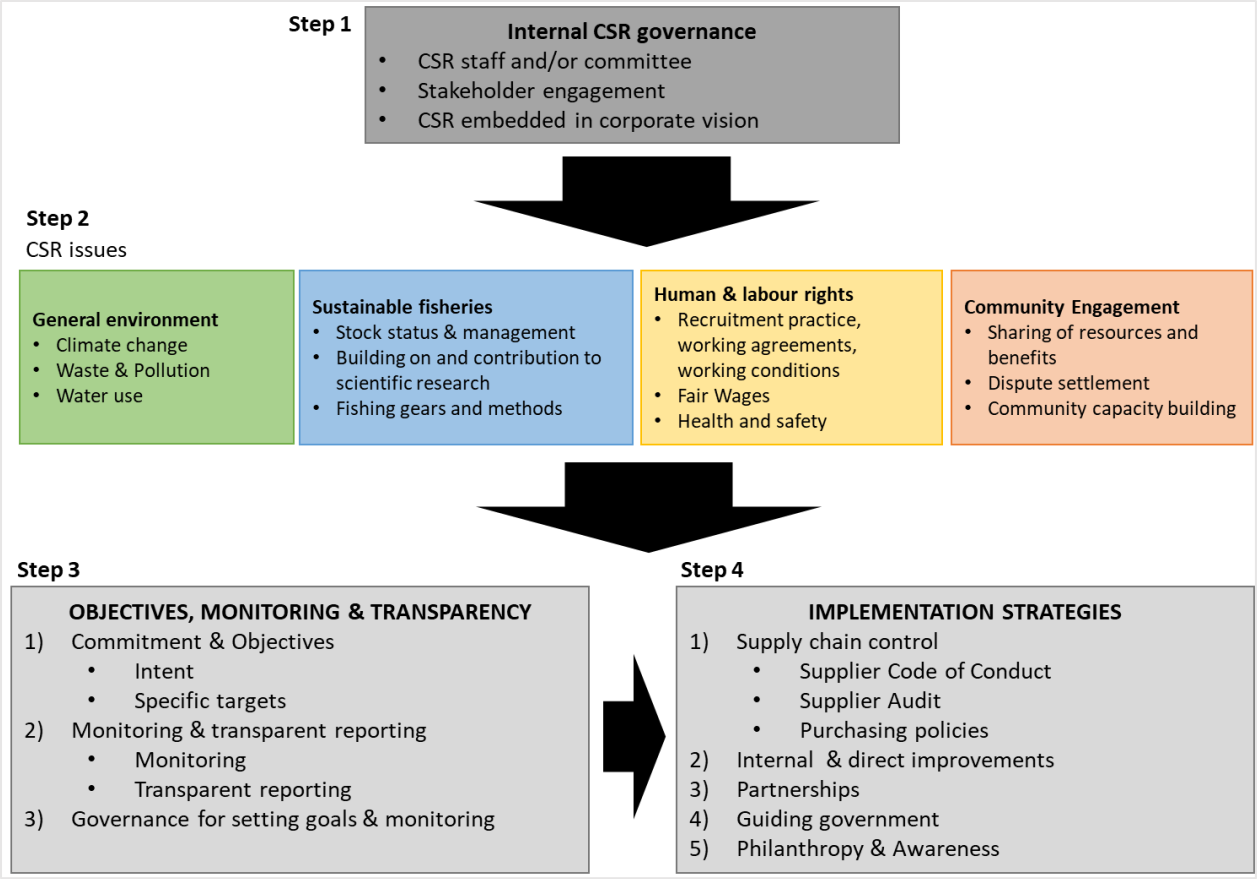

Figure 3.1. Three-step analysis framework of CSR practices in the wild seafood industry.

3.2.1 Internal CSR governance

We chose three criteria to assess how CSR is governed internally, namely whether the company has a CSR vision, CSR staff and/or a CSR committee and a formal process for identifying and engaging with stakeholders (Table 3.).

Incorporating CSR concerns and sustainability in its vision and management philosophy is the first step for a company to transform its business model and its activities such that they align with principles of sustainable development (Baumgartner, 2014). Indeed, having a company level vision for sustainability can contribute to creating a deeper meaning to the organization and its employees and therefore influence behaviours and decisions

(Strandberg, 2009; Zucchella and Urban, 2014). To operationalize the vision into action, it is important to have dedicated CSR staff and/or a CSR committee managing CSR-related activities such as implementation, monitoring and reporting. Based on stakeholder theory, the survival and success of an organization hinges on the organization's ability to create wealth, value or satisfaction for its stakeholders as opposed to exclusively its shareholders (Freeman, 2010). Stakeholders may be defined as ''groups and individuals who can affect, or are affected by, the achievement of an organization's mission'' (Freeman, 1984, p. 54). Today, as a result of increasing transparency, engaging with stakeholders is more important than ever but, is also becoming more complex as the range of stakeholders companies have to deal with is increasing, from consumers, to supply chain partners, local communities, to NGOs and governments. Engaging with stakeholders is important for companies to understand how their CSR activities helps them meet stakeholder interests and maintain their legitimacy (Delgado and Castelo, 2013).

CRITERIA	DESCRIPTION
CSR CAPACITY	The company has staff or committee(s) in place to manage CSR issues
CSR ACCOUNTABILITY	The company consults and engages with stakeholders through a formal or informal process
CSR VISION	Environmental and social responsibilities are embedded in corporate vision

Table 3.1. Internal CSR governance criteria.

3.2.2 Issue selection

The UN Global Compact, a UN pact formed in 2000 and designed to encourage businesses worldwide to adopt sustainable and socially responsible practices, is based on a list of 10 principles divided in four key areas (UN Global Compact, 2000, Table 3.1). This list represents key global CSR issues across all sectors.

CATEGORY	PRINCIPLES
HUMAN RIGHTS	Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights Principle 2: make sure that they are not complicit in human rights abuses
LABOUR	Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining Principle 4: the elimination of all forms of forced and compulsory labour Principle 5: the effective abolition of child labour Principle 6: the elimination of discrimination in respect of employment and occupation
ENVIRONMENT	Principle 7: Businesses should support a precautionary approach to environmental challenges Principle 8: undertake initiatives to promote greater environmental responsibility Principle 9: encourage the development and diffusion of environmentally friendly technologies.
ANTI-CORRUPTION	Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery

Table 3.1. UN Global Compact Principles.

Between 2016 and 2017, the Index Initiative launched the development of the Seafood Stewardship Index (SSI) and released a draft methodology to benchmark the largest seafood companies for their contribution to the UN SDGs. The methodology lists five CSR categories of indicators or "measurement areas" based on relevant SDGs, the ISO 26000 Social responsibility guidance standard, various international conventions and guidelines (e.g., FAO Code of Conduct for Responsible Fisheries, ILO Work in Fishing Convention) and multi-stakeholder roundtable consultations that included independent experts, seafood companies, NGOs, intergovernmental organizations and governments. These "measurement areas" include 1) Governance of stewardship practices; 2) Compliance, traceability and procurement; 3) Ecosystems; 4) Human rights and working conditions; and 5) Local communities (Index Initiative, 2018).

Based on the UN Global Compact principles, the SSI's "measurement areas" and a preliminary analysis of the data, we chose to look at four broad categories of CSR issues that are relevant to the wild capture fisheries industry including general environmental issues, sustainable fisheries, human rights and labour practices and community engagement (Table 3.2).

The Sustainable Seafood Movement initially formed to deal only with the ecological aspects of sustainable fisheries, but more recently, broader environmental concerns, like carbon emissions, and social concerns, like forced labour, have been incorporated into the movement. Additionally, community engagement is an important aspects of CSR across industries and sectors, including companies whose activities have an environmental impact such as the extraction of natural resources (Dare et al., 2014; Delannon et al., 2016).

CSR ISSUE	DESCRIPTION
GENERAL ENVIRONMENT	Includes impacts related to fishing and processing activities such as green house gas emissions, energy use, waste, pollution and water use.
SUSTAINABLE FISHERIES	Includes aspects related to stock status, science-based fisheries management (including IUU related issues) and ecosystem impacts.
HUMAN RIGHTS AND LABOUR PRACTICES	Includes aspects related to recruitment practices, working agreements, working conditions, respect of human rights, fair wages and health and safety.
COMMUNITY ENGAGEMENT	Includes aspects related to sharing of resources and benefits with local communities, providing employment and investing in local facilities, dealing with resource use conflicts with local communities, actively engaging with communities to build long-term relationships and improve the lives of communities surrounding company operations.

Table 3.2. Key CSR issues in the wild capture fisheries.

Despite life cycle assessment studies being conducted since the early 2000s, the **environmental impacts** of seafood production (other than the direct impacts of fishing)

such as green house gas emissions, energy use, waste and pollution have only recently become a focus of the Sustainable Seafood Movement (e.g., the Monterey Bay Aquarium's Seafood Carbon Emissions Tool, the Global Ghost Gear Initiative). The environmental impacts of fishing operations include greenhouse gas emissions, pollution and lost fishing gear (NOAA, 2015; Tyedmers et al., 2005; Vázquez-Rowe et al., 2012). As in other food industries, the impact of seafood processing and transport operations, includes energy use, water consumption and packaging (Kroyer, 1995). The issue of **sustainable fisheries** has been the largest focus of the Sustainable Seafood Movement and includes a number of sub-issues including sustainable fish stocks, ecosystem impacts, fisheries management and illegal, unregulated and unreported (IUU) fishing (FAO, 2018; Pauly et al., 2005). **Social issues** in the seafood industry became more prominent following a series of media reports of modern slavery and human trafficking in various fisheries (Greenpeace, 2018; Marschke and Vandergeest, 2016). Social issues occur at different levels of the value chain both in the fishing and processing sector and include human rights, working conditions, labour rights, health and safety and gender equity (ILO, 2007; Kittinger et al., 2017; Nakamura et al., 2018; Williams, 2012). **Community engagement** or community relations is a topic that has been on the CSR agenda of many globalized industries and consists in activities that aim to improve the relationship between companies and the local communities in which they operate (Bowen et al., 2010). Community engagement is less streamlined in terms of what issues it addresses but generally deals with gaining or maintaining a "social license to operate" and contributing to the well-being, socio-economic development and empowerment of communities (Cho and De Moya, 2016; Dare et al., 2014). Global companies operate in different "local communities", which means community engagement

can range from improving the well-being of communities in developed and developing countries.

The literature on effective management outlines the importance of setting objectives. One of the most prominent framework was the "management by objective" framework developed by Peter Drucker which is based on the following principles for setting objectives: Specific, Measurable, Achievable, Relevant and Timebound (S.M.A.R.T) (Greenwood, 1981). Moreover, the literature on monitoring and evaluation has also developed principles to help organizations decide on which elements to monitor and measure. For instance, the Goldilocks frameworks puts forward four key principles 1) Credible data; 2) Actionable data; 3) Responsible data; and 4) Transportable Data (Karlan and Gugerty, 2018). Based on these frameworks, we chose four criteria to assess how companies set objectives and specific goals, how they monitor progress and, whether they transparently report on their progress (Table 3.3).

CRITERIA	DESCRIPTION
COMMITMENTS & OBJECTIVES	
INTENT	The company expresses a general intent to address or take into consideration this issue (e.g., we consider, we strive to, we intend to)
SPECIFIC TARGETS	The company sets specific, measurable and timebound targets
MONITORING & TRANSPARENT REPORTING	
MONITORING	The company monitors its improvement in relation to this issue
TRANSPARENT REPORTING	The company discloses its impacts and progress publicly

Table 3.3. Criteria to assess how companies set objectives and monitor progress for each CSR issue.

3.2.3 CSR activities

CSR can be implemented through a variety of activities. Based on a review of the CSR and private governance literature and a preliminary analysis of the data, we chose to look at

five broad categories of common CSR activities including supply chain control, internal improvements, partnerships, guiding government, philanthropy and awareness (Table 3.4). First, companies may implement CSR through supply chain management or supply chain control using tools such as supplier codes of conduct (Bartley and Egels-Zandén, 2015; Seuring and Müller, 2008) and purchasing policies (Barrientos, 2013; Dauvergne and Lister, 2011). Second, companies may focus their efforts on improving their own internal practices by implementing new protocols throughs codes of conducts, policies and certification. Third, companies may partner with NGOs and/or other businesses to develop best practices standards and implement improvements (Bitzer and Glasbergen, 2015; Dauvergne and Lister, 2011; Gutiérrez and Morgan, 2017). A fourth approach companies can take, especially in a sector like fisheries where shared resources are ultimately under the management of governments, is to engage or guide governments through advocacy and participation in policy making (Dauvergne and Lister, 2011; Gulbrandsen, 2004). Lastly, companies can also implement CSR through philanthropic activities such as donations to charities or employee volunteer program (Gautier and Pache, 2015).

CSR ACTIVITIES	DESCRIPTION
POWER (SUPPLY CHAIN CONTROL)	Supply chain control activities consists in "asking downstream actors to do the job" through instruments such as code of conducts, sourcing policies, 1st, 2nd and 3rd party audits. - Supplier code of conduct - Supplier 1st, 2nd and 3rd party audit against a code of conduct or an independent (certification) standard. - The procurement department include supplier performance in their purchasing decisions.
PRACTICES (INTERNAL IMPROVEMENTS)	Changes in internal practices and processes through code of conducts, internal policies, certification, eco-efficiency measures, social audits and continuous improvement projects.
PARTNERSHIPS	Partnerships with private actors NGOs, scientists and/or other industry actors (e.g., International Sustainable Seafood Foundation). Such partnerships include activities such as advising, developing standards, supporting research projects and government advocacy.
PUBLIC POLICY (GUIDING GOVERNMENT)	Guiding government includes governments adopting private sustainability programs, co-implementation of development projects and engagement in developing regulations and policies.
PHILANTHROPY (PHILANTHROPY AND AWARENESS)	Philanthropic and awareness activities consist in monetary donations to local organizations, schools and charities, employee volunteering, organizing community events to raise environmental and social awareness.

Table 3.4. Five categories of CSR strategy used to analyse CSR practices in the wild seafood industry.

3.3 SELECTION OF COMPANIES

Large seafood suppliers are often seafood companies that are typically vertically integrated and involved in one or more value chain activity including processing, importing, branding and marketing of fishery products and sometimes fishing, controlling large parts of seafood value chains (Future of Fish, 2015). Moreover, a small number of large seafood companies control up to 16% of the global marine catch (Österblom et al., 2015) and have been the focus of recent NGO campaigns and partnerships (e.g., Greenpeace, WWF, the Sustainable Fisheries Partnership) and academic research (Österblom et al., 2017). Moreover, top tier

companies in a sector are generally expected to be a model and leadership for business model innovation, including CSR related aspects. Therefore, these companies are perceived by some as important to engage for driving change in seafood value chains. Looking at the CSR practices of large seafood suppliers can help us gain a better understanding of the current role and responsibilities that mid-chain seafood companies are taking to improve seafood value chains and reflect on their contribution.

The largest 25 seafood companies were chosen based on Undercurrent News's 2017 report of the world's largest seafood companies by revenue (Undercurrent News, 2017) (Table 3.5). These companies have headquarters in South East-Asia, Europe and North America with seven of those companies based in Japan, seven in the EU and five in the US. In order to characterize those companies further, we reviewed which value chain activities they are involved in based on the information available on their website (Table 3.5). Almost all the companies (22) are involved in processing activities and, 13 companies are involved in at least three value chain activities, thus showing extensive vertical integration. Nine companies appeared to be directly involved in fishing operations. It should be noted that it is beyond the scope of this study to see the heterogeneity of companies' behaviour beyond the top 25 and whether company characteristics affect CSR behaviour.

	NAME	HEADQUARTERS	REVENUE IN 2016 (IN US$ MILLION)
1	**MARUHA NICHIRO**	JAPAN	7158
2	**NIPPON SUISAN KAISHA (NISSUI)**	JAPAN	5707
3	**THAI UNION GROUP**	THAILAND	3752
4	**MITSUBISHI CORPORATION**	JAPAN	3400
5	**DONGWON ENTERPRISE**	SOUTH KOREA	3163
6	**RED CHAMBER GROUP**	US	2576
7	**TRIDENT SEAFOODS**	US	2400
8	**AUSTEVOLL SEAFOOD**	NORWAY	2186
9	**KYOKUYO**	JAPAN	2123
10	**MARUBENI CORPORATION**	JAPAN	1900
11	**PACIFIC SEAFOOD GROUP**	US	1370
12	**NUEVA PESCANOVA**	SPAIN	1134
13	**TRI MARINE INTERNATIONAL**	US	1050
14	**LABEYRIE FINE FOODS**	FRANCE	1040
15	**SHANGHAI FISHERIES GENERAL CORPORATION**	CHINA	1038
16	**ROYAL GREENLAND**	GREENLAND	1005
17	**F.C.F. FISHERY**	TAIWAN	1000
18	**HIGH LINER FOODS**	CANADA	956
19	**BUMBLE BEE FOODS**	US	955
20	**YOKOHAMA REITO (YOKOREI)**	JAPAN	940
21	**WALES GROUP**	THAILAND	896
22	**PARLEVIET & CAN DER PLAS**	NETHERLANDS	848
23	**NOMAD FOODS**	UK	800
24	**HANWA FOODS**	JAPAN	799
25	**BOLTON ALIMENTARI**	ITALY	787

VALUE CHAIN ACTIVITIES			
FISHING	**Processing**	**Distribution and/or Importing**	**Branding and/or marketing**
9 COMPANIES (36%)	22 companies (88%)	18 companies (72%)	13 companies (52%)

Table 3.5. List of the largest 25 seafood companies. (adapted from Undercurrent, 2017)

3.3.1 Data analysis

To analyse CSR practices, we used publicly available information found in CSR or sustainability reports and corporate websites. In the case where subsidiary companies were

listed, publicly available data on the CSR programs of subsidiary companies were included. All data were downloaded between February and March 2018 and analysed through manual content analysis with cross checking by co-authors (20% of the companies). In cases where an English version of the websites and/or CSR report was not available, Google Translate and Japanese and Chinese mandarin speakers helped with translation.

3.4 RESULTS

3.4.1 Step 1: CSR governance framework and communication

Results show that 20 companies present a formal CSR vision while only 11 companies mention having a CSR committee or CSR manager/director and only 11 companies (47%) explicitly mention engaging with stakeholders (Figure 3.2). CSR visions were either indirectly expressed in the form of a CSR action plan, CSR policy or sustainability strategy or directly included in the corporate mission and vision. For instance, Kyokuyo writes in its corporate mission that "management will take leadership to contribute to sustainable social development by considering environmental impacts" and Labeyrie Foods writes that "CSR is the cornerstone of the group's development". How companies presented their stakeholder engagement efforts varied, with some being more specific and organizing formal stakeholder dialogues events (e.g., Bolton Alimentari, Nissui) and materiality assessments (e.g., Thai Union, Marubeni). Companies with CSR committees typically include the president, CEO or executive board on the committee or report to them. In terms of how CSR information is communicated, 23 companies (92%) have a section on their website dedicated to sustainability and 11 have a public CSR report, although some of them were outdated, going back to 2015.

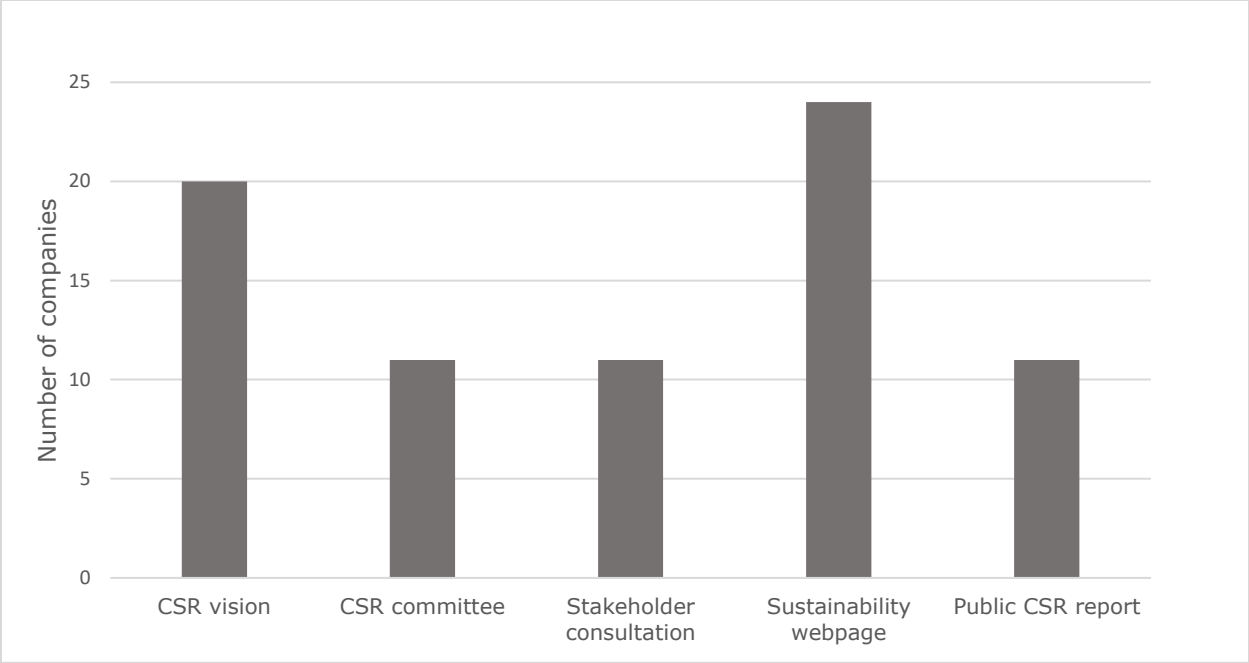

Figure 3.2. CSR governance framework and communication.

3.4.2 Step 2: CSR objectives, monitoring, and transparency

Almost all companies (92%) express intent to implement improvements across all categories of issues but far fewer (20%) set specific targets (Figure 3.3). Intent was typically expressed using general statements such as "we are committed to environmentally responsible food manufacturing" (Nissui), "we support sustainable fisheries" (TriMarine International) or "we will continue to check the situation on human rights" (Marubeni Corporation). General environmental issues was the issue for which most companies (9) set specific targets (e.g., "we will reduce our greenhouse gas emissions by 3% by 2020" (Nissui) with only five companies setting specific targets for sustainable fisheries " (e.g., "We are moving toward having 100 percent of our branded tuna either Marine Stewardship Council (MSC) certified or engaged in a fishery improvement project, with a minimum target of 75 percent by 2020" (Thai Union) or "full traceability by 2017" (Thai Union).

Only one company (Thai Union) had specific targets for health and safety aspects measured through quantifiable indicators such as lost-time injury frequency rate per hours worked.

Claims that issues are being monitored were more common (60%) for general environmental issues mostly through Environmental Monitoring Systems (EMS), in line with International Organization for Standardization (ISO) 14000 certification. Thirteen companies (52%) claimed to monitor human and labour rights issues through social audits such as Sedex (Supplier Ethical Data Exchange) supplier mapping and assessments, as well as internal monitoring of occupational health and safety incidental rates. In general, monitoring claims were often not followed by transparent reporting, except for general environmental aspects. For sustainable fisheries, four companies (16%) were transparent about how much of their product is MSC certified or meets their criteria for sustainable sourcing. In the case of International Sustainable Seafood Foundation (ISSF) member companies (Bumble Bee Foods, Bolton Alimentari, Thai Union and TriMarine International) transparent reporting consisted in aggregate compliance reports that are publicly available on ISSF's website (ISSF, 2018).

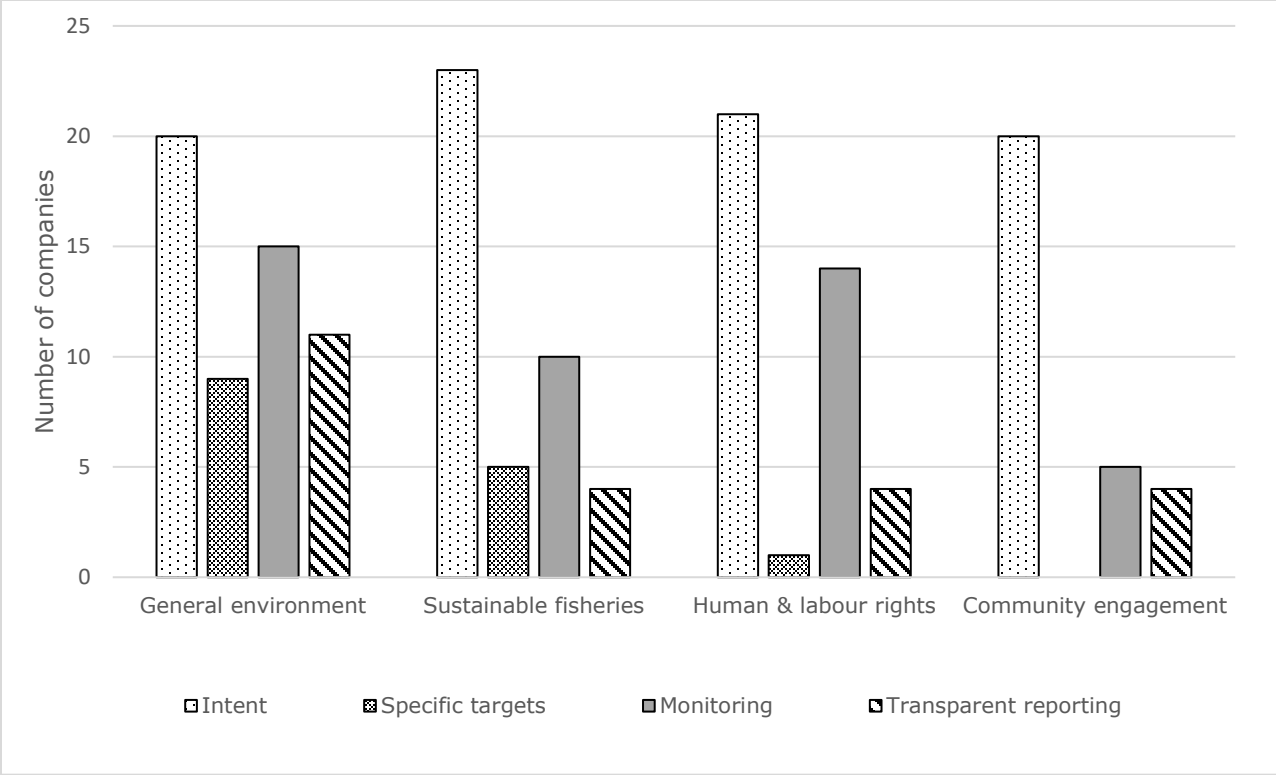

Figure 3.3. CSR objectives, monitoring and transparency.

3.4.3 Step 3: CSR implementation practices

General environment

Twenty companies (80%) mentioned addressing general environmental issues (Figure 3.4), usually through internal improvements such as waste reduction through increased recycling and packaging innovation, use of more energy efficient technologies and transportation practices and use of renewable energy. Several companies claimed to be ISO 14000 certified, a standard that requires environmental monitoring systems to be in place. Twelve companies (48%) addressed environmental issues through supply chain control, mainly by having clauses related to environmental protection in supplier codes of conduct and associated supplier audits. Philanthropic and awareness activities were also used by nine companies (36%), including consumer awareness, local clean-up events, contribution to

climate change research, employee education and funding of local environmental initiatives. Four companies (16%) had partnerships with programs such the EPA Smartway initiative, recycling banks or research projects for eco-packaging.

Sustainable fisheries

Twenty-three companies (92%) stated that they were implementing sustainable fisheries improvements (Figure 3.4). All five types of activities were found to be used to address sustainable fisheries, with the most common ones being supply chain control and internal improvements. Examples of supply chain control activities included commitments to buying MSC certified products, requirements from vessel owners to sign up on ISSF's Proactive Vessel Registry (PVR), purchasing policies that avoid sourcing from overfished stocks or from fisheries with high bycatch. Some companies claimed to have a due diligence process in place such as supplier mapping and assessment. Changes to internal practices mostly consisted in implementing better traceability, improving fishing practices, such as bycatch reduction and on-board monitoring or becoming MSC certified (for companies engaged in fishing).

Fifteen companies (60%) mentioned partnering with other organizations such as NGOs (e.g., WWF, the Sustainable Fisheries Partnership, Greenpeace, the International Union for Conservation of Nature), other businesses (e.g., ISSF, SeaBOS) and scientists (e.g., IFREMER). Formal multi-stakeholder partnerships were common, including FIPs, the Sustainable Seafood Coalition and ISSF. Depending on the fishery, companies were found to engage with governments at local, national and regional levels by participating in fishery councils (e.g., North Pacific Council), attending meetings of Regional Fisheries Management Organizations (RFMOs) and working with multi-stakeholder initiatives and

special interest groups such as the pelagic freezer trawler association and the ISSF. However, it was sometimes unclear how companies go about engaging with government, making vague statements such as “we actively participate in regional and federal fisheries management processes” (Trident Seafoods) or “we engage with policy makers on better fisheries management” (TriMarine International).

Philanthropic and awareness activities included organizing sustainable seafood events, financing FIPs and turtle conservation programs. Many Japanese companies also have their own foundations, some of them working to promote sustainable fisheries and seafood consumption.

Over a third of the companies were found to build on and/or contribute to scientific research. Seafood companies involved in fishing activities mentioned supporting science-based management through improved reporting and monitoring whereas other seafood companies claimed that their purchasing decisions are based on science-based fish stock assessments. Other ways to engage with science were through direct financial support to research projects (e.g., gear innovation, electronic data recording and traceability). One recent approach has been the formation of an alliance between large seafood companies facilitated by the Stockholm Resilience Centre (SeaBOS).

Human and labour rights

Issues of human and labour rights were mentioned by 19 companies (76%), and in most cases these issues were dealt with through supply chain control and internal improvements (Figure 3.4). Supplier codes of conduct typically targeted human and labour rights issues in processing plants (e.g., Business Ethics and Labour code of conduct) and were often accompanied by a due diligence supplier assessment process. Many companies claimed

using international principles and guidelines such as International Labour Organization (ILO) standards and UN conventions to develop their codes of conducts. Companies reported that the supplier assessment process was either done internally (i.e., supplier self-reporting) or through a 2nd or 3rd party assessment. Based on supplier assessments, companies then decide whether to engage with suppliers for making improvements or cease the business relationship. Companies mentioned several frameworks, tools and standards such a those offered by SEDEX, an organization that offers risk assessment tools and an online platform where suppliers self-report. SEDEX also offers auditing services to suppliers (SEDEX Member Ethical Trade Audit). Companies also reported using the Ethical Trade Initiative (ETI), a membership-based organization that requires its members to sign on to its code and principles. ETI members must report transparently about their activities and to the ETI board which then provides feedback and advice for improvement. Other frameworks companies mentioned include the Business Social Compliance Initiative (BSCI), which is similar to SEDEX, offering a standardized code of conduct, implementation methodology, auditing and engagement tools. With regards to fishing activities, one company had developed a Vessel Code of Conduct to be used for third party audits in its supply chains, while companies involved in fishing activities usually wrote they were committed to good working conditions on-board fishing vessels (e.g., "we are committed to providing exceptional operating conditions" (Trident Seafoods) or "we are committed to providing a safe and healthy work environment" (Pacific Seafood Group). Another tool mentioned was the Seafood Slavery Risk Tool, developed specifically for the seafood industry and provides businesses with an assessment methodology and resources for implementing improvements in labour practices.

As most of the companies are involved in processing (88%), 15 companies included their own internal practices in their improvement programs through company codes of conduct and policies, covering issues of ethical recruitment, training of workers in health and safety as well as labour and human rights issues and internal monitoring and accountability systems (e.g., the Occupational Health and Safety Assessment Series (OHSAS 18001). As required by the UK *Modern Slavery Act* (2015), a few of the European companies present their strategy to ensure slavery and human trafficking are not occurring in their value chains. However, there are no legally binding requirements to conduct due diligence and no penalties for non-compliance. California's *Transparency in Supply Chain Act* (2012) makes similar requirements, which only one company in the study has to comply with (Bumble Bee Foods).

Seven companies (28%) claim to be engaged in partnerships either with other businesses and/or NGOs, to work on human and labour issues. Four of them are members of the Global Seafood Task Force, a multi-stakeholder initiative that aims to develop guidelines and auditable standards for responsible recruitment practices and working conditions on board fishing vessels. One company has partnered with other industry members, the Thai government and NGOs to specifically improve the Thai seafood industry (Thai Union). Examples of NGO partners include Verité, ISSARA, Greenpeace, WWF, Seafish, ISSF, the International Justice Mission and Fishwise. Finally, one company (Bumble Bee Foods) is a member of the Global Sustainable Seafood Initiative (GSSI), an organization that benchmarks certification standards against internationally agreed guidelines, and which has now recently expanded its scope to include social standards.

Only seven companies presented efforts that targeted governments, instead making general statements such as “we are working with the Thai government” (Thai Union). Philanthropic and awareness activities were also rare, consisting in “promoting positive change” (Bumble Bee Foods, Thai Union) at conferences, campaigns to raise awareness on human rights issues and donations to the “Not for Sale”, an NGO that focuses on market-based solutions to address and prevent the root causes of human trafficking globally.

Community Engagement

Nineteen companies mention at least one activity related to community engagement, mostly consisting of internal improvements and philanthropy (Figure 3.4). Internal improvements focused on employee development and services, providing jobs to local communities (for those companies involved in processing), employee engagement and promotion of diversity (e.g., hiring people with disabilities). Philanthropy was the most common approach to community engagement and consisted in donations to local charities (especially organizations focused on youth education, helping communities stricken by natural disasters and food banks), employee volunteering activities and contributions to cultural institutions and events. Seven companies (28%) partnered with NGOs that work in community development by providing, for example, access to education (e.g., Save the Children, Jambo Bukoba), access to renewable energy and support to marginalized communities (e.g., Greenland).

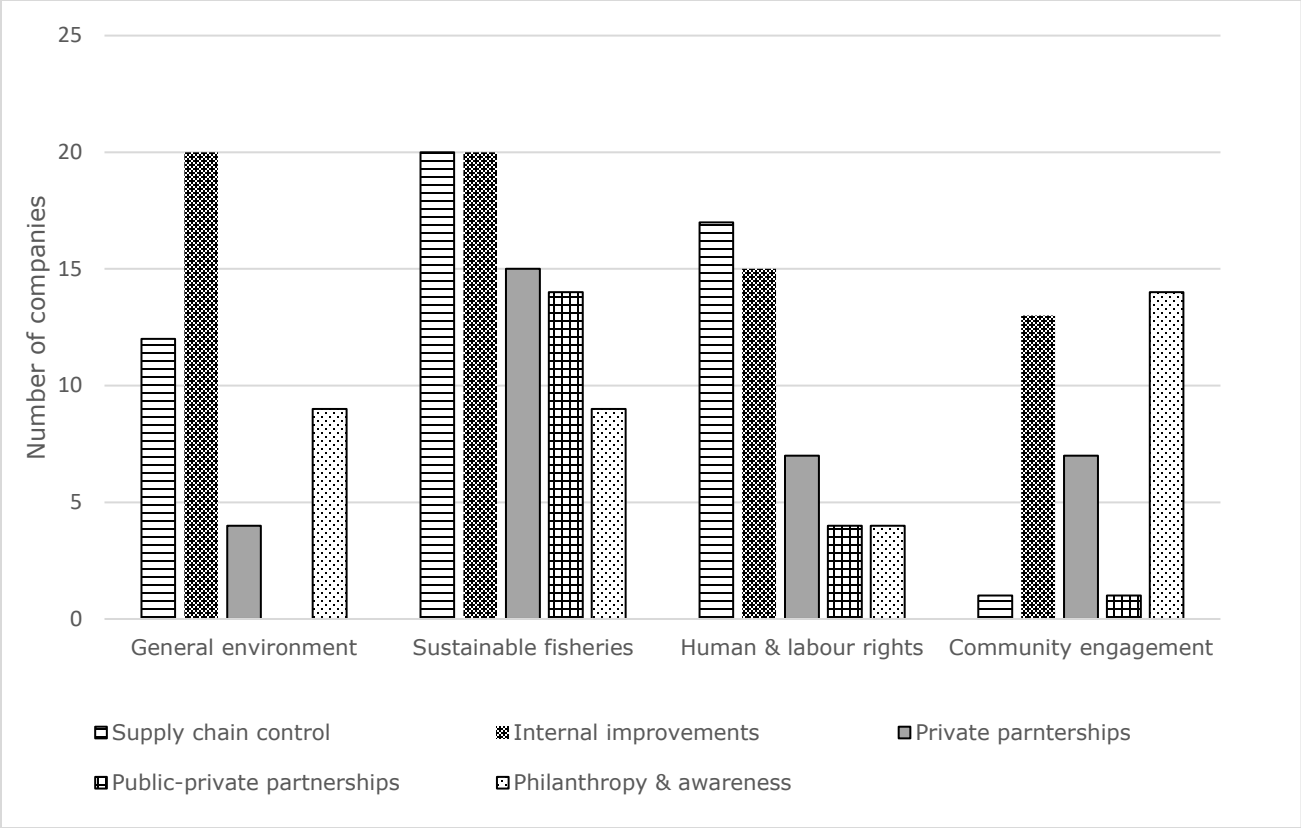

Figure 3.4. CSR practices and activities.

3.5 Discussion

In this paper we sought to analyze what the largest seafood companies are doing in terms of CSR, and to provide commentary and analysis on the potential for these CSR practices to drive change. It is evident from the results of this study that the top 25 seafood companies have CSR on their radar, with 47% of the companies publishing a CSR report and 92% having a section of their website communicating about CSR, tackling a range of issues and through different approaches. It is also evident, however, that having CSR on one's radar does not necessarily translate into formalized actions and targets. In this section we discuss this gap between vision and action, and the extent to which the main CSR activities of the

five Ps: Power; Practices; Partnerships; Public policy; and Philanthropy, are being used in service of the Sustainable Seafood Movement.

3.5.1 Transforming vision into action

For twenty companies (80%), we observed that a gap exists between having a CSR vision and a more structured and formalized action plan with specific targets. Similarly, more companies communicated CSR informally through their corporate website rather than through a structured CSR report. One possible explanation for this lag could be that high-level commitments are deemed to be sufficient to build a positive reputation and corporate image, while setting more specific goals would be too difficult or constraining. Setting specific CSR targets may indeed be challenging for issues that companies cannot control and where uncertainties are high such as fisheries management and social compliance, especially in countries where regulations are weak and enforcement capacity is limited. Moreover, seafood value chains can be long and complex, spread over many different countries, making it even more challenging to monitor and control production practices (Boström et al., 2015). This explains why companies may be more likely to have explicit targets for internal aspects such as energy efficiency and health and safety than for sustainable fisheries and social aspects. The absence of explicit targets also explains why only a handful of companies had monitoring systems in place. Lastly, the general absence of specific targets and monitoring may explain why so few companies transparently reported on progress. One exception was for human and labour rights aspects, which over half the companies monitored but only four made audit reports publicly available. Again, it could be that as a result of human and labour rights scandals, companies are now expected

to have due diligence processes in place to ensure violations are not taking place in their supply chains without yet having the capacity and systems in place to comprehensively monitor and report on social issues in their supply chains (Nakamura et al., 2018).

Less than half of the companies noted having a formal stakeholder engagement process and a dedicated CSR staff or committee. It is unclear why this is the case but could be because companies do not think of it as necessary to report on it and/or because it is done in informal ways. It is important to note that it is hard for companies to succeed in recognizing their CSR visions without any dedicated CSR staff. Similarly, if stakeholder engagement is not in place, it is unlikely that CSR issues are fully integrated in business activities as stakeholders can allow companies to ensure their CSR strategies align with stakeholder interests. Except for companies that own consumer-facing brands (e.g., Bumble Bee Foods, Bolton Alimentari, Thai Union, Nissui, High Liner, Nomad Food), 12 (48%) of the companies reviewed in this study are not identifiable by consumers and therefore do not face the same reputational risks from the public. This may also limit the ability of stakeholder to pressure companies into making stricter CSR commitments and hold them accountable (Mayer and Gereffi, 2010).

3.5.2 Power: Supply chain compliance using private standards and purchasing power

Large seafood companies use supply chain control mechanisms to ensure suppliers comply with social and environmental standards, especially sustainable fisheries and human and labour rights. Supply chain control can help companies mitigate reputational risks and maintain market access (where the market punishes poor performance) and gain competitive advantage or increase market share (in cases where the market rewards good

supply chain performance). This "compliance model" (Locke et al., 2009) is based on leveraging the purchasing power of large companies to change production practices in global value chains, therefore bypassing slow (inter)governmental processes (e.g., WTO) and issues of state sovereignty (Falkner, 2013). Therefore, some argue that private voluntary standards can complement and/or be a steppingstone to public regulation by filling regulatory gaps, especially in low regulated environments such as certain developing countries. However, the effectiveness of private codes and standards is mixed and uneven and depends on the appropriateness of the standard used, the incentives for suppliers to comply, and the mechanisms to verify compliance (Kalfagianni and Pattberg, 2013; Newell, 2008).

Seafood companies vary in the standards they used and the way they verify compliance. With regards to social compliance, some companies require suppliers to comply with national laws while others require certification against specific standards (e.g., Sedex or SA8000) or develop their own codes based on international guidelines (e.g., ILO Work in Fishing Convention). With regards to fisheries sustainability, companies typically claim to give preference to MSC certified and/or Seafood Watch approved fisheries, fisheries in a credible FIP and fisheries compliant with the FAO Code of Conduct for Responsible Fisheries. While relying on private standards to exert supply chain control may seem like an straight forward way to operationalize CSR, there are a number of challenges around compliance as well as legitimacy of standards developed by western organizations and markets thus limiting its acceptance non-western regions (Bailey et al., 2018; Ponte, 2012). For instance, the effectiveness of the MSC standard and FIPs in transforming fisheries management globally has been limited with only 10% of MSC certified fisheries being in

the developing world (Jacquet et al., 2010; Kalfagianni and Pattberg, 2013; MSC, 2017; Tlusty, 2012). Similarly, the effectiveness of social audits in achieving sustained improvements through "social upgrading" (Barrientos and Gereffi, 2011; Gereffi and Lee, 2016) has been mixed as these usually only address "outcome" aspects of working conditions such as health and safety and fail to address "process" aspects such as worker empowerment (Bartley and Egels-Zandén, 2015).

The use of supply chain control mechanisms such as codes of conduct, independent audits and purchasing policies is based on the assumption that the economic leverage lead firms have over their suppliers also enables them to enforce compliance against social and environmental standards (Gereffi et al., 2005; Gereffi and Lee, 2016). In other words, civil society organizations use the power of lead firms by threatening their reputation through "name and shame" campaigns, forcing them to adopt and implement standards and corporate codes in their supply chains (Locke et al., 2009). The large seafood companies reviewed in this study are typically vertically integrated and handle large volumes of wild seafood and have value chains that expand all over the globe, a trend that is likely to increase with the growing number of mergers and acquisitions (Österblom et al., 2015). The effectiveness of the compliance model also depends on audit quality and transparency of results as it is used by NGOs to threaten under-performing companies by mobilizing the media and consumers. We found that large seafood companies do not make publicly available the results of social audits nor any assessment of the sustainability of the fisheries they source from, making it hard to judge their performance against their commitments, nor the quality of audits. With regards to social audits, ensuring high quality audits can be challenging as these usually require auditors to be trained in many different fields (e.g.,

human rights, health & safety, labour rights etc.) and for issues to be continuously monitored.

Lastly, compliance depends on the incentives for suppliers to comply with social audits. These can be limited by the push for lower prices, demands for higher production volumes and high costs of improvements. Under this model, the consequence of non-compliance usually consists in reduced orders or termination of the business relationship. Despite those limitations, codes have had positive impacts and sometimes complement public regulation and enforcement. For instance, it was found that codes can outperform government enforcement for health and safety issues and formalization of employment while government regulation perform better in relation to the illegal use of short-term contracts and non-permanent workers (Bartley and Egels-Zandén, 2015). With regards to fisheries sustainability, information disclosure by companies was selective. Indeed, certification and assessment reports (e.g., MSC, Seafood Watch) as well as FIP performance (fisheryprogress.org) are usually made public; however, companies do not generally disclose performance information on fisheries that are not in one of these programs, despite making claims of due diligence. Tools, such as the Ocean Disclosure Project (ODP) that aim to increase transparency in seafood value chains could be used to address this gap.

Given the limitations of the "compliance model", some authors advocate for a "cooperation model", which consist in using audit results for continuous improvement rather than "punishment". Instead, buyers and suppliers work together through joint-problem solving, diffusion of best practices and capacity building to solve non-compliances with substantial investment from the buyers (Gimenez and Sierra, 2013; Locke et al., 2009; Lund-Thomsen and Lindgreen, 2014; Seuring and Müller, 2008). For sustainable fisheries and social

compliance, initiatives such as Fair Trade USA, fishery improvement projects and the Ethical Trade Initiative are representative of the "cooperation model" where companies work with their supply chains using a continuous improvement approach. However, the extent to which large seafood companies are involved and partner with their suppliers in implementing improvements and thus contributing to the "cooperation model" remains to be studied.

3.5.3 Practices: Company level improvements

We found that company level improvements used to address various social and environmental issues can generally be linked to a clear "business case" (Margolis and Walsh, 2003; Weber, 2008). For instance, activities aimed at reducing energy and water use can lead to significant cost-savings. Many companies mention programs to improve traceability to support sustainable fisheries by fighting IUU and seafood fraud. However traceability can also lead to improvements at the company level such as improved efficiency, risk reduction and competitive advantage (Sterling et al., 2015). Some of the companies involved in fishing mention internal practices to improve fishing practices (e.g., FIP) and obtaining MSC certification. These types of improvements can lead to better reputation, maintenance or gain of market access, and in some cases price premiums (Kurucz et al., 2008; Ponte, 2012). Many companies presented activities to ensure good working conditions, empower employees and provide career development opportunities. These types of activities represent potential investments in human capital such as employee loyalty and performance which can in turn lead to increased competitive advantage (Strandberg, 2009). Finally, many companies claimed to contribute to the socio-economic

development of local communities by providing employment and ensuring fair and ethical business practices.

These types of activities can directly benefit companies reinforcing their social license to operate and thus, their successful operation (Dare et al., 2014). Therefore, it seems that the extent to which companies improve their social and environmental performance is limited by the extent to which there is a clear business case associated with it, such as increased market share, improved reputation or enhanced production efficiency. However, market reward for good environmental and social practices is still limited, with most customers still purchasing products based on price and convenience, rather than sustainability. For instance, the premium for MSC certified seafood still remains elusive, especially for mid-chain companies such as the one analysed in this study (Roheim et al., 2011). Thus, carrying the MSC logo does not guarantee companies more money but does ensure continued access to downstream actors, i.e., companies can continue to sell their product. In cases where there is a "market for virtue", it is usually limited to informed and affluent customers (Vogel, 2005). Moreover, the market tends to negatively reward poor performing companies rather than positively reward good performing ones (i.e., we might be willing boycott irresponsible companies but not willing to pay more for well performing ones). Beyond providing positive market rewards, ensuring that company level improvements are fairly rewarded requires transparent accountability mechanisms to disclose company performance accurately (Iles, 2007; Watts, 2015). However, we found that except for general environmental aspects, companies usually did not monitor or disclose social and environmental performance publicly, making it difficult to judge whether the CSR activities they claim to implement are effective, in turn leading to risks

of false claims and greenwashing. These risks can be mitigated, as done by some companies reviewed in this study (e.g., Trident, Thai Union), by having their own facilities or fishing operations independently certified.

Transparency, or lack thereof, remains a key issue for assessing the CSR practices and performance of companies. If performance would be made more transparent, the business case for CSR may still be limited by the fact that many of the companies reviewed in this study are not consumer-facing, restricting the extent to which NGOs can leverage their reputation and threaten their market access (Mayer and Gereffi, 2010). Indeed, given that over 70% of retail purchases of seafood take place in supermarkets in many countries (FAO, 2016), retailers in the United-States, the European Union and now Japan, have been the primary target of private governance systems in global seafood value chains. However, these markets consume only 35% of total marine fisheries landings and thus, leaving seafood sold and consumed in developing world markets unaffected by retailer pressure in developed countries (Swartz et al., 2010). Moreover, some of the companies reviewed here also sell into markets where demand for sustainability is low or non-existent.

For non-consumer-facing companies, a potential point of leverage for improving their business case through sustainable practices is investors. Impact investment funds targeting seafood have recently been emerging (e.g., the Meloy Fund, Encourage capital) together with principles for investment in sustainable wild capture fisheries (EDF, 2018). However, the effectiveness of this approach remains to be studied and none of the companies in this study mention working with impact investors. In summary, making company level improvements is a valuable and valid approach the social and environmental performance

of large seafood companies but limited by the extent to which these improvements benefit those companies such as increased market access, reputation and improved efficiency.

3.5.4 Partnerships

We found that seafood companies form partnerships with NGOs mainly to address issues related to sustainable fisheries and human and labour rights, and to a lesser extent for general environmental and community engagement issues. The goal of these partnerships generally consists of developing standards for best practices (e.g., corporate codes, certification standards), implementing improvements (e.g., FIPs, Ethical Trade Initiative) and in some cases, jointly-engaging with governments (e.g., ISSF). There are two main potential benefits for businesses partnering with NGOs. First, when NGOs endorse a CSR program, they help build a credible sustainability image and reputation in the market. Moreover, cooperative (as opposed to adversarial) business-NGO relationships can help advance both agendas by combining expertise and capabilities to develop private standards (Vellema and Van Wijk, 2015) and implement programs that deal with complex issues such as human rights and overfishing (Austin and Seitanidi, 2012; Blowfield and Dolan, 2014).

However, there is considerable debate on whether these partnerships are fulfilling their intended objectives (Bitzer and Glasbergen, 2015). First, NGO-business partnerships are inherently challenged by the difficulty of reconciling divergent institutional logics, leading to different value frames and expectations. As a result, some authors argue that NGO-business partnerships are imbalanced and dominated by the business logic, a sort of taming of civil society actors limiting, rather than expanding, NGO activism (Falkner, 2003).

Indeed, some authors argue that because CSR results from "a societal backlash against the externalities and excesses of corporate power", it represents an "ongoing process of contestation about the role of business and society", where corporations try to keep the upper hand as part of a broader hegemonic project (Bair and Palpacuer, 2015, p. 8). This is in line with the perspective that firm and non-firm actors are engaged in continuous struggles over the governance of GPNs (Levy, 2008).

Additionally, some authors warn that private governance mechanisms developed through business-NGO partnerships are fundamentally flawed, as these aim to address social and environmental issues that were caused by the market system that it seeks to work with. As such, market-based approaches mobilizing CSR, while trying to offer an alternative to the current logic of global markets, are not challenging powerful industrial and retailer interests but simply "capitalism with a human face" (Newell, 2008, p. 1064, Konefal et al., 2005; Taylor, 2005). The second debate on NGO-business partnerships is that, given their focus on market solutions, their ability to improve complex social-ecological problems is limited to market sensitive or "hot" issues, potentially neglecting wider issues such as unequal power relationships in value chains. The third and last debate concerns the effectiveness of these partnerships for driving sustainable change (Konefal, 2013). Thus, NGO-business partnerships hold some potential for developing standards and implementing improvements, however this may be limited by the extent to which those partnerships are inclusive of small-holders and developing world stakeholders, mobilize producers by creating the right incentives though transparency and accountability, and address the root of the problems they seek to address.

3.5.5 Public policy: Engaging government

Despite the growing influence of private actors in the governance of fisheries, and a shift of power away from the nation-state towards private actors, the responsibility for managing fisheries remains a public affair. Indeed, several companies stated engaging with policy makers and regulators with regards to improving fisheries regulations either directly (e.g., industry councils) or through multi-stakeholder initiatives (e.g., FIPs, ISSF). This type of engagement is likely motivated by companies have fishing quotas in these fisheries and/or the desire to obtain or maintain MSC certification (Foley, 2013). What we then find is not a "pure" form of private governance, but rather "a 'mixed' regime, where the boundary between public and private spheres is blurred" (Clapp, 1998, p. 295) and where public and private actors have become inter-dependent to achieve the necessary changes (Falkner, 2003). Furthermore, government engagement can be pre-competitive as seen by several companies that reported working with other seafood companies to promote sustainable fisheries management. Indeed, there has been a recent increase in pre-competitive platforms to engage with regulators (but not mentioned by companies in this study) such as SFP's supplier roundtables, the International Pole-and-Line Foundation (IPNLF) and the Global Tuna Forum. In the case of tuna, several companies stated attending RFMO meetings, but how these companies engage with regulators in these meetings remains unclear.

It was surprising not to see more companies engaging with government on human and labour rights issues as these issues largely fall under jurisdiction of governments. It may be that companies merely report that they are complying with national labour legislation and are not required by their buyers to work with governments on lifting up that legislation.

Reflecting on the impacts and effectiveness of seafood companies engaging with governments is difficult. In the context of our study, the information collected did not reveal how and to what extent companies engage with policy makers. For instance, companies may just send letters, either individually or as part of coalitions with other businesses, or companies might regularly meet with policy makers to discuss issues and work on implementing solutions. How companies engage with regulators and policy-makers may also depend on their network and political leverage with governments.

3.5.6 Philanthropy & Awareness

Philanthropic activities such as donations to local organizations, community events, employee volunteering and disaster relief were found to be common approaches to community engagement. Indeed, these types of activities are often not directly related to the bottom line but rather can help build trusting relationships with local communities, improving reputation and securing a license to operate (Chen et al., 2008; Dare et al., 2014). In case of consumer-facing companies, philanthropy may be part of a marketing strategy that may encourage consumers to chose their product (Gautier and Pache, 2015). Some philanthropic activities are more strategic such as supporting education programs related to seafood production which may directly benefit companies by creating a pool of potential employees (i.e., may still be part of a broader business case) (Porter and Kramer, 2002). However, many of the philanthropic programs observed in this study consist in one-time donations or annual events rather than sustained donations to an organization. Therefore, corporate philanthropy may be an effective way for building and maintaining a social

license to operate and acceptance by local communities but less so for solving broad social and environmental issues that require a long-term approach and continuous improvement.

3.6 Conclusion

Our study shows that, as a result of growing stakeholder and market expectations, large global seafood companies make claims to implement and engage in a number of social and environmental improvements through CSR. At the same time, new sustainability demands involve less tangible outcomes and issues that may be beyond a company's control, such as socio-economic development of local communities and sustainable fisheries management, for which companies need to find new ways to contribute and demonstrate progress. Seafood companies seem to approach CSR in a variety of ways from using their purchasing power to transform practices in their supply chains, to making improvements to their own practices, working in partnerships with NGOs and other businesses to develop private standards and implement improvements, engage with regulators, and making philanthropic donations to charities and local community organizations. All these approaches have the potential to affect their bottom line positively while while at the same time improving the social and environmental conditions in their supply chains and the industry as a whole.

The lack of specific, measurable time-bound commitments is concerning, especially because industries generally look at top tier companies as leaders in new business models and strategies, including those that take into account environmental and social issues. It is unclear why so few of the seafood companies reviewed had set specific objective and have trouble walking the talk of CSR. One possible explanation may be that investments in CSR

limited by how much companies are rewarded (i.e., the business case) for it through market incentives and improved reputation. As the CSR movement tries to re-embed companies by acting as a form of social regulation and to develop expectations for companies to contribute to wider development goals, it is important that the right incentives are provided by developing improved accountability and rewarding mechanisms that go beyond the market. There is great potential for pre-competitive business platforms to have a large sustainability impact by normalizing CSR practices, and moving them through to public policy. Once taken up as policy, the "voluntary" nature of the practice disappears, no longer rendering it as part of the CSR space. In this way, the scope for CSR should actually become smaller, while what we currently see today is an expansion of the CSR scope.

Regulating seafood companies on social and environmental aspects through CSR may not only require creating a better business case but also ensuring that companies have CSR processes in place such as internal CSR governance processes. This might go against the CSR philosophy of self-regulation but may be the only way to hold companies accountable in a democratic way (i.e., not through the market). There is no doubt that seafood companies must take part in developing a sustainable fisheries industry. The emergence of governance networks where companies work increasingly closely with civil society and government actors hold great potential for solving complex environmental problems as it incorporates actors from different sectors and provides an innovative environment for learning, allowing for the development of effective and adaptive governance. However, as these governance networks develop, we must ensure that private corporate interests (including non-consumer-facing companies) align with public interests through the

creation of a wider business case that aims for long-term sustainability and goes beyond short-term market incentives.

CHAPTER 4 THE ROLE OF TRACEABILITY AND MID-CHAIN FIRMS IN ENVIRONMENTAL GOVERNANCE: INSIGHTS FROM AN INDONESIAN HANDLINE TUNA FISHERY

4.1 INTRODUCTION

Increasing awareness about the environmental and social impacts of wild seafood production systems, has led to a multiplication of efforts to govern seafood sustainability (Barclay and Miller, 2018). These include both public and private regulatory approaches targeting specified environmental problems, such as illegal fishing and overfishing. Public regulations include governments improving fisheries management systems or imposing import regulations to prevent illegally produced seafood from entering their markets (European Commission, 2011; Hilborn et al., 2020; NMFS, 2016). Private actors including environmental non-government organizations (NGOs) have also developed market-based tools such as educational campaigns and information tools (e.g., Seafood Watch Program), third party sustainable fisheries certification programs (e.g., Marine Stewardship Council), fishery improvement projects (FIPs) that aim to assure a pathway to more sustainable practices, and NGO-business partnerships (e.g., Bitzer and Glasbergen, 2015; Gutiérrez and Morgan, 2015; Holt et al., 2019; Ponte, 2012). Many of these public and private sustainability governance strategies are underwritten by information and communication systems that document, verify and expose seafood production practices in order to ensure that products comply with regulations (Bailey et al., 2016; Bailey and Egels-Zandén, 2016; Gardner et al., 2019; Gupta, 2010; Hess, 2007; Mol, 2015; Watts, 2015). In this paper, we examine information-based tools of this type in the context of an effort to improve

sustainability in a small-scale fishery (SSF), finding that catch documentation and traceability operates as a form of "informational governance".

Catch documentation and traceability (CDT) schemes are one type of information and communication system that are increasingly being promoted as tools for improving seafood sustainability (FAO, 2017; FishWise, 2018b; Lewis and Boyle, 2017; WWF, 2015a). Catch documentation schemes (whether electronic or paper-based) are systems designed to trace a seafood product throughout the supply chain to determine if it originates from a fishery compliant with applicable conservation and management measures (FAO, 2017). This kind of traceability system collects and transfers information and allows the records of production and product movement to be accessible at a future date and in different locations (Bailey et al., 2016; Future of Fish, 2014a; WWF, 2015a). CDT systems collect key information about the harvest, processing, and transportation of a fisheries product that enables the tracking of the product through each step of the value chain from final point of sale to its point of origin (USAID, 2017a). It has been suggested that CDT systems offer opportunities for improved monitoring of fisheries and seafood value chains and preventing mislabeled and illegal, unreported and unregulated (IUU) products from entering the market. Moreover, based on evidence linking IUU fishing and human rights abuses, proponents claim that CDT systems can also help improve working conditions in the industry (Bailey et al., 2016; FishWise, 2018b; Lewis and Boyle, 2017; Nakamura et al., 2018). Recently, organizations have begun to advocate shifting to *electronic* CDT systems to a) reduce the risk of falsification by being more tamperproof; b) increase efficiency at collecting and transferring information over networks and thus potentially be more

inclusive by providing easier access to information to a wider set of stakeholders; and c) reduce transcription error or loss of documentation (FAO, 2017; WWF, 2015a).

The number of public and private efforts to develop and implement (electronic) CDT systems is growing in fisheries value chains. For instance, some governments have taken steps to prevent illegally caught seafood from entering or exiting their jurisdiction by requiring catch documentation, such as catch certificates, to be submitted as part of the import process. Prominent examples include the European Union's Regulation to prevent, deter and eliminate IUU established in 2010 and the United-States' Seafood Import Monitoring Program (SIMP) established in 2016 (EU Commission, 2008; Hosch, 2016; NMFS, 2016). Those public or state-based regulations aim to prevent IUU seafood products from entering specific markets and thus, deter illegal activities in seafood value chains (FAO, 2018; Greenpeace, 2018; Oceana, 2018; Souter et al., 2016; Stawitz et al., 2016; Warner et al., 2019). Private actors are also driving the design and implementation of CDT systems. End-buyers such as retailers are increasingly asking for product credentials regarding not only the legality but also the environmental and social impacts associated with the seafood they purchase and distribute (Lewis and Boyle, 2017). Buyers demand this type of information to mitigate reputational risks linked to negative publicity and NGO campaigns and help them meet their sustainable sourcing commitments, which relies on their ability to differentiate products (Sterling et al., 2015). Retailers, brands and chefs also rely on CDT systems for marketing (e.g., "storied fish") and satisfying consumers' "right to know" (Future of Fish, 2016a; Oceana, 2016). Catch documentation and traceability systems can also help companies comply with third-party traceability standards such as those associated with certified product (e.g., Marine Stewardship

Certification Chain of Custody certification). Finally, the technology used in electronic CDT systems can also be used to collect business data to improve production efficiency and supply chain management (Future of Fish, 2014b; Sterling et al., 2015). Thus, CDT systems hold potential as a tool for seafood companies to optimize their operations and enhance their legitimacy, features that are increasingly important for maintaining or improving their market acceptance and position (Bachmann and Ingenhoff, 2016; Delgado and Castelo, 2013; Du and Vieira, 2012). Demand for CDT systems has led to a number of private or public-private initiatives within seafood value chains to make major investments in developing, piloting and implementing different systems around the world (Bush et al., 2017; Castillo and Vosloo, 2018; Miller et al., 2014; USAID, 2017a; WWF, 2015b).

CDT systems' ability to be useful for meeting stated fisheries sustainability objectives hinges on their design and implementation (how information is produced, shared and disclosed) (Mol, 2014). Therefore, analysing the process through which these systems are designed and implemented is fundamental to understanding how and which specific fisheries sustainability goals CDT systems can support. Therefore, this article focuses on examining how the motivations and implementation process of CDT systems impact their contribution to stated fisheries sustainability goals, specifically in SSFs. The FAO has produced voluntary guidelines for Catch Documentation Schemes (FAO, 2017) and private sector groups have started to define specific theories of change for how CDT systems can be used to improve fisheries sustainability. For instance, Future of Fish, a leading NGO in the field of seafood traceability, has defined five core functions of traceability systems related to what information should be collected, how it should be verified and how its integrity should be maintained through the value chain (Future of Fish, 2016b). Another

examples is the Global Dialogue for Seafood Traceability (GDST), a multi-stakeholder initiative established to set key data elements and guidelines for data quality, verification and interoperability and develop advice for governments in their development of CDT related regulations (GDST, 2016). Lastly, the Seafood Alliance for Legality and Traceability (SALT), an initiative coordinated by the NGO FishWise, aims to facilitate and accelerate the implementation of CDT systems in the seafood industry through knowledge sharing and guideline development (SALT, 2020).

While demand for CDT is growing across fisheries and global markets, not all fisheries systems have the same opportunities or experiences with implementing these programs, and failure to implement may have high consequences, such as loss of market access. These concerns are significant in SSFs which often produce for export markets and as such are players in and subject to dynamics of seafood global production networks (GPNs) (Coe et al., 2008; Crona et al., 2016). SSFs play an important role with regard to employment, food security and economic development (FAO, 2018; The World Bank, 2012), but are frequently excluded from the biggest sustainability initiatives due to high costs and data deficiency (Duggan and Kochen, 2016; Ponte, 2012, 2008). The importance of implementing CDT in SSFs has been highlighted by the FAO, governments, NGOs and academics as a means to maintain market access, improve data availability and empower fishers to improve their livelihoods (Bailey et al., 2016; Castillo and Vosloo, 2018; Duggan and Kochen, 2016; FAO, 2015; Kessler, 2019). Today, several efforts to enroll SSFs in traceability schemes are emerging, often with a combined aim of combatting IUU while also trying to achieve socio-economic returns in SSF. However, implementing CDT in SSFs faces challenges associated with data poor conditions and concerns that small scale

fishers themselves have limited financial and political power to take part in the design of private and public regulations (Bailey et al., 2016; Doddema et al., 2018; Hardt et al., 2017; Mol, 2006; Sterling et al., 2015).

It is unclear how CDT schemes are interacting with the socio-economic and environmental relations that comprise GPNs, and if CDT schemes reflect the context and needs of SSFs (Bailey et al., 2016; Barr et al., 2019; Borland and Bailey, 2019; Crona et al., 2016). CDT projects often focus on having a CDT system a place, and are less attentive to how these information systems get implemented and interact with inter-firm relationships and power asymmetries in GPNs (Bailey et al., 2016; Doddema et al., 2018). However, information – such as that comprises CDTs – is a source of power in value chain governance that works through questions of sustainability (Gupta, 2010; Mol, 2015, 2008). CDT systems generate, transfer, and distribute information about the environmental credentials of seafood products and stand to shape how GPNs systems are structured and organized, and for whom. Therefore, this study is motived by the following central question: **By what means, and to what ends, do CDT systems interact with environmental governance and firm relations in seafood global production networks?**

The main contribution of this article is to detail how traceability systems – now key elements of efforts to demonstrate environmental and social commitments in SSF GPNs – are implemented and what effects they have on the relationship among actors in the network. We do so by conceptualizing CDT systems as a form of "informational governance" that is applied to questions of sustainability. We start by presenting the conceptual links among informational governance, environmental governance and chain governance. We then use those links to build a conceptual framework and develop

analytical questions to examine how CDT systems alter and reflect environmental governance dynamics within a small-scale Indonesian handline tuna fishery value chain. We find that lead firms that fill the role of exporter and importer, and thus are subject to various public and private forms of sustainability governance (including requirements for traceability), play a key role in meeting the informational demands of the network through the design and implementation of traceability systems. Lead firms do this not only to comply, but also as to outcompete other exporters in the GPN. In order to implement traceability, lead firms and their suppliers employ various strategies to minimize their costs and maximize the benefits of CDT implementation, including to improve their position in the GPN. We conclude that for CDT to support stated goals of sustainability while improving livelihoods in SSFs, careful attention must be given to pre-existing power relationships within GPNs and how fishers are included in the design and implementation of the system to ensure buy in and that SSFs are not further marginalized in seafood GPNs.

4.2 Information systems as a new site of environmental governance in seafood global production networks

Much of contemporary production, distribution and consumption of goods and services is organized through global production networks of interconnected firm and non-firm actors (e.g., governments, civil society) that are formed in relation to geographical, economic and social dimensions of production and consumption processes (Coe et al., 2004; Henderson et al., 2002). A key interest in GPN scholarship has been the concept of "chain governance", or how networks of firms, governments and other economic actors interact with each other to govern production and consumption processes, with much literature focusing on how "lead firms" exert power in chains to set the conditions of production.

Central to the GPN approach is the network view of governance in which power is not an inherent capability possessed by an actor to dominate another but rather a medium generated and used by actors in the network to achieve certain ends: an actor may use a range of resources (e.g., financial, political) to exercise power in chains in relation to other chain actors (Hess, 2008; Levy, 2008). The causal mechanisms that shape GPN structures and power distribution within are dynamically governed and change over time (Yeung and Coe, 2015). This dynamic model suggests that GPN structures (and the power dynamics within them) are subject to disruption and change and firms deploy a range of strategies to survive in the face of change.

Sustainability is now firmly a part of firm strategies in GPNs. Lead firms, defined by their ability to coordinate and control conditions of production in GPNs, play a dominant role in governing sustainability by imposing and defining sustainability standards in GPNs, often to improve their market position (Bolwig et al., 2010; Riisgaard et al., 2010). In short, concerns about sustainability and environmental upgrading are now well recognized to constitute power relations in GPNs (Havice and Campling, 2017; Ponte, 2019). As such, chain governance and environmental governance are intertwined as firms use and work through the environment to (re)position themselves in the network. Environmental sustainability is an integral part of seafood GPNs, evidenced in the multiplication of voluntary corporate sustainability commitments, multi-stakeholder initiatives (MSIs) and public-private partnerships (PPPs) that have sustainability goals in their mandate (Dauvergne and Lister, 2011; Ponte, 2019, 2014; Schouten et al., 2012). In other words, environmental sustainability is not only an object of governance in GPNs, it is also a tool firms and non-firm actors use to reposition themselves in the network relative to others; as

such, environmental sustainability has become a site of governance and political contestation within GPNs (Bair and Palpacuer, 2015; Havice and Campling, 2017).

In this context, information (and associated processes, technologies, institutions and resources linked to it) is restructuring institutions and practices of governance in GPNs (Mol, 2006). Information is a source of power with a transformative capacity that can be used by various actors engaged in environmental governance. The transformative powers of information are not derived from the content of information but rather from the enhancement of information collection, processing and transmission and the "time-space compressing" of information flows enabled through new information technologies that allow an increasing number of people to access and make use of the information at times and places distant from where and when the information originated. Consequently, environmental governance increasingly consists of struggles over access to, production and verification, and control over information related to questions of concern about the environment. Information is therefore a key source of power used in environmental governance due to the value of firms' reputational capital, legitimatory capital of NGOs, the central role of the media in environmental politics, and the power and influence of accountability mechanisms, (Auld et al., 2010; Gupta, 2008; Mol, 2015; Watts, 2015).

The development and deployment of information-based tools to disclose and expose the environmental performance of firms and fisheries is based on the assumption that information will empower civil society to act as a countervailing power against markets (and states) by holding them accountable. In other words, the act of disclosing information has become central to achieving environmental improvements in the seafood industry. However, the disclosure of environmental information has often become an end in and of

itself, with the assumption that greater transparency is inherently positive and creates greater accountability of powerful actors (Gupta, 2008; Mol, 2014). However, in practice, actors are unevenly positioned to create, access, control, and use information, and through these shortcomings can be made more or less vulnerable and accountable. Therefore, whether transparency supported by an information tool such as CDT leads to greater accountability of powerful actors and environmental improvements depends on the transparency arrangements created by the information tools, i.e., how the information disclosed is produced, (including its reliability and quality), who has access to what information and about whom, and for what purpose is the information used (Gupta, 2010; Mol, 2014). Consequently, information systems such as CDT that can influence fisheries environmental sustainability have become sites of environmental struggles in GPNs (Mol, 2006). How information systems such as CDT intersect with inter-firm relations thus depends on the characteristics of the transparency arrangements that arise from them.

Based on this understanding of CDT systems, and the transparency arrangements that arise from them as a new site of chain and environmental governance within GPNs (Figure 4.1), key questions that emerge are: **1) What are the strategies used by the lead firm to implement catch documentation and traceability?; 2) How does catch documentation and traceability restructure power relations within the chain and impact the position of the lead firm within the network? 3) What are the implications for catch documentation and traceability systems as tools to govern environmental sustainability in seafood GPNs?**

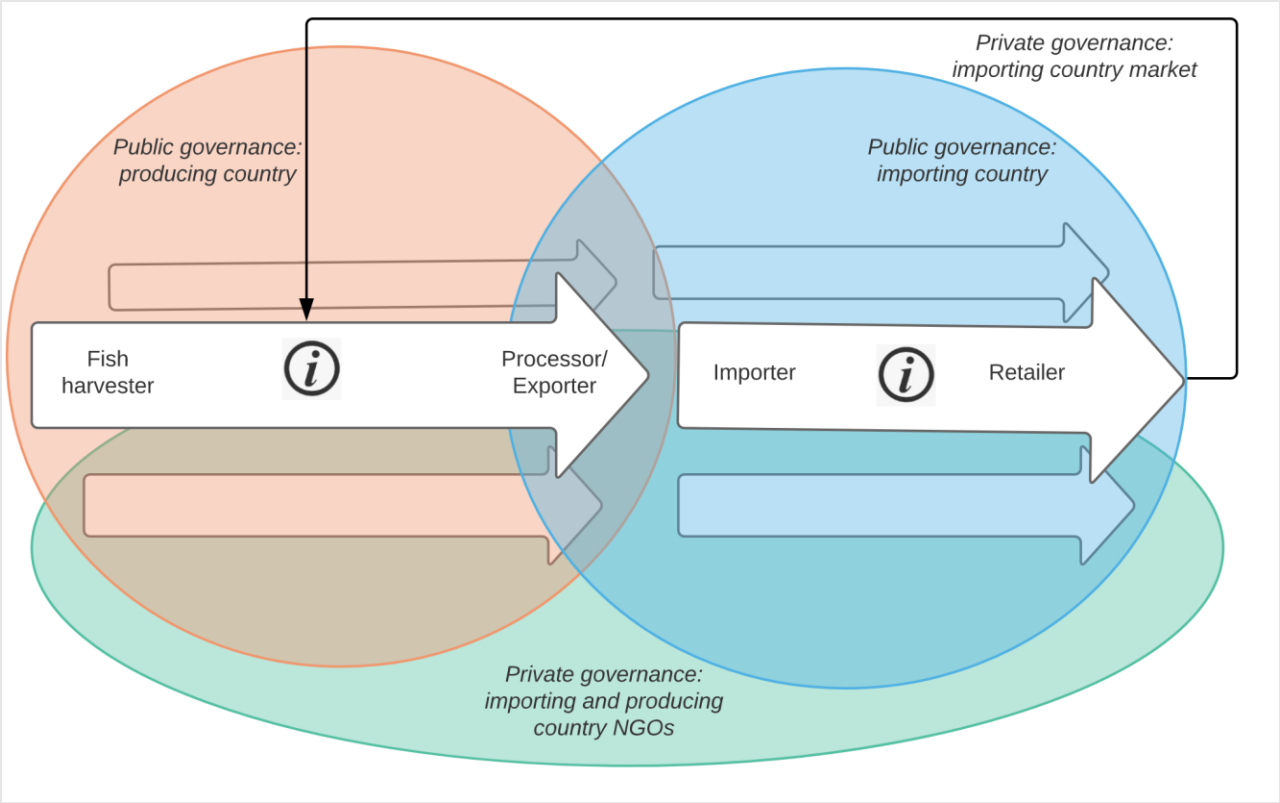

Figure 4.1. Conceptual framework of a seafood global value chain (white arrows), embedded in a production network (background arrows), where governance is directed by importing and producing countries, NGOs, and markets (circles), converging on processor/exporters.

4.3 Case study: implementation of CDT in an Indonesian handline tuna value chain

4.3.1 Case selection and data collection

Case selection and data collection

The case study used is the value chain of a North American processor and importer (Anova Food USA) sourcing from the Buru handline yellowfin tuna (*Thunnus albacares*) fishery in Eastern Indonesia and the various consecutive traceability projects it has implemented. It is exemplified by three main features. First, the fishery is small-scale and in a developing country. Second, the fishery is linked to an export value chain. Third, the fishery is subject

to state and market-based sustainability and traceability governance systems and has worked towards implementing CDT systems and associated technologies. As such, this value chain is value chain provide us an example of CDT systems intersect with inter-firm relationships in the context of a small-scale fishery embedded in an export-oriented seafood GPN subject to public and private forms of governance.

Data collection took place between November 2018 and April 2019 through phone and in-person interviews with projects' participants and a review of projects' reports and documentation. Participants were asked about their involvement and role in the project(s), the process of planning and execution of activities, what technologies were implemented and how these impacted their participation in the governance of the fishery and the value chains. In total, twelve semi-structured one-hour long interviews were conducted. The project participants all agreed beforehand to participate in the study by signing a consent form and were sent the questions in advance when requested. The interviews and analysis in this study were guided by the three analytical questions outlined in the previous section.

The Buru handline yellowfin tuna value chain

The Buru handline yellowfin tuna fishery takes place in Indonesian national and archipelagic waters off the coast of the island of Buru, located in the eastern province of Maluku. Fishers conduct one-day fishing trips in small one or two-manned vessels that are less than 10 metres in length and two gross tons and target western central Pacific yellowfin tuna. Once landed, the fish is sold to local traders (also called middlemen or brokers), who aggregate loins from several fishers in the area. Local traders trim, transport and sell the loins to a primary processor (Harta Samudra) located in Ambon city. As in other small-scale fisheries in the region, local traders and fishers typically have a patron-client

relationship where local traders provide credit and social welfare services to fishers and fishers pay back by selling only through the local traders they have obligations with (Bailey et al., 2015a; Tolentino-Zondervan et al., 2016). When the loins arrive at the primary processing plant, they are cleaned, retouched and frozen. Harta Samudra then sells the loins to Anova Foods USA, a secondary processor, exporter and importer producing final consumer products that are imported and sold into the North American market to large retailers (Figure 4.2).

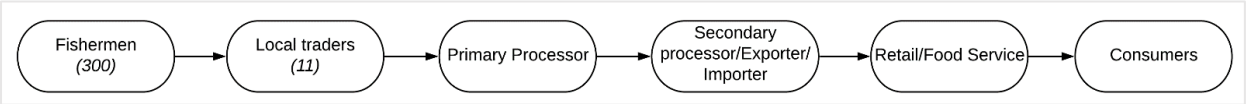

Figure 4.2. Value chain of the Buru handline yellowfin tuna fishery (numbers in brackets refer to the number of actors).

4.4 PUBLIC AND PRIVATE GOVERNANCE ARRANGEMENTS

The Buru value chain is part of a highly competitive global production network and subject to several public and private sustainability governance arrangements since a number of years (Table 4.1). State based governance systems relevant to the implementation of CDT include international fisheries and IUU policy frameworks, the Western and Central Pacific Fisheries Commission (WCPFC), the implementation of a government lead traceability in Indonesia (STELINA) and the US Seafood Import Monitoring Program (SIMP). However, given the often remote and informal nature of SSFs such as the Buru handline fishery, state-based regulations have generally failed to failed to fully consider the specific socio-economic context in which these fisheries operate and thus the appropriateness of these regulations and the ability SSFs to meet them. This is usually the result of lack of data and SSF's weak political voice. In the past two decades, private governance has become an

alternative and complement to public regulations. In the case of the Buru fishery, private governance initiatives have been driven by large US retailers (Anova's customers) who, under NGO pressure, have made various time-bound commitments to source their seafood from fisheries that are certified MSC or engaged in a FIP progressing towards MSC certification (CEA, 2020a). Consequently, the Buru handline tuna value chain has been engaged in a FIP since 2011 with an ultimate aim of achieving MSC certification (Duggan and Kochen, 2016). Moreover, the Buru handline fishery became certified to the Fair Trade USA standard for capture fisheries in 2014 (Borland and Bailey, 2019; Fair Trade USA, 2014). Unlike the FIP, the Fair Trade program was not driven by any specific retailers' commitments but rather by Anova's interest in differentiating itself and its handline tuna product as environmentally sustainable *and* socially responsible. In order to implement the FIP and Fair Trade certification, Anova established an Indonesian NGO in 2013 called *Masyarakat Dan Perikanan Indonesia* (MDPI). Both the FIP and Fair Trade certification program included CDT related activities to comply with the MSC and Fair Trade chain of custody standards, which were implemented by MDPI in partnership with Anova, Harta Samudra, local traders and fishers. In addition to CDT requirements associated with certifications, growing public and media attention to seafood fraud, mislabelling and IUU fishing since 2014 has led many retailers to make commitments to legal and traceable seafood, irrespective of whether it is engaged in a sustainability program or not. Consequently, suppliers such as Anova have been under increasing pressure to implement CDT systems in order to provide assurance of the provenance and legality of seafood products. More recently, some retailers, including Anova customers, have been piloting and developing consumer-facing traceability features on their seafood products in order to

enhance consumer trust. The number of public and private governance drivers for implementing CDT systems are present at global, regional and national levels of state governance systems, showing a now universal agreement among private and public actors on the need for CDT in seafood value chains.

Consequently, Anova and its suppliers face risks of loss of market access if they are unable to prove the provenance of their tuna products and CDT systems have become a mechanism for demonstrating compliance with market and regulatory information requirements in relation to the sustainability and legality of seafood products. However, the CDT systems, implementation and outcomes vary in different fisheries and seafood GPNs as these become shaped by the specific socio-economic and political context in which they are embedded. The Buru tuna value chain is embedded in a highly competitive international tuna GPN which is subject to increasing information demands while at the same time being embedded in complex local socio-economic dynamics such as the ones between fishers and local buyers. Moreover, the informal, remote and artisanal nature of the fishery means that it has very limited access to expertise, finance and capital for investing in upgrading activities while at the same time is being pressured to implement complex traceability systems in order to meet export market requirements. In the next sections, we review the implementation and outcomes of the CDT projects implemented in Anova's Buru handline tuna value chain as a result of the public and private governance arrangements described and how those projects were shaped by socio-economic and political context in which it is embedded.

STATE-BASED AGREEMENTS AND MEASURES	
INTERNATIONAL	
US SEAFOOD IMPORT MONITORING PROGRAM (SIMP) (2017)	In 2017, the US Seafood Import Monitoring Program (SIMP) came into force. SIMP is a risk-based import control measure to prevent IUU seafood product from entering the US market and requires importers to submit CDT documentation in compliance specific data standards (NMFS, 2016). Under SIMP, yellowfin tuna is considered a high-risk species which means this fishery and value chain must comply with the SIMP rule and associated data requirements.
REGIONAL	
REGIONAL PLAN OF ACTION TO PROMOTE RESPONSIBLE FISHING PRACTICES INCLUDING COMBATING ILLEGAL, UNREPORTED AND UNREGULATED FISHING IN SOUTHEAST ASIA (2007)	The RPOA IUU was endorsed by Indonesia, in 2007 and is based on the FAO's International Plan of Action to combat IUU. The RPOA requires all signatories to maintain a comprehensive and up-to-date vessel register and catch and effort information. The plan also requires countries to collaborate on implementing market measure to identify and track fish catches at all points of the value chain.
WCPFC'S CONSERVATION AND MANAGEMENT MEASURE ON DAILY CATCH AND EFFORT REPORTING (2013)	At the regional level, all tuna fisheries are subject to Conservation and Management Measures (CMM) set by the Western Central Pacific Fisheries Commission (WCPFC). In 2013, the WCPFC released the CMM on "Daily Catch and Effort reporting" (CMM 2013-05) which requires tuna fishing vessels to complete "an accurate written or electronic of every day that it spends at sea".
ASEAN CATCH DOCUMENTATION SCHEME (2017)	The ACDS is a set of non-regulatory guidelines regarding regional (electronic) catch documentation efforts by ASEAN member countries.
INDONESIA	
HARVEST STRATEGY DEVELOPMENT PROCESS FOR INDONESIA ARCHIPELAGIC WATERS (STARTED IN 2014)	In 2014, Indonesia launched a process to develop tuna harvest strategies and control rules for its archipelagic waters. This process further contributed to the need for improved data collection and monitoring systems in Indonesian tuna fisheries.
INDONESIA'S NATIONAL TUNA MANAGEMENT PLAN (2015-2019)	In 2015, Indonesia adopted a 4-year National Tuna Management Plan (NTMP) which sets the management framework and strategic objectives for all tuna fisheries in Indonesia (MMAF, 2015). The NTMP outlines a number of objectives to improve the availability and accuracy of catch and effort data in all tuna fisheries and the preparation of a supply chain system to document and track tuna products from landing to export. The NTMP did not set fishery-specific objectives and therefore does not make explicit how those measures will be implemented in handline tuna fisheries.
NATIONAL FISH TRACEABILITY AND STOCK SYSTEM (STELINA) (2018)	In 2018, Indonesia launched an online system (STELINA) to collect and track tuna products through supply chains, from landing to export. STELINA was piloted in 2018 and 2019 but is not yet fully operational nor has it been deployed in small-scale fisheries.
NON-STATE MARKET DRIVEN MEASURES	
FISHERY IMPROVEMENT PROJECT - MARINE STEWARDSHIP COUNCIL FISHERIES AND CHAIN OF CUSTODY STANDARDS (2011)	The MSC fisheries and chain of custody standards require a CDT to be in place in order to verify MSC product claims. The Buru handline tuna fishery underwent an MSC pre-assessment in 2010 and has been in a FIP to achieve MSC certification since 2011.
NON-STATE MARKET DRIVEN MEASURES	
FAIR TRADE USA CAPTURE FISHERIES STANDARD (2014)	The Fair Trade certification standard also requires a CDT system to be in place in order to verify Fair Trade product claims and accurately calculate the Fair Trade premium. The Buru handline tuna fishery has been Fair Trade certified since 2014.

NON-STATE MARKET DRIVEN MEASURES	
MEDIA ATTENTION LEADS RETAILERS TO INCREASE DEMAND FOR TRACEABLE SEAFOOD (2014)	Retailers require CDT to be in place to avoid seafood fraud and mislabelling and the associated reputational damage. CDT is also used to support consumer-facing traceability and associated marketing activities.

Table 4.1. International, regional and national state and nonstate market driven agreements and initiatives relevant to the implementation of CDT in the Buru tuna value chain.

4.5 CDT SYSTEMS IMPLEMENTED IN THE BURU TUNA VALUE CHAIN

Anova upgraded the traceability system in its Buru handline tuna value chain in response to state and market-based regulations. First, the Fair Trade certification in 2014 required traceability and records to be maintained down to the name of the individual fishers and Fair Trade fisherman association. Shortly after the Fair Trade certification, the Buru value chain took part in two projects to develop and pilot eCDT technologies that would help meet both market and state based regulations. The first project ("Technology innovations towards sustainability in Indonesia's tuna supply chains") was funded by the Dutch Research Council (Nederlandse Organisatie voor Wetenschappelijk Onderzoek or NWO) and implemented by a multi-stakeholder collaboration between Wageningen University (The Netherlands), EcoTrust Canada, MDPI, Anova and Harta Samudra (referred to as the NWO project hereafter). The NWO project's primary objective was to pilot and research eCDT technologies that would facilitate improved information flows between fisheries stakeholders in order to help both tuna fishers and processors in Indonesia meet the informational requirements of public and private systems and test the impact of consumer-facing traceability. More specifically, at the fisher node the goal was to implement a bi-directional technology system that would not only collect fisheries data but also provide information to the fisher (for example, where their catch was being sold). The idea is that

a bi-directional information flow could empower fishers to increase their bargaining power by improving their understanding of the value chain of which they are part. The anticipated technology was a platform that would improve supply chain transparency by linking fishers, local traders and processors to end-consumers. At the processor node, the goal was to implement a technology that would improve the speed and reduce the costs of traceability processes within the processing plant and help meet buyer informational requirements.

The second project was funded by the United State Agency for International Development (USAID) and led by a regional partnership between USAID and the Southeast Asian Fisheries Development Center (SEAFDEC): the Oceans and Fisheries Partnership (referred to as USAID Oceans hereafter). One of USAID Oceans' core objectives was to "support the development and implementation of transparent and financially sustainable eCDT systems that bolster the abilities of Asia-Pacific nations to combat IUU fishing practices, enhance fisheries management, and protect its citizens from human rights and labor abuses" (Project website, accessed 18/10/2019). As such, the project aimed to develop an eCDT system that would collect ecological, economic and social data related to seafood products that would be usable by government and all value chain actors, especially processors, local traders and fishers. Moreover, the project planned to be inclusive of small-scale fisheries and thus, develop a technology that would consider their socio-economic needs, such as safety-at-sea and securing higher prices (USAID, 2017b). For the implementation in Indonesia, USAID Oceans partnered with MDPI, Anova and Harta Samudra to develop and pilot CDT technologies in the Buru handline tuna fishery.

CDT credibility is related to the structure of information flows and transparency arrangements they create. Here, we present the outcomes of the projects in terms of technologies implemented and associated information flows, and examine how these aligned with the objectives set out in the proposed projects (Table 4.2, Figure 4.3). At the fisher node, Fair Trade's traceability requirements led to a manual traceability system that consisted of fishers and local traders marking each individual loin with the name of the fisher and Fair Trade association. The NWO project implemented a web-based traceability platform called *ThisFish* that allowed two-way communication between consumers and fishers via SMS (if initiated by the consumer). However, the feature was used less than a dozen times during the time of the project and therefore discontinued. This suggests that, from a market perspective, the CDT system in and of itself is used to generate consumer trust and therefore legitimacy rather than the information content. This use of the CDT systems raises some important questions around the power of these systems (especially those that are implemented by private actors that may end up focusing on the goal of traceability rather environmental sustainability. At the local trader node, two different electronic applications were developed to replace the local trader paper logbooks: *OurFish* (developed under NWO) and *Trafiz* (under USAID Oceans). Both *OurFish* and *Trafiz* were not successfully implemented for several reasons. First, there were several technical problems that reduced trust in the applications. Second, the more stringent accuracy of financial records required by the application conflicted with informal agreements with fishers, for example implicit margins for the traders. Finally, because the application requires separate records for each landing, inputting the data into the application was more time-consuming than writing the information down by hand. Ultimately the local traders

prioritized paper notebooks over *OurFish* and *Trafiz* but provided access to their data to auditors for the Fair Trade audits. Moreover, neither *OurFish* nor *Trafiz* were ever connected to downstream electronic traceability systems. When the loins are delivered to the primary processing plant, traceability information is manually inputted into Harta Samudra's internal electronic traceability system (initially *Tally-O* (owned by *ThisFish*) under NWO and then upgraded and repurposed as *Trace Tales* (owned by MDPI) under USAID Oceans). As the product moves through the processing plant, *Trace Tales* is used to record, and track information through each processing step. When the loins are boxed, a label with a Quick Response (QR) code is placed on each box of loins and is used to transfer the information to Anova. At the end of the processing line, a consumer-facing QR code is printed and placed on the final consumer package. Lastly, Anova implemented a *blockchain* system to connect *Trace Tales* to its internal quality control system (called an enterprise resource planning or ERP). The *blockchain* is used to link the consumer-facing QR to a webpage owned and managed by Anova, which contains provenance information (e.g., gear, fishery location, catch dates) but, unlike *ThisFish*, does not allow for two- way communication with the fisher. While the projects successfully implemented electronic traceability in the processing plants, they failed to implement eCDT technologies at the fisher and local trader nodes, despite intentions to do so. Moreover, information transfer remained one way – from upstream to downstream. This outcome reflects the difficulty in operationalizing fully eCDT in the upstream end, and the attending implication that upstream actors continue to be left out of the ownership and use of information generated through these systems. This outcome also shows the impact of pre-existing uneven power

relationship between fishers and their buyers on decisions around information transfer and access.

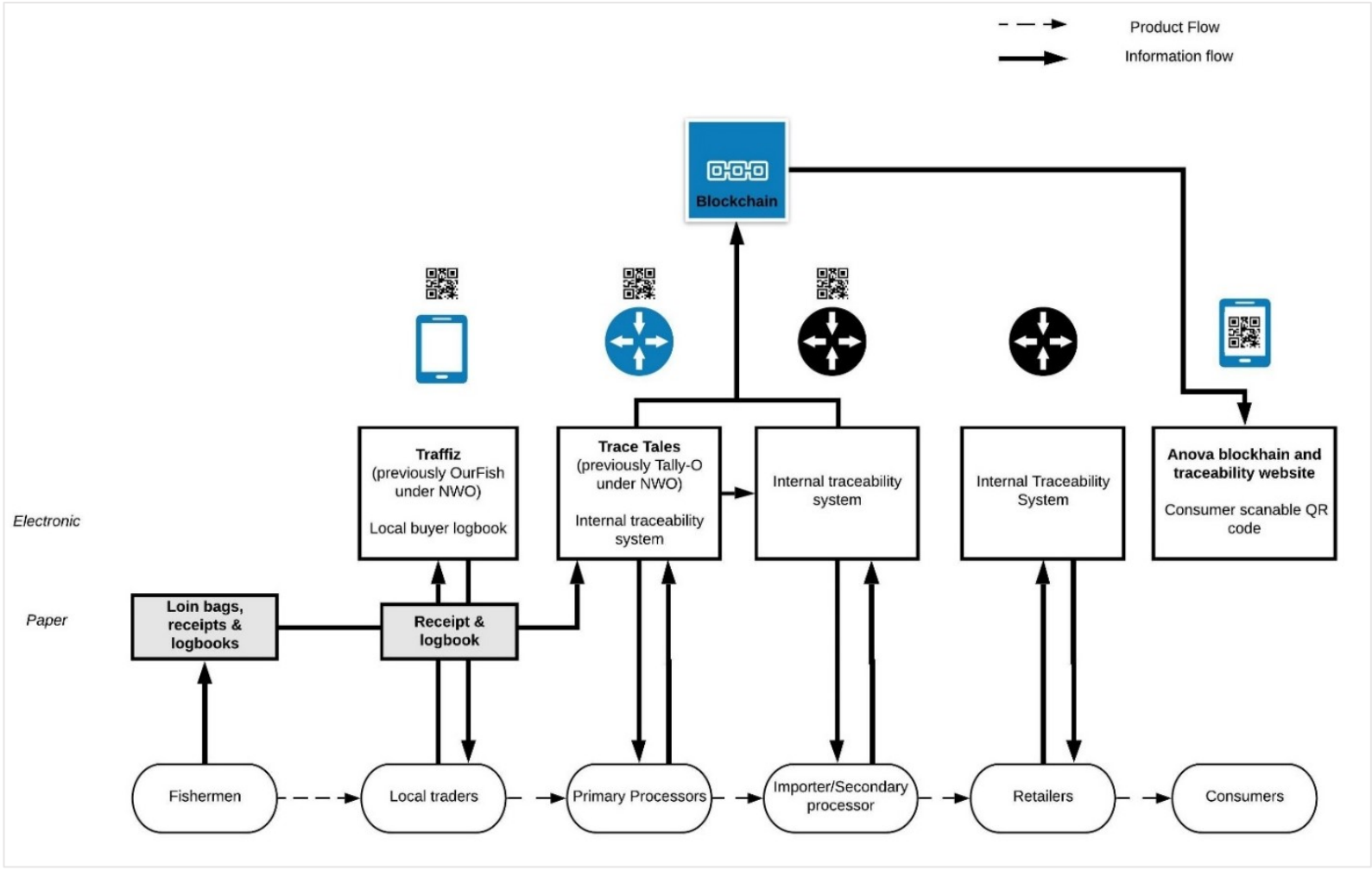

Figure 4.3. CDT system (including both paper and electronic systems) implemented in Anova's Buru handline tuna value chain.

VALUE CHAIN ACTORS	TRACEABILITY PROJECTS OBJECTIVES	OUTCOMES	TRANSPARENCY ARRANGEMENTS
FISHER	Empower fishers to improve their position in the value chain by implementing bi-directional traceability system provide information to the fisher (e.g., where their catch is being sold).	Implementation of *ThisFish* consumer-facing traceability and 2-way communication platform (discontinued when project ended).	No access to traceability data.
LOCAL TRADER	Digitize local trader's logbooks to facilitate information transfer from landing sites to processing plant.	Implementation of *OurFish* (discontinued when project ended) and *Trafiz* (not adopted).	Access to fishers operations data: fuel and ice use, loans, catch volumes, species etc.
PRIMARY PROCESSOR	Improved business efficiencies and compliance with market informational requirements by implementing a traceability technology.	Implementation of *Tally-O* under NWO replaced by *Trace Tales* under USAID Oceans).	Access to CDT data: fishing and landing location, fishing gear, fisherman name, fishers FT association, vessel ID, fish volumes, species, local trader information (name).
SECONDARY PROCESSOR/ IMPORTER		Traceability system and blockchain developed outside of USAID Oceans.	Access to CDT data sent by the primary processor: fishing and landing location, fishing gear, fisherman name, fishers FT association, vessel ID, species, primary processor information.

Table 4.2. Objectives and outcomes of the NWO and USAID Oceans project by value chain actor.

4.6 FIRM STRATEGIES AND RESULTING VALUE CHAIN AND PRODUCTION NETWORK IMPLICATIONS

4.6.1 Firm strategies to implement catch documentation and traceability

In this section, we examine the different strategies the lead firm Anova, deployed to implement a CDT system in the Buru tuna value chain to meet state and market-based requirements and strengthen its position within the GPN. We find that to implement CDT, Anova used a combination of interfirm strategies to leverage external capital, work with downstream actors and draw on internal capabilities. This shows that information requirements and the CDT systems implemented as a result are indeed intersecting with

interfirm relationships and central to Anova's ability to (re)define and maintain it position within the GPN.

Leveraging external resources

As lead firm, exporter and importer, Anova played a central role in the development and implementation of CDT systems and technologies in its value chain. Instrumental to Anova's strategies to meet market and regulatory sustainability and CDT requirements was the development of a new organization: MDPI. MDPI is an Indonesian NGO whose mission is "to empower fishing communities to achieve sustainability by harnessing market forces". Therefore, MDPI implements a variety of sustainability and traceability projects in Indonesian SSFs in order to help maintain access to markets. Since MDPI was established in 2013, Anova has been a regular funder of the organization leading to a close partnership in the implementation of various sustainability (FIP, Fair Trade) and CDT projects (USAID Oceans, NWO) in Anova's Indonesian value chains. MDPI thus became an epicenter for sustainability and CDT projects in which Anova is the primary actor, even though MDPI is able to support other businesses as well that may or may not be in Anova's interest. As such, the creation of a new institution, MDPI, was central to Anova's sustainability strategy as one interviewee explained "MDPI was an important factor in the implementation of those projects" (interview 12). Indeed, the creation of MDPI allowed Anova to leverage external resources to invest in sustainability projects that would not have been available otherwise. First, Anova created MDPI to gain access to local capabilities to implement sustainability related projects. Second, as an NGO, MDPI partnered with a wider set of organizations and thus was able to access additional resources (e.g., funding, partnerships). By having MDPI as a non-profit organization and project implementation

partner, Anova (and its supplier Harta Samudra) gained access to new sources of human and financial capital (approximately $150,000) that was leveraged to co-invest in the CDT projects. MDPI's resources and partnerships allowed Anova and Harta Samudra to co-develop and test different internal traceability systems and applications in its operations (*Tally-O* in NWO and then *Trace Tales* in USAID Oceans). The partnership with MDPI decreased the implementation and compliance costs (there were no license fees for the traceability software and technical support was provided at no cost). By leveraging additional financial and human resources through MDPI, Anova and Harta Samudra implemented a CDT system at a much lower cost than if they had done it alone. As such, access to external resources significantly improved the business case CDT by lowering the cost of implementation. Indeed, as one interviewee explained "if Anova would have had to pay for those projects, it would have been a major loss/deficit" (Interview 10). MDPI also served as Anova's partner for training fishers in implementing CDT and comply with Fair Trade's chain of custody requirements. MDPI brought together vertical and horizontal relationships through which firm and non-firm actors worked together to negotiate and implement CDT.

Partnerships and buying power

Even though one does not own the other, because Anova is Harta Samudra's sole buyer, the two companies are highly dependent upon each other and have had a long-standing business partnership based on co-development and co-investing in upgrading focused quality improvements and sustainability. As one interviewee explained "Because Anova buys all of Harta Samudra's tuna, that made things easier. The companies are extremely close" (interview 5). It was therefore a natural step for Harta Samudra to take part in the

CDT projects, seeing that both companies would benefit (i.e., improve regulatory compliance and market access) from developing complementary CDT systems. Because most local traders are not contractually obliged to sell to Harta Samudra, the CDT projects' partners aimed to specify the business case for local traders taking part. To do so, MDPI studied how the technology (*OurFish* then *Trafiz*) could benefit local traders compared to paper-based logbooks and test different versions of the technology. In addition, Harta Samudra also used its relationship with local traders to encourage them to use the eCDT technology in order to further strengthen the traceability system throughout the value chain (e.g., reduce errors, increase speed of transfer). Unfortunately, both projects were unsuccessful in implementing an electronic version of local trader's logbook mainly due to the lack of user friendliness of the applications developed, despite pre-scoping and piloting. MDPI also played a key role in training fishers in the CDT projects through its presence in and relationships with the fishing communities. MDPI's role in implementing the Fair Trade program contributed to building trust with fishers. Indeed, Fair Trade was a key enable for the implementation of CDT ("it was mainly the Fair Trade program that brought about this technology" interview 7; "Fair Trade gave extra incentives to fishers to implement traceability" interview 6). MDPI together with fishers and local traders designed a (manual) CDT system which consists of tracking the loins from landing to the processing plant (fishers use some of the Fair Trade premium to pay local traders to mark the loins). This would likely have proven more difficult if MDPI had not been viewed as an NGO external to Anova (the buyer).

4.6.2 Value chain performance and power relations

Upgrading

CDT enabled upgrading in the Anova value chain in two ways: market compliance and improved business analytics. CDT enabled Anova's Buru value chain to comply with market and state-based traceability requirements and therefore maintain access to the US market, which could have otherwise been compromised via lack of compliance with SIMP. Indeed, as two interviewees explained: "reporting for SIMP would have been almost impossible without it" (interview 1) and "the main motivation for implementing traceability was buyer demand and lowering the cost of compliance" (interview 7). The CDT system also met a core requirement of Fair Trade's chain of custody standard and customers' informational requirement to mitigate IUU risks. In the future, the CDT system will also likely support other Chain of Custody certifications such as the one required for MSC certified products ("The traceability projects made it easier to meet Fair Trade requirements" interview 7). Moreover, the electronic CDT technologies allowed for more efficient collection and transfer of the information required to meet the SIMP requirements. Harta Samudra derived a number of benefits from having an electronic internal traceability system in place (*Tally-O* then *Trace Tales)* including enhanced capabilities to manage, analyse and transfer data, which in turn led to improved operational efficiencies and business analytics. As several interviewees explained "Trace Tales is very efficient, so some staff can be redeployed to other parts of the business" and "there is less error in the data with detailed data at all stages of production" (interviews 7 and 12).

The CDT system also differentiated the Anova value chain within the tuna GPN in which it is embedded, which improved competitiveness. As two interviewees explained "the other

main motivator for implementing traceability was market differentiation" and "there was an overwhelming response to the project from Anova's customers" (interviews 11 and 12). By developing a blockchain and consumer-facing platform, Anova used the CDT system as an opportunity for market differentiation, reinforcing customer trust in the product and enhancing Anova's reputation as a first-mover in implementing blockchain in a small-scale fishery value chain. Furthermore, retailers were interested in partnering with Anova over other suppliers due to the opportunity to connect Anova's blockchain to their own in view of further strengthening their own traceability system. There is a double differentiation, firstly in "storied fish" (i.e., fish product which is marketed as having a story to attract consumers and generate trust) and secondly by being a first mover in blockchain implementation ("Anova is a leader in this space and goes above and beyond what the customers are asking for – creating new trends" interview 10).

Uneven power relations

The CDT system and the associated transparency arrangement did not shift power relations in the Buru handline value chain but rather reinforced pre-existing power relationships. Retailer power remained unchallenged in dictating traceability requirements and was reinforced from the positive impact traceability has on consumer trust, brand image and reputation. The consumer traceability platform *ThisFish* could have provided opportunities for fishers to communicate with consumers and thus enable them to see where their product is consumed, but retailers discontinued it out of concern that it would increase scrutiny of products without a consumer-facing feature (a rare feature at the time of the NOW project but became much more common later on). Indeed, one interviewee who took part in the

NWO project explained that "there was a big assumption that there would be market – and that was not the case. The business case came later" (interview 6). Second, the level of customization of the CDT system and the close collaboration between Anova and Harta Samudra deepened the mutual dependence between the two firms rather than changed the relationship. Finally, the fact that the CDT system implemented did not provide fishers with access to the traceability information being collected due to the one-way information nature of the CDT system did not allow fishers to gain visibility on the destination of their products, limiting their further understanding of the market for their products and thus their empowerment vis a vis their buyers. Consequently. the CDT projects did not affect fishers' position in the value chain while increasing their reporting burden, maintaining pre-existing power asymmetries whereby upstream actors with low capabilities depend on downstream actors to access markets (Gereffi et al., 2005; Purcell et al., 2017).

4.6.3 Implications for catch documentation and traceability as a tool to govern environmental sustainability in global seafood production networks

CDT systems are promoted as a tool that will increase transparency of seafood production practices and thus increase accountability of firms in terms of social and environmental performance. In our case study, CDT indeed increased the transparency of production practices but did not lead to any changes in the environmental or social practices in the fishery and value chain. Rather, the CDT system allowed the value chain to comply with regulatory (SIMP) and market informational requirements as well as chain of custody certification standards. Moreover, the CDT system implemented allowed for the social and environmental credentials of the fishery to be made more visible to consumers through the

consumer-facing feature. This allowed for product differentiation and reinforcement of customer trust in Anova; however, it did not empower fishers to take part in the marketing of their products and "tell their story" themselves. Again, the socio-economic needs of fishers (beyond the need to comply with Fair Trade traceability requirements) were not taken into account in the design of the CDT which means that the system did not benefit them beyond compliance e.g., operational efficiency, access to market data. From this we can draw some conclusions on the role of information and CDT systems in governing environmental sustainability in SSF value chains as well as the need for attention to power relationships in seafood GPNs more broadly. With regards to the role of information in governing sustainability in SSF value chains, our case study shows that the implementation of CDT systems is crucial for SSFs to maintain market access by allowing SSFs to demonstrate legality as well as social responsibility and environmental sustainability. Moreover, we found that lead firms such as Anova have a key role to play in the implementation of CDT systems in SSFs as they are able to leverage and provide the required human and financial capabilities to develop and implement CDT solutions. However, our case study provides another example of the challenges that come with lead firms driving upgrading activities that takes into account the interests of small-scale fishers in the design and implementation of CDT systems in a way that meets their social and economic needs e.g., improved livelihoods, improved bargaining power through an improved understanding of the market. In this case, the incentives for fishers to take part in the CDT projects was closely linked to Fair Trade certification and the associated price premium. As such, CDT was seen as a "worthwhile" additional burden for fishers. Overall, the CDT system served primarily as a tool for compliance rather than a tool to improve

fisher livelihoods and fisheries sustainability directly. This leads us to broader conclusions about the need for attention to power relations in GPNs as CDT systems advance in efforts to address social and environmental concerns in fisheries. As sustainability related information becomes an important source of power in governing environmental relations in seafood GPNs, special attention needs to be given about how CDT systems are used to reinforce or change power relationships. In our case study, we found that the CDT system implemented reinforced pre-existing uneven power relationships in favour of lead firms (Anova and its customers). If CDT systems are to improve fisheries sustainability, it is crucial to ensure that take into account who controls how CDT systems are designed and implemented.

4.7 Conclusion

In this article, we aimed to investigate how and why CDT systems interact with interfirm environmental relations in seafood global production networks, with a specific focus on SSFs. By positioning CDT systems as a form of informational governance, we were able to investigate the intersection between information and information systems with interfirm relationships in the context of environmental governance. Our results show that the CDT systems and the transparency arrangements that emerge from them are determined by how they are designed and implemented i.e., who was involved, what was their motivations, how were decisions made etc. At the same time, the design and implementation of the CDT system reflected pre-existing power asymmetries and relationships as powerful lead firms used their position to shape the CDT system in a way that maintains or improves their position within the network. Indeed, Anova deployed several strategies centered around

the creation of a new NGO (MDPI) with which it partnered with its suppliers and fishers as well as non-firm actors in order to leverage external resources. As such it used its position as a lead firm to implement a CDT system in the Buru value chain. The outcome of the CDT project was an overall upgraded value chain on two fronts: improved ability to comply with import and market requirements and market differentiation through innovative product features: “storied fish” and blockchain traceable. However, some benefits only accrued to Anova and Harta Samudra such as increased operational efficiencies and business analytics as well as improved reputation and brand image. Fishers and local buyers on the other hand only benefited through improved compliance with market requirements. This outcome reflects the difficulty in operationalizing fully eCDT in the upstream end, and the attending implication that upstream actors continue to be left out of the ownership and use of information generated through these systems. If CDT systems are to contribute to fisheries sustainability, they should be designed in a way that takes into account the context and interests of all who are to contribute to their implementation and does not perpetuate uneven power relationships.

CHAPTER 5 SOCIAL NETWORKS AND SEAFOOD SUSTAINABILITY GOVERNANCE: EXPLORING THE RELATIONSHIP BETWEEN SOCIAL CAPITAL AND THE PERFORMANCE OF FISHERY IMPROVEMENT PROJECTS (FIPS)

5.1 INTRODUCTION

The conservation and sustainable use of our oceans, seas and marine resources is one of the 17 goals set by the 2030 Agenda for Sustainable Development adopted by the United Nation in 2015 (UN, 2015). One approach to support this goal is the use of fishery certification and eco-labels that aim to incentivize fisheries to operate according to certain environmental standards using market rewards such as ensured long-term market access and price premiums (Gutiérrez & Morgan, 2015; Ponte, 2012; Roheim et al., 2011). Today, the most widely used certification and eco-label standard for environmental sustainability of fisheries is the Marine Stewardship Council (MSC) with approximately 12% of worldwide fisheries catch certified (MSC, 2017). Non-governmental organizations (NGOs) have succeeded in getting a large of number of retailers and food service companies in North America and Europe to make timebound commitments to sustainable sourcing based on the MSC standard (Bailey et al., 2018). These commitments have compelled upstream seafood supply chain actors to act in order to maintain market access and meet the growing market demand for sustainable seafood products. However, for many fisheries around the world, especially in small-scale and developing world fisheries, meeting the MSC standard requires considerable improvements in fishing practices and

fisheries management policies (Bush et al., 2013; Tlusty, 2012), with many of those improvements being infeasible or out of the control of the fishery itself (Stoll et al., 2020).

Consequently, the Sustainable Seafood Movement developed the concept of Fishery Improvement Projects (FIP), a structured multi-stakeholder approach to address environmental challenges in a fishery (CASS, 2019). The goal of most FIPs is to achieve a level of performance that meets the MSC standard, whether they wish to pursue certification or not. The intent of the FIP model is to allow fisheries that currently do not meet the MSC standard to maintain market access while working on credible improvements. The Conservation Alliance for Seafood Solutions (CASS) developed a series of guidelines that provide a list of criteria that FIPs should meet in order to be credible and meet market standards (CASS, 2019).

5.1.1 What defines FIP performance?

Since 2006, FIPs have become a widely promoted approach to sustainable fisheries and have proliferated around the globe with an estimated 127 active FIPs in place in 2018 (Villeda, 2018). Today, most seafood buyers include products from FIPs in their sourcing policies and commitments, making it an acceptable criterion for sustainability in the market place. However, the credibility and effectiveness of the FIP model has been questioned with the concern that FIPs with limited or no progress are still gaining some market access due in part to limited verification standards and capacity (Sampson et al., 2015) . As a result, a web platform (FisheryProgress.org**)** was developed to catalogue, verify and increase the transparency of FIP performance through self-reporting and independent (desk-based) verification. Through this platform, FIPs must report progress against a set

workplan twice a year and are rated from A to E for their performance defined by the extent to which they meet their milestones in a timely manner. Reporting on this web-based platform led to an increasing amount of data available to understand the FIP model better and what elements might contribute to its effectiveness. For instance, recent research used the FisheryProgress database to look at 18 potential FIP attributes and their link to FIP performance and found that only three were significantly linked to FIP performance, namely, cumulative project time, whether there are regional-level management arrangements in place, and the level of vulnerability of the target species (Thomas Travaille et al., 2019a). And while it seems that the FIP model may be delivering on its promise (Cannon et al., 2018; Thomas Travaille et al., 2019b), more research is still needed to understand what makes FIPs work (or not), especially for small-scale fisheries (Barr et al., 2019; Holt et al., 2019). Better understanding what factors contribute to FIP success would help FIP implementers and funders better design FIPs as an effective approach to sustainable fisheries, and thus a program in support of achieving the 2030 Agenda. However, current databases only collect data on a narrow range of FIP attributes and there has been a lack of attention to developing and evaluating other attributes.

5.1.2 Social networks and FIP performance

Fisheries management to achieve sustainable fisheries is an interdisciplinary task which requires the consideration of environmental, social and economic aspects (Phillipson and Symes, 2013). Any intervention that aims to influence how a fishery is managed should therefore consider all aspects of a fishery and how these aspects are interlinked. Moreover, managing fisheries ultimately boils down to managing and governing people and their

activities including fishers (Hilborn, 2007), and increasingly, value chains and markets as well (Jacquet et al., 2010). With the rise in private governance approaches to fisheries management and sustainability (e.g., certification, ratings programs), the number of stakeholders with an interest in fisheries management and seafood sustainability has grown to include local and international NGOs as well as private and public actors. As a result, fisheries governance now consists of coordinating *networks of public and private actors* and managing different interests and levels of influence (Barclay and Miller, 2018; Bush et al., 2015; Gibbs, 2008; Havice and Campling, 2017). Consequently, FIPs should be understood in contributing to fisheries management not only in how they embody improvements in relation to the network of related environmental and socio- economic aspects of fisheries, but also in the ways in which they engage and mobilize the network of actors that affect how fisheries are managed (González-Mon et al., 2019). If FIPs are then understood as networks of actors, the analysis of social networks in fisheries and associated supply chains may be a worthwhile exercise when designing an intervention such as a FIP which requires the collective and coordinated action of multiple stakeholders. One resource that arises from a social network and its attributes (e.g., structure, size), that may be of particular relevance to the performance of FIPs is social capital (Figure 5.1). Social capital typically consists of abstract social resources such as trust, reciprocity, accountability, and a common understanding of collective issues and how these should be resolved and arises from social relationships and how these are organized and structure (Burt, 2003; Scrivens and Smith, 2013). As such, social capital is an important resource to solving complex multi-stakeholder problems such as sustainable fisheries (Grafton, 2005; Gutiérrez et al., 2011; Nenadovic and Epstein, 2016).

Figure 5.1. The attributes of social networks give rise to different levels of social capital, which in turn affects FIP performance.

This paper will present the theoretical links between social network attributes, social capital, the governance of FIPs and FIP performance, and explore potential ways to measure those links. The central guiding question is how the social network attributes of FIPs impact their social capital and therefore their performance as a collective effort to improve the sustainability of a fishery. Understanding the relationship between social network structure and FIP performance through the creation and maintenance of social capital could help funders and practitioners in designing, implementing and monitoring FIPs.

In the next section, we will explain in more detail how social networks and social capital are relevant to FIP performance. We will then discuss potential social network attributes that may be relevant for measuring social capital in FIPs. Finally, we will make suggestions for future research to investigate further the relevance of social networks and social capital for FIP performance.

5.2 Governance, networks, and FIPs

As explained above, FIPs bring together a network of governmental, non-governmental and industry actors to work together towards a common objective: a sustainable fishery.

Industry actors drive FIPs in two ways: demanding and preferably sourcing products that come from a fishery engaged in a FIP and/or directly supporting the implementation of FIP activities through in-kind and financial support. As a resource manager, the role of government in FIPs is to improve the fishery's management system, for example, through policy change or improved implementation of existing policies. Finally, the role of NGOs in FIPs is usually that of a mediator and supervisor, coordinating FIP activities and ensuring continuous engagement of industry and government actors. As such, FIPs sit at the intersection between value chain and environmental governance (Figure 5.2) (Havice and Campling, 2017). Therefore, in this section we will present how the concept of networks has been used to study value chains and environmental governance and thereby construct a conceptual framework that may be relevant to understand FIP governance and performance.

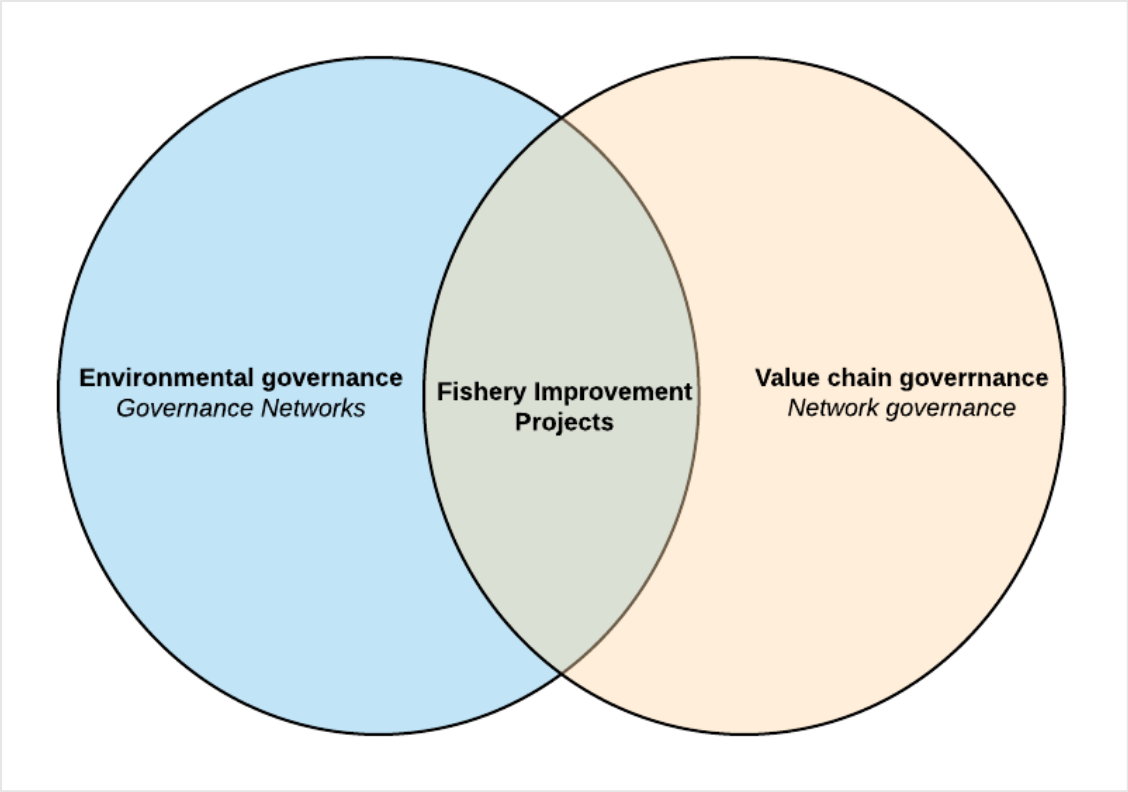

Figure 5.2. FIPs sit at the intersection of environmental and value chain governance, which means they sit at the intersection of governance networks and network governance.

5.2.1 Networks and value chain governance: network governance

The role of social networks in economic organization has been gaining attention, with the term network increasingly replacing the concept of linear supply chain to describe the organization of economic activities, giving rise to new concepts such as netchains (Lazzarini et al., 2001), production networks (Coe et al., 2008) and supply network ecosystems (Sloane and O'Reilly, 2013). Where most of the attention in the economics literature had been on vertical supply chain relationships (Gereffi et al., 2005), the concept of network reflects a shift towards a growing recognition of the horizontal inter-dependences between firms located at the same level of the supply chain (Choi and Kim, 2008). Several studies now recognize the importance of network structure for

implementing new practices in supply chains and responding to stakeholder requests (Roy et al., 2006; Wathne and Heide, 2004), giving rise to the concept of network governance.

Network governance is a theoretical concept developed to explain certain forms of inter-firm coordination (i.e., value chain governance) that are based on and influenced by social relationships (Jones et al., 1997). The idea of network governance came from the observation that as a result of globalization, supply chains have become more fragmented, disaggregated and organized around sub-contracting relationships (Arndt and Kierzkowski, 2001; Feenstra, 1998). Therefore, inter-firm coordination in different global industries (especially those subject to uncertain and competitive environments) are increasingly shaped by political and social relations and thus do not always follow pure hierarchical structures or market logic (Gereffi et al., 2005; Powell, 1990; Uzzi, 1987). As such, network governance is based on the idea that economic transactions are embedded in social relationships, a phenomenon described by the economic sociologist Mark Granovetter (1985) as "structural embeddedness" to explain why Transaction Costs Economics (TCE) failed to explain certain economic exchanges as it does not take into account the structure and content of network ties. By combining TCE and social network theory Jones et al. (1997) describe network governance as involving "a select, persistent and structured set of autonomous firms (as well as non-profit agencies) engaged in creating products or services based on implicit and open-ended contracts to adapt to environmental contingencies and to coordinate and safeguard exchanges. These contracts are socially not legally- binding" (p. 914).

Network governance can be a source of competitive advantage and supply chain efficiency and arises as a response to problems of adaptation, coordination, and safeguarding

exchanges more efficiently. The governance of specific product requirements between seafood suppliers and end-buyers, such as certain sustainability attributes, for example, is subject to network forms of governance. Indeed, even if sustainability attributes can be codified and standardized (e. g. third-party certification), there is no third-party system for certifying a credible FIP and FIP product. The Fisheryprogress.org platform does provide a certain level of verification; however, progress is still self-reported, and it is unclear to what extent, if any, FIP performance scores are used by end-buyers to discriminate between FIPs. Therefore, proving that a product comes from a credible and well-performing FIP still relies on more explicit coordination between first-tier suppliers and buyers using a mix of informal and formal documentation and communication. As a result, inter-firm coordination around the sustainability attributes of FIP products is likely based on trust and mutual dependence. Because FIPs are largely driven by downstream end-buyers (i.e., top-down), their effectiveness is likely partly determined by the relationship between first-tier suppliers and end-buyers and how these actors are involved in the FIP. Further down the supply chain, first-tier suppliers (usually processors and importers) typically work with local supply chains (suppliers and fishers) to implement improvements. Therefore, maintaining strong and long-term business relationships between importers, local suppliers and fishers is key to ensure FIP stability and progress and is another example of network governance of fisheries sustainability (Figure 5.3). In other words, the private governance of fisheries sustainability, and specifically the progress of fisheries improvement, relies on the characteristics of network governance in seafood supply chains.

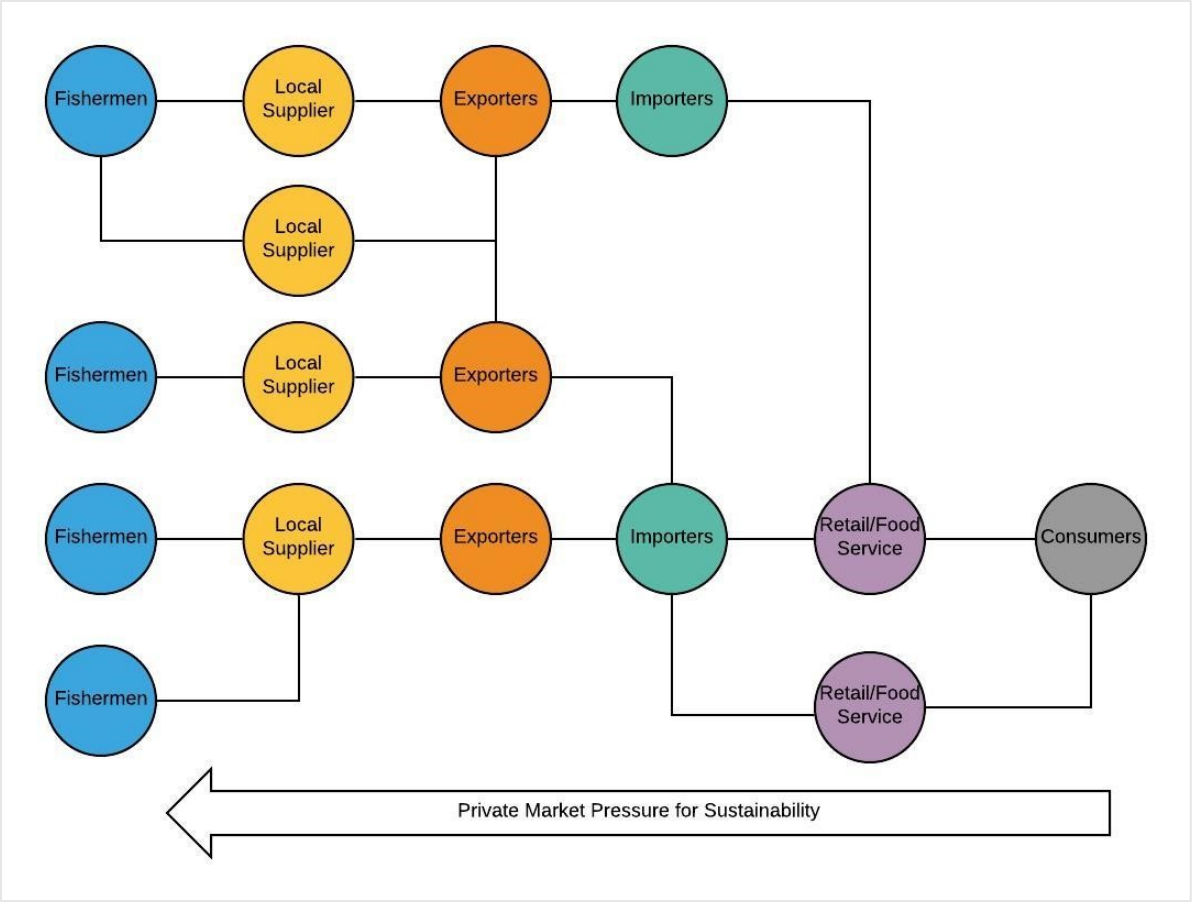

Figure 5.3. Sustainability aspects of seafood production are governed through supply chain networks.

5.2.2 Networks and environmental governance: governance networks

At the same time economic sociologists were discussing network governance, political scientists were discussing governance networks. The concept of governance networks was first put forward by political scientists in their study of policy networks to describe new kinds of interactions between public, semi-public, and private actors in governing an increasingly complex and fragmented society (Rhodes, 1997; Sørensen and Torfing, 2005; Stoker, 1998). Rhodes (1997) uses the term governance network to describe the observed shift from state-centered government towards less formal processes based on networks of inter-dependent public and private actors, the so-called shift from "government to

governance". Networks differ from markets and hierarchies in that they are not based on contracts, authority and rules of law but on trust and diplomacy (Rhodes, 2007). As such, it is shared norms and values that hold governance networks together (i.e., social capital) and lead to trust-worthy and cooperative behaviour. Governance itself is rooted in the concept of network as it is defined as "governing with and through networks" and based on the following propositions (Rhodes, 2007):

- Interdependence between organizations (including states and non-state actors)
- Continuing interactions between network members
- Game-like interactions based on trust and regulated by rules of the game negotiated and agreed by the network participants
- Autonomy from the states with networks not accountable to the state; although the state can steer networks, networks are largely self-organizing.

Given the shortfall of traditional government-led management, governance networks have also emerged in the fisheries sector (Gibbs, 2008). Indeed, private philanthropic foundations, environmental NGOs and supply chains have become active participants in the governance of fisheries through private approaches such as certification and FIPs. As such, the Sustainable Seafood Movement is governed by a network of actors working together to influence fisheries sustainability, giving rise to a more decentralized and networked form of governance where both public and private actors play, what has been deemed a governance "concert" (Barclay & Miller, 2018; Gutiérrez & Morgan, 2017). A FIP, as a multi-stakeholder initiative, is one of the governance strategies architectured by the Sustainable Seafood Movement that is based on the collective action and voluntary

participation of public and private actors with a common objective of improving the sustainability of a fishery. As such, a FIP can be defined as a type of environmental governance network (Figure 5.4). Fishery improvements often take time to be implemented and lead to policy and environmental outcomes (FIPs typically last several years) and, therefore, rely on the continuity and stability of relationships between FIP stakeholders, which in turn relies on long-term commitment, trust, accountability and a mutual understanding of the issues to be resolved and associated solutions. Therefore, these abstract qualities of social relationships between FIP stakeholders, both within and outside supply chains, are key to FIP success.

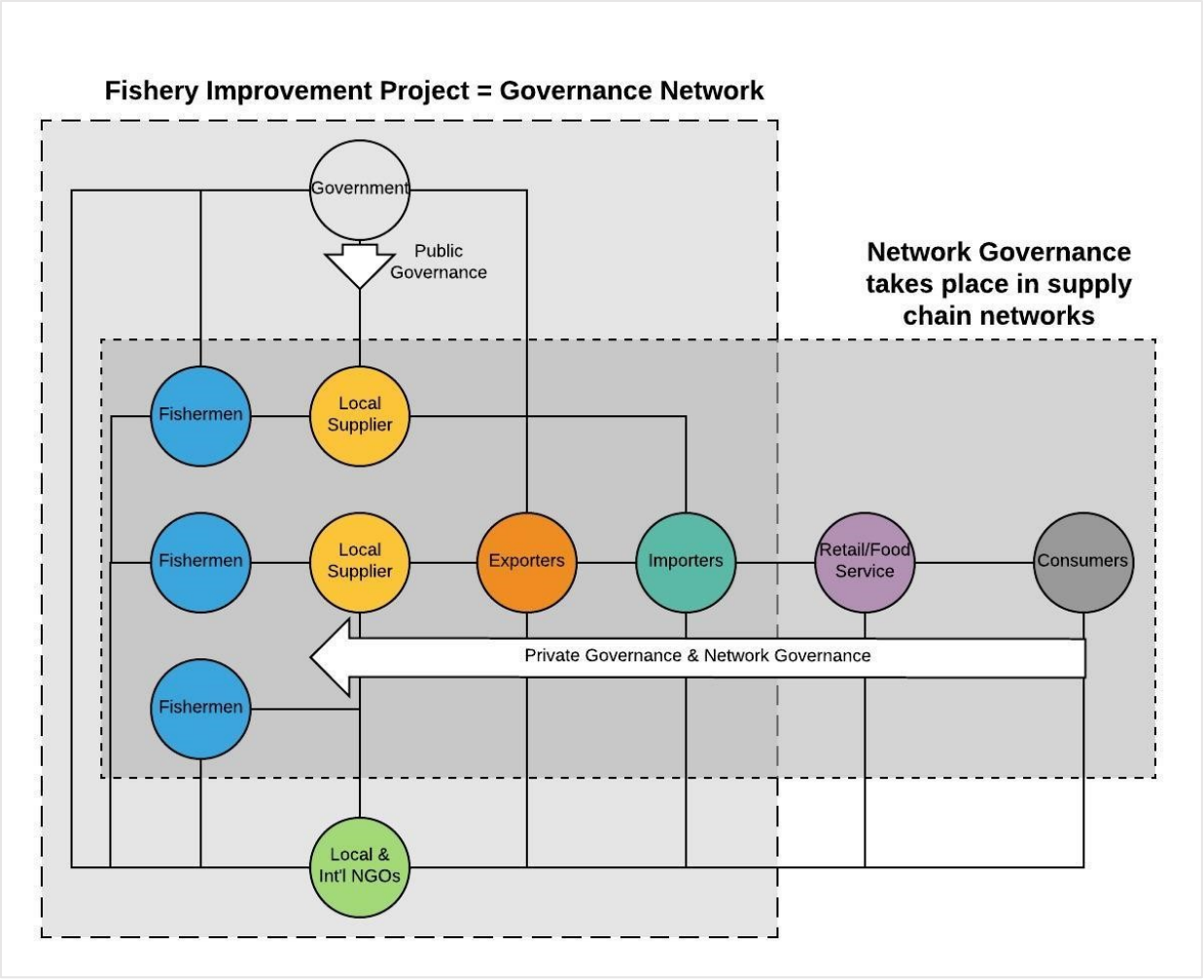

Figure 5.4. A FIP is a governance network of private and public actors with the collective goal of achieving environmental outcomes for a fishery and overlaps with network governance of value chains.

The role of social networks in environmental management has been the subject of previous academic interest (e.g. Bodin et al., 2006). Indeed, social networks have been identified as an important denominator to effectively deal with natural resource problems by facilitating 1) the generation, acquisition and diffusion of different types of knowledge and information about the systems under management; 2) the mobilization and allocation of key resources for effective governance; 3) commitment to common rules among actors fostering willingness to engage in monitoring and sanctioning programs; and 4) the resolution of

conflicts (Bodin & Crona, 2009). However, not all social networks are created equal, and the characteristics of a network can affect the ability of that network to govern responsible practices and to manage resources sustainably.

5.2.3 Governance of networks, collective action and social capital

How the structure of social networks affects social processes and the governance of networks such as FIPs can be understood through the concept of social capital. Social capital is not a clearly defined concept; however, three distinct representations have been identified in the literature (Grootaert et al., 2003). The first one is associated with sociologists such as Pierre Bourdieu, Ronald Burt and Nan Lin who define social capital as the resources (such as information and support) individuals can access through their social relationships (Burt, 2003; Lin, 1999). This view emphasizes the importance of network structure as having the most influence on how resources flow. For example, the strategic position of an actor may enable him or her to access resources or leverage certain relationships to gain access to resources (Burt, 1992). This first view sees social capital as an individual resource based on four types of resources or capital namely, information, influence, social credentials, and reinforcement (Lin, 2001). The second representation of social capital was largely developed by the political scientist Robert Putnam, who argued that social capital is created through social interactions between individual members of a community and can be translated into shared norms of reciprocity, cooperation, and mutual trust (Putnam, 2000). Therefore, the underlying idea of social capital is that certain network structures and network position facilitate cooperation and lower the “costs” of working together. As such, social capital is a collective resource that is available to all members of

the group. A third intermediate representation is one held by James Coleman and was influential in shaping Robert Putnam's work. Coleman sees social capital as both a private and public resource with the actions of individuals having positive (and potentially also negative) externalities for the wider group. As such, individual and collective social capital are co-dependent. These three representations are all valid and interrelated, showing the complex and multi-dimensional nature of social capital. Considering these definitions of social capital, the OECD differentiates between four types of social capital based on four dimensions: network structure and activities, the productive resources made accessible through those structures and, whether the social capital is owned by the individual, or by the collective (Scrivens and Smith, 2013). These lead to four forms of social capital (Table 5.1). In the case of FIPs and continual improvement of a governance network, the collective forms of social capital (civic engagement and trust and cooperative norms) are the most relevant as they contribute to collective action, as we will discuss further below.

	NETWORK STRUCTURE AND ACTIVITIES	**PRODUCTIVE RESOURCES**
INDIVIDUAL	Personal relationships	Social Network Support
COLLECTIVE	Civic Engagement	Trust and Cooperative Norms

Table 5.1. Four forms of social capital based on four dimensions. (Scrivens and Smith, 2013)

Governance networks provide opportunities for information sharing and collective action but can also pose challenges in terms of holding network members accountable to meeting network-level goals because participation is mostly voluntary (Provan and Kenis, 2008). Thus, the effectiveness and performance of governance networks rely on social capital to encourage network members to collaborate and ensure they stay engaged and are held

accountable for their responsibilities (Sandström and Carlsson, 2008). Indeed, Lubell and Fulton (2008) discuss various social mechanisms whereby governance networks may be vital in effective policy management and implementation, one of them being that social networks "represent an investment in social capital, important in the case of collective action within a decentralized multi-actor social system." This builds on the work of Ostrom and others, who argued that social capital is a crucial factor to promote collective action (Ostrom and Ahn, 2003). In that context, social capital refers to the norms and networks that facilitate co-operation (Grafton, 2005). The importance of social capital and social relationships in facilitating cooperative action to solve some of the negative consequences of destructive human behaviours should not be underestimated. Indeed, social capital decreases the transaction costs of working together: people will invest in collective action if they trust others will do so as well and not engage in private actions that damage the common good (Pretty, 2003).

Given that FIPs are collective action projects that rely on the voluntary collaboration of public and private actors and governed through networks formed by informal social relationships between private and public actors, understanding how social capital arises through those relationships is critical. Indeed, social capital and social network are increasingly seen as important components in ensuring successful fisheries governance (Grafton, 2005).

5.3 UNDERSTANDING THE PERFORMANCE OF FIPS USING A NETWORK PERSPECTIVE

Now that we have made the case that a FIP is a social network of private and public actors that come together to govern the sustainability of a fishery, and demonstrated the relevance of social network structure to the effectiveness of those governance networks, we will briefly review the method of Social Network Analysis (SNA) and key network metrics that may be relevant for understanding the performance of FIPs.

5.3.1 Social Network Analysis

Social network analysis (SNA) is a quantitative method to measure network characteristics such as disconnections within the network, relevant actors that should be mobilized, and who is important to work and negotiate with, and to influence and contact in order to achieve common (environmental) objectives (Scott, 2015). Based on graph theory, SNA provides standardized definitions and measures to describe quantitatively relationships, the network structure of those relationships, and the positions of actors within the network. As such, SNA combines the quantitative mathematical approach of graph theory with the qualitative and interpretive approach of sociology to describe and explain individual and collective behaviours based social relationships (Prell, 2012). SNA conceptualizes life in terms of structure of relationships rather than in terms of actor attributes. As such, the method of SNA is based on the paradigm that not only personal attributes influence personal performance, but that one's network position also matters because people influence each other (Borgatti and Li, 2009). In other words, SNA looks for causation in social structures and how individuals are embedded in that structure. For example, two

individuals with the same attributes may perform differently due to different network position, and people with the same attributes may behave similarly not because they have the same attributes but also because people with the same attributes tend to occupy similar network positions. Thus, similar network positions give rise to similar opportunities and constraints that in turn shape individual behaviour and performance. Social network characteristics can be viewed not only as affecting the behaviour or outcomes of individuals but also of networks. For example, the question "how does network structure affect the performance of FIPs?" positions the performance of the FIP as dependent on the network structure.

Stakeholder analysis (SA) or mapping is often used as part of the FIP scoping process to identify most relevant parties to the FIP and determine who needs to become a participant (CASS, 2019; WWF, 2013). SA is a methodology for identifying key stakeholders within a system and for assessing the potential impact that changes to that system might have on the identified stakeholders (Grimble, 1998). On the other hand, SNA represents and investigates the relationships and flows between individuals, groups or organizations, using quantitative statistical analysis to characterize the power of those relationships on individuals as well as on the functioning of the network as a whole. Thus, SNA is different from SA, but in the FIP context, can be complimentary by bringing in a more quantitative analysis to the qualitative approach of stakeholder analysis. For example, SA usually identifies and categorizes stakeholders subjectively (Prell et al., 2009) whereas SNA uses position in the networks to statistically identify types of stakeholders. Moreover, SNA allows consideration of the influence of relationships and network structure over the outcome of the network rather than looking at stakeholder influence in isolation. SA and

SNA have been combined in a number of fields of study such as natural resource management (Holland et al., 2010; Prell et al., 2009), so combining their benefits for understanding FIP performance may be a logical progression.

Over the past decade, there has been a growing interest in studying environmental governance, natural resource management and sustainability from a network perspective using SNA, focusing on understanding which structural network characteristics increase the likelihood of collaboration, collective action, and successful natural resource management (e.g. Bodin et al., 2006; Crona and Bodin, 2006). Five key structural characteristics have been found to affect social processes relevant for the governance of natural resources including 1) number of ties between actors in the network; 2) network cohesion; 3) sub-group linkages; 4) network centralization; and 5) actor centrality (Bodin and Crona, 2009). The importance of these structural characteristics have been shown to impact knowledge diffusion, mobilization and allocation of key resources, commitments to common rules, and conflict resolution (Bodin and Crona, 2009; Janssen et al., 2006; Prell et al., 2009). Social capital can also be measured by analysing the presence of three types of ties: bonding, bridging, and linking (Table 5.2) (Aldridge et al., 2002). Bonding social capital arises within a tight group of like-minded individuals who are connected through "strong ties." Bridging social capital arises from ties that connect similar but different groups or social networks. Linking social capital stands for ties that connect very different groups usually located at different hierarchies. These structural characteristics and types of ties could serve to help to provide an analytical lens to evaluating FIP performance, eventually perhaps leading to a set of necessary enabling factors required of a FIP network in order to achieve continual improvement.

Here we provide two examples of how network structural characteristics are linked to social capital. First, dense networks, that is, networks in which everyone is connected to each other, means that it is harder to escape the scrutiny of others and increases the likelihood of working together (Burt, 2003). This occurs through two mechanisms. First, social structure affects how information is accessed making it less likely that the information will be altered in denser networks (i.e., contributes to alignment of views and credibility) (Coleman, 1990). Second, dense networks facilitate sanctions and therefore make it less risky for network participants to trust each other and work together through the development of common rules and norms (Burt, 2003). Structural holes are another example of how social capital is affected by network structure (Burt, 2004). Structural holes occur when two sub-groups are not strongly or well connected and act as an insulator and keep information from flowing between people. Thus, actors located in between such sub-groups or in those structural holes may be of particular importance, creating a high level of social capital by accessing information from two disconnect groups but also through potential control of information flow. This "broker" position can be measured though indexes such the network betweenness, developed by Freeman (1977). How the person or organization occupying this broker position uses this social capital (e.g., to facilitate or control) is likely to affect how the network operates, and the likelihood of collective action taking place. These are but two examples of how network structure and position affect the social capital at the individual and network level, which in turn affects a network's ability for collective action for achieving common objectives, which in the case of FIPs is usually continual improvement toward environmental sustainability.

Other network characteristics may affect those two mechanisms as well. For example, if a network is large, it is more likely to have structural holes. If a network is dense, social capital in the form of higher scrutiny and shared norms may be high but social capital in the form of brokered structural holes may be lower (Burt, 2003). Therefore, when looking at issues of cooperation and collective action, it is important to look at both network level and actor level characteristics because collective social capital is linked to both individual and collective social capital. When social capital is high, people have more confidence in investing in collective activities and are less likely to engage in private actions (Pretty, 2003). When seen as social and governance networks, FIPs and their performance can be linked to actor level and network level network characteristics. In the next section, we will present some specific types of network measures that could be used to map and measure social networks within FIPs in an effort to understand relational dynamics that may influence their performance.

5.3.2 Actor level measures

Centrality

Actor centrality was found to significantly affect two features important for adaptive management, namely adaptive capacity and learning (Bodin et al., 2006; Newig et al., 2010). The centrality of an individual refers to the extent to which an actor occupies a central position. Centrality can be conceptualized in different ways and can refer to how many ties an actor has (degree centrality), how many times it falls between two other actors (betweenness centrality), how close to all the other actors in the network he/she is (closeness centrality), or how well connected it is to central actors (Eigenvector centrality).

Central actors can contact many members of the network quickly, potentially exert influence on them, and are better situated to access valuable information. This can put them at an advantage and therefore it is important that these actors use this position in a way that benefits the collective interest (Bodin and Crona, 2009). Centrality has been shown to be positive for coordinating the process of solving simple tasks because important information can be synthesized and transmitted to a few actors who can make a decision and take action (Bodin et al., 2006).

Central actors may also positively contribute to effective coordination in times of change when resources need to be mobilized to adapt to the new situation. If only a few individuals occupy a central position, there is a risk of centralized decision-making leading to issues of legitimacy and democracy in the way the network is governed (Bodin et al., 2006). This ability to support coordination may be an interesting point of future study given the importance of inter-firm coordination in theories of global value chain governance. Focusing on the implementation of sustainable practices in value chains, Vurro et al., (2009) explain that network analysis can help us understand the dependencies between supply chain actors and the associated need for mutual trust and collaboration to implement sustainability. Therefore, they link network metrics (density and centrality) to different types of sustainable value chain governance. How the different kinds of centrality are linked to network governance in resource management is summarized in Table 5.2.

TYPE OF CENTRALITY	DEFINITION	IMPACT ON SOCIAL CAPITAL	REFERENCES
DEGREE CENTRALITY	The sum of an actor's connections	+ Increases an actor's influence. This influence depends on the strength of those ties. Many ties often mean these are weak therefore influence does not continuously increase with the number of ties; + Central actors can use their position to coordinate activities, execute leadership, and synthesize others' knowledge and opinions, essential for collective sense-making and collaboration; + Central actors can be targeted to motivate a network quickly and diffuse information; - Too many ties can create constraint as these create feelings of obligations to please.	Bodin (2017) Bodin and Crona (2009) Prell et al. (2009)
BETWEENNESS CENTRALITY	Measures how many times an actor falls on the shortest path between two actors. Betweenness centrality can be used to calculate the modularity of a network, i.e., the extent of network cohesion.	+ Actors with high betweenness centrality can influence the flow of resources between others and may have access to different kinds of resources and information; + Can act as bridges between disconnected actors (broker) and help provide a holistic view of the issue, a benefit for collective action; + Can support the gathering and diffusion of information from and to the whole network; - May create constraints by being exposed to different positions and opinions; - Having many actors with high betweenness centrality can make a network more vulnerable to fragmentation if these actors disappear, are not willing to play a coordinating role, or if their ties are weakened; - High betweenness centrality may negatively affect the redundancy and buffering in a network, both desirable network attributes for collective action.	Burt (2003) Freeman (1979) Granovetter (1973) Prell et al. (2009)
CLOSENESS CENTRALITY	Measures how close actors are to each other by measuring the length of the path between actors	+ High closeness is often associated with independence and autonomy. A node with high closeness centrality is freer from an actor's influence and is better able to act independently.	Freeman (1979)

Table 5.2. Centrality measure linked to effective collective action, with positive impacts on social capital indicated by "+" and negative impacts indicated by "-"

5.3.3 Network level measures

Network level measures can also provide insights on how network configurations may influence effective natural resource governance. For instance, when a network is characterized by high density of ties, it is likely that more communication is occurring, which may mean more mutual trust and the development of knowledge and understanding and more accountability between actors. This leads to higher potential for collective action and collaboration (Bodin et al., 2006; Coleman, 1990; Granovetter, 1985). However, excessive high density can have negative effects such as homogenization of information and knowledge, which may limit innovation and adaptability in the network. In the context of FIPs, allowing new knowledge to be integrated and communicated among FIP participants and the ability to adapt to new information is key to ensure that the FIP activities continue to meet the objectives of FIP stakeholders. For instance, the conditions of a fishery may change which may shift interests and ability of participants to take part in the FIP. This is why NGOs recommend FIPs to establish a Steering Committee, clear memorandums of understanding, detailed workplan and regular public reporting (CASS, 2019; WWF, 2013). Network cohesion, which is the tendency to form sub-groups, is another network level measure, which may pose a challenge to cooperative action. For instance, the existence of sub-group can create "tribal" and divisive attitudes. This can sometimes be an issue in FIPs as these bring together actors from different sectors that often operate according to different paradigms or who have not traditionally worked together (Bitzer and Glasbergen, 2015; Future of Fish, 2019). However, if intermediate actors connecting sub-groups (i.e., brokers) are able and willing to coordinate sub-groups, this limitation can be overcome. Other network level measures considered important for collective action include diameter and centralization and are described in Table 5.3.

NETWORK LEVEL MEASURES	DEFINITION	IMPACT ON NETWORK GOVERNANCE	REFERENCE
DENSITY	The proportion of existing ties compared to all potential ties. Density is also referred to as network closure.	+ Higher density usually translates into more communication, reciprocity, and mutual trust which, all contribute to knowledge development, development of common norms, and understanding as well as exposure to new ideas; + High density increases mutual trust and trustworthiness; + High density increases social monitoring; + Development of social obligations and expectations; + Lowers the risks for information deterioration; + All of the above contribute to the establishment of collaborative norms. - High density reduces heterogeneity and potential for innovation.	Bodin and Crona (2009) Granovetter (1973) Robins et al. (2011) Burt (2003) Crona and Bodin (2006)
MODULARITY OR COHESION	Describes the tendency to form multiple sub-groups. A sub-group, also called a component, clique, or cluster is defined as having significantly more (bonding) ties between its members than it has with non-members.	- High modularity often means a fragmented network and thus lead to us vs. them mindset. This can limit the capacity for consensus-building. This can be mitigated if actors connecting sub-groups (brokers, usually with high centrality scores) have the capacity and willingness to coordinate sub-groups towards common objectives; + Sub-groups are good for knowledge development within sub-groups and if sub-groups interact in a positive way, they can support the development of comprehensive and diverse knowledge at the network level.	Bodin et al., (2006) Wasserman and Faust (1994)
DIAMETER	The longest path between two actors. Diameter can translate into reachability, i.e., the maximum number of steps needed to reach from one node to any other node.	- It is assumed that the higher the diameter, the less cohesive the network. This can affect collaboration, social memory, and adaptive capacity.	Crona and Bodin (2006)
CENTRALIZATION	Describes the extent to which the network is organized around central actors. This measure is complementary to network density. A very dense network usually means it is less centralized.	+ High centralization means that most of the ties are organized around one or few actors. High centralization may be useful in the initial phase of a project to form groups and build support for collective action; - On the long term, high centralization can become disadvantageous for long-term planning and problem solving.	Crona and Bodin, (2006) Prell et al., (2009) Provan and Milward (1995)

Table 5.3. Network level measures and their impact on effective collective action, with positive impacts on social capital indicated by "+" and negative impacts indicated by "-".

5.3.4 Examples

In order to illustrate some of the measures we suggest can be used to assess social capital in FIPs, especially collective social capital, we provide four examples of hypothetical FIPs with different network structures and associated network measures (Table 5.4, Figure 5.5). Network 1 has a high density with a high number of connections upstream of the value chains, where fishers, processors, a local NGO and governments are well connected with each other, potentially leading to higher levels of cooperation. Moreover, the network is not highly centralized which could suggest that the FIP is a collective effort but might lack leadership. Network 2 is moderately centralized around mid-chain actors (processor and importer) who have hired an independent consultant to manage and advise them on FIP activities. Density is low, which means that implementation of FIP activities could be highly dependent on the processor's ability to enroll fishing companies in the FIP activities. Network 3 is fragmented (low modularity) and highly centralized around a fishing association to which fishing companies are members and who has partnered with an international NGO (that is, also advising their retail customers) for implementing FIP activities. In this case, the fishing association has ties with the government, which could mean that it has influence over government decisions that support the FIP; however, the performance of the FIP will depend on the strengths of the relationships between the fishing association and the fishing companies. Finally, network 4 is moderately centralized around a processor association and local NGO which, together work with fisher groups and an international NGO connected to the end retail customer. The network is denser than the others due to the additional connections between the upstream and downstream ends

of the supply chain which could potentially provide additional incentives and pressure to implement FIP activities.

	NETWORK 1	NETWORK 2	NETWORK 3	NETWORK 4
DENSITY	0.361	0.250	0.357	0.389
MODULARITY	0.201	0.167	0.075	0.265
DIAMETER	4	4	3	3
CENTRALIZATION	0.49	0.57	0.61	0.48

Table 5.4. Network level measures of example (fictional) FIP networks.

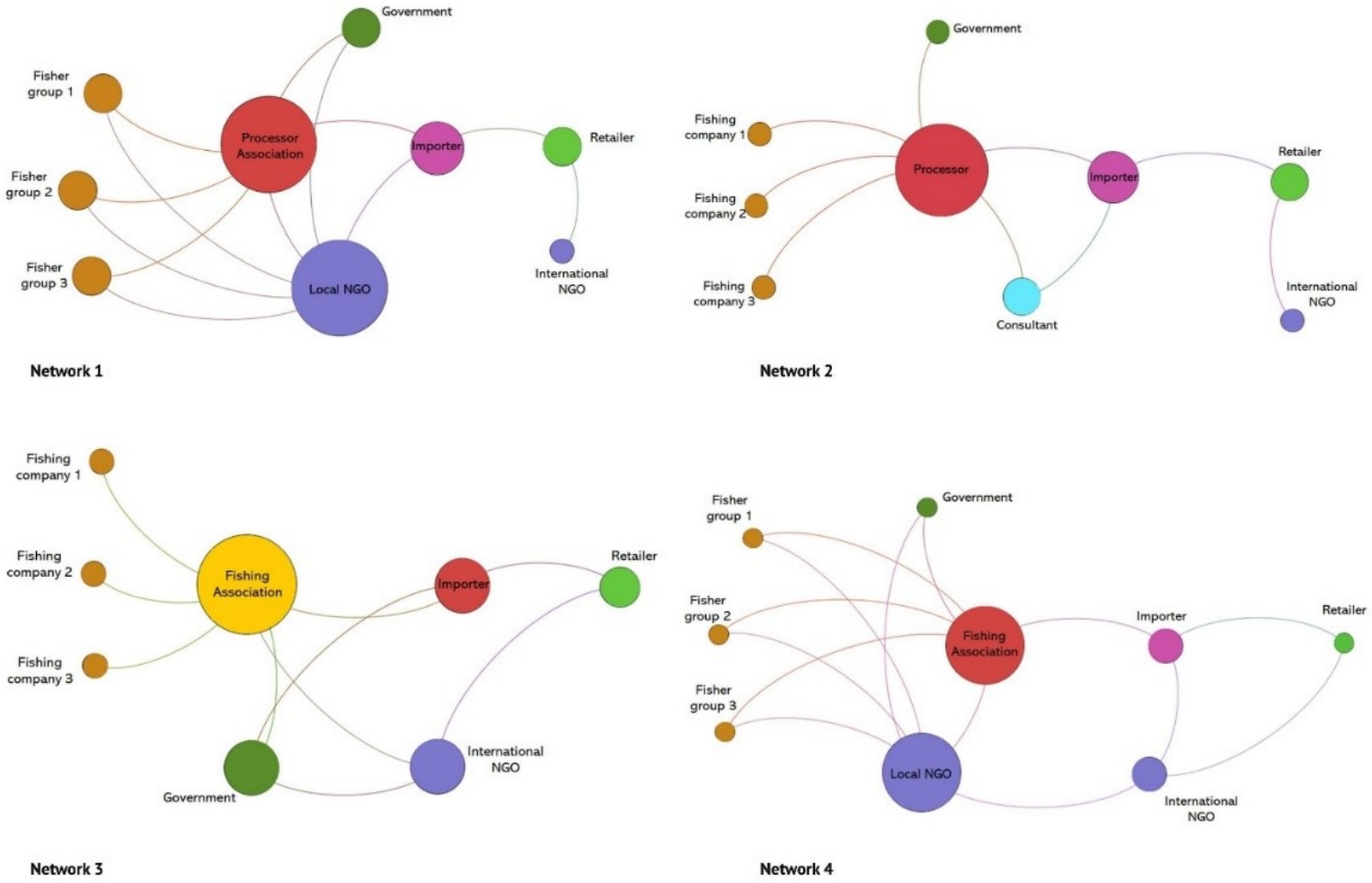

Figure 5.5. Examples of simple fictional FIP social networks (the size of the nodes are proportionate to the degree centrality of each actor).

5.4 FUTURE RESEARCH

Empirical research on FIP performance and effectiveness is still limited to a handful of peer-reviewed and gray literature (Cannon et al., 2018; CEA, 2015; Sampson et al., 2015; Thomas Travaille et al., 2019a; Villeda, 2018), none of which take FIP network dynamics, social networks, or social capital into account. This is surprising given the rising number of FIPs as well as the existence of tools for transparently monitoring, evaluating and reporting FIP progress. This is also concerning because it means that the sector is increasingly advocating for the "FIP model" which has yet to be shown to work across fisheries and contexts (Barr et al., 2019; Stoll et al., 2020). Therefore, more research is urgently needed for developing tools to understand the inside workings and context of individual fisheries, how stakeholders within fisheries and their value chains are connected, how the sector is connected to other related sectors and various markets, and how FIPs impact the network system that is a fishery, its surrounding community and value chains. Combining different tools such as stakeholder analysis and mapping, value chain analysis and social network analysis, we can better understand how FIPs can support the goal of sustainable fisheries and seafood sustainability. This is especially true as the scope of FIPs is expanding to include social and business improvements.

Social network analysis is but one of the tools that can help better understand how social networks and social capital matter to FIP performance, but it could bring significant insights on the impact of social relationships and social capital for achieving successful collective outcomes. Furthermore, since a FIP is a multi-stakeholder platform for engaging value chain actors in the policy-making process, examining the performance of FIPs from a social network perspective could help gain insights on how FIPs can better contribute to

and influence regulators, something that FIPs have struggled with and could significantly increase FIP success. Therefore, we suggest that several aspects should be further investigated. First, key metrics relevant to fisheries and FIPs should be better defined by ground-truthing some of the suggestions made in this article as well as others (Bodin et al., 2019; Bodin, 2017; González-Mon et al., 2019; Grafton, 2005) and develop a methodology including questionnaires to collect information on those key social network metrics. This could use existing methods to measure social capital and social networks (Prell, 2012; Prell et al., 2009; Siegler, 2014). Another area of research needed to understand betterthe impact of social networks on FIP performance would be to conduct social network analyses across FIPs and evaluate links between social network metrics and FIP performance using existing FIPs. This could be done first as a snapshot and re-evaluated overtime through longitudinal studies that could understand correlations between exiting and evolving dynamics of social capital and FIP performance. Furthermore, empirical research is also needed to identify strategies that leverage social networks and social capital to accelerate FIP progress and support a model of continual improvement. For instance, the role mid-chain actors may have been underestimated in the past by the Sustainable Seafood Movement and analysing how their bottleneck position connecting markets and producers, importing countries and producing countries may reveal that they hold a key broker position in the network with high social capital. Finally, another potential interesting avenue of research would be to explore how the modelling of FIP networks through SNA could be used as part of Integrated Ecosystem Assessments (IEAs) and explore how the structure of FIP networks, including value chains, would be affected under the different shared socioeconomic pathways (SSPs). For instance, the evolving demand for seafood

products in different parts of the world under the various SSPs could affect the network structure of seafood value chains and the extent market-based approaches for sustainability such a FIPs are used and possible.

5.5 Conclusion

In this article, we aimed to make the first step for considering FIPs as governance networks, essentially social networks of actors including fishers and their communities, NGOs, industry, philanthropic foundations, governments, scientists and market actors that represent a collective effort to improve the (environmental) sustainability of the fishery. Looking at FIPs from a network perspective potentially allows us to understand better how and why FIP actors and stakeholders interact the way they do and therefore help target interventions to leverage actors in key positions, identify key relationships and actors, and determine how FIP-related activities may impact different actors through the network. Taking a network or system perspective on environmental, social and economic issues is not new and fisheries sustainability is one of those multi-faceted issue that will only be dealt with if we take all aspects into account, including the most central to all, namely, people and relationships.

CHAPTER 6 CONCLUSION

6.1 INTRODUCTION

This thesis set out to investigate the accountability of mid-chain companies in the wild-seafood industry by the Sustainable Seafood Movement (SSM). To do so, I framed the SSM as an accountability movement and described accountability of CSR using three key elements (based on Bäckstrand, 2008): 1) a ***standard*** that describes the behaviour or outcomes that the one being held account to is expected to meet or produce; 2) ***procedures to monitor and access information*** about the behaviour and outcomes of the one being held account to against the standard and; 3) ***means to reward and sanction*** the one being held account to, to enforce compliance. All these elements need to exist for an accountability system to be effective, and to which information and transparency are central.

I critically examined the three elements of accountability (**Chapter 2**) and took a specific focus on information by examining contemporary tools to increase transparency and information in the industry, namely CSR reports (**Chapter 3**) and traceability (**Chapter 4**). I put my findings on CSR disclosure and traceability in the context of informational governance. I also investigated the potential of social capital in improving accountability in fishery improvement projects specifically (**Chapter 5**). Finally, I examined what the outcomes of current accountability mechanisms by analysing the CSR practices of the 25 largest seafood companies based on their CSR reports (**Chapter 3**). Drawing on all

chapters, I conclude with suggestions on how accountability of seafood CSR can be improved.

Based on the research conducted, this conclusion sets out to answer the following questions (as presented in the introduction):

1) **What is the level of CSR accountability of mid-chain seafood companies created by the SSM through standards, monitoring and sanctions?**
2) **What CSR practices result from this accountability system and what is their potential to lead to improvements?**
3) **What are key opportunities to improve CSR accountability and CSR practices?**

What is the level of CSR accountability of mid-chain seafood companies created by the SSM through standards, monitoring and information and sanctions?

6.2 CSR STANDARDS

6.2.1 Seafood CSR standards

In **Chapter 2**, I reviewed and examined the various standards developed and used by the SSM. These standards are based on high level guidelines and goals such as the FAO Code of Conduct for Responsible Fisheries and the UN Sustainable Development Goals (SDGs), which are translated into specific certification or benchmarking standards that seafood companies are required to meet in order to be considered socially responsible and

environmentally sustainable. These standards cover one or several dimensions of seafood sustainability including environmental sustainability, traceability, illegal fishing and human and labour rights (**Chapter 2 and 3**). Environmental standards include the Marine Stewardship Council (MSC) capture fisheries standard, traceability standards include the Global Dialogue for Seafood Traceability (GDST) standards, human and labour rights standards include SA8000 and the Fair Trade USA standard for capture fisheries. All-encompassing standards include the Seafood Stewardship Index based on UN SDGs.

In order to level the playing field and ensure the credibility and reliability of standards, buyers, seafood companies together with the FAO formed the Global Sustainable Seafood Initiative (GSSI) to benchmark certification schemes against the FAO guidelines. Another kind of "standard" set by the SSM is the seafood sourcing commitments made by buyers (retailers and food service companies) as these set the bar for the performance of buyers and, through a domino effect influence the performance of their value chains. These commitments and policies are usually timebound, and apply to all or a portion of the seafood sold and use standards such as the MSC's, which are developed in partnership with NGOs, such as the Monterey Bay Aquarium, MSC, WWF, SFP and FishWise (CEA, 2020a). Seafood companies also set CSR commitments which lack precise and timebound goals (**Chapter 3**).

6.2.2 Who sets seafood CSR standards?

CSR standards and commitments are the outcomes of negotiations by a *global network* of buyers, seafood companies and NGOs. Indeed, many standards used by seafood companies and their buyers (MSC, Monterey Bay Seafood Watch, GDST) are developed through a

multi-stakeholder process that includes NGOs, industry and various social or environmental fisheries experts. Multi-stakeholder initiatives (MSI) and standard setting processes within and outside of the seafood industry reflect the rise of NGO power and increased civil regulation and have strengths and weaknesses (Utting, 2002). For instance, MSI carry risks of co-optation and a lowering of expectations if powerful actors are able to leverage their position to bias the outcomes in their favour to the detriment of others (Baur and Schmitz, 2012; Bitzer and Glasbergen, 2015; Utting, 2008). Moreover, multi-stakeholder initiatives such as the MSC have historically lacked representation from the Global South and the social sciences, biasing standards towards a definition of sustainability that is most readily met by fisheries and companies in the Global North and mainly focused on environmental issues (Ponte, 2008).

Even though some multi-stakeholder standard setting processes such as the MSC have worked to improve internal accountability through increased transparency (Auld and Gulbrandsen, 2010), others still have limited transparency in how standards are set. For instance, it is unclear (based on their website), how the conservation measures and commitments of the International Sustainable Seafood Foundations (ISSF) are set. The bias towards industry interests and the Global North in multi-stakeholder processes is not always obvious as it is exercised through "soft" forms of power such as discursive power.

Similarly, the sourcing commitments of buyers in the Global North are the outcome of a negotiation process between buyers and NGOs, either through a formal partnership or through an advisory relationship (Bitzer and Glasbergen, 2015; Dauvergne and Lister, 2011; Elder and Dauvergne, 2015; Fuchs and Kalfagianni, 2010). For instance, NGOs such as SFP and WWF now work hand in hand with companies to advise on and implement

CSR. As I found in **Chapter 2 and 3**, sourcing commitments (the outcome of those negotiations) vary widely from one commitment cycle to the next and from company to company. For instance, some commitments have timebound goals and others not, commitments vary in the portion of seafood they cover (e.g., only frozen and fresh seafood) or commitments vary in the criteria used to define what is an "acceptable" level of sustainability. For instance, following the realization that many fisheries are not readily able to meet high standards of sustainability, buyers have expanded their sourcing criteria to accept seafood from Fishery Improvement Projects (FIPs). This means FIP fisheries continue to have access to markets while making improvements. Some argue that the inclusion of FIP seafood as meeting sustainable seafood commitment criteria has lowered the bar, especially as gaps remain in the monitoring and verification of FIP progress, despite recent improvements (CEA, 2020b; Sampson et al., 2015). This lack of precision and comparability of sustainability commitments suggests that NGOs are unable to get companies to set more precise commitments and thus unable to impose stricter requirements. Consequently, it is difficult to pass a judgement on their effectiveness and whether these commitments set the bar high enough and weaken the ability of NGOs and the SSM to hold buyers and seafood companies for their CSR performance.

Whereas the use of confrontational approaches to pressure companies (i.e., blame-and-shame campaigns) used to be the main strategy, the multiplication of multi-stakeholder approaches and partnerships to setting standards reflects a shift towards more collaborative strategies. This shift in strategy has potential implications for the governance of CSR standards and how strict these standards are: does business collaboration come at the cost of losing leverage over business and NGOs leading the SSM to align their values and

interests increasingly with those of the companies they are trying to regulate? NGOs leading the SSM, as in other sectors, are thus faced with the paradox of working with powerful companies while at the same time remaining independent and not undermining their own effectiveness (Baur and Schmitz, 2012; Bendell, 2005; Hussain and Moriarty, 2018). Indeed, there is considerable debate on whether NGO-business partnerships are fulfilling their intended objectives (Bitzer and Glasbergen, 2015).

First, these partnerships are inherently challenged by the difficulty of reconciling divergent institutional logics, leading to different value frames and expectations. As a result, some authors argue that NGO-business partnerships are imbalanced and dominated by the business logic, a sort of taming of civil society actors, limiting rather than expanding NGO activism (Falkner, 2003). Additionally, some authors warn that private governance mechanisms developed through business-NGO partnerships are fundamentally flawed, as these aim to address social and environmental issues that were caused by the market system with which it seeks to work. As such, market-based approaches mobilizing CSR, while trying to offer an alternative to the current logic of global markets, are not challenging powerful industrial and retailer interests, but simply "capitalism with a human face"(Konefal et al., 2005, p. 1064; Newell, 2008; Taylor, 2005). The second debate on NGO-business partnerships is that, given their focus on market solutions, their ability to improve complex social-ecological problems is limited to market sensitive or "hot" issues, potentially neglecting wider issues such as unequal power relationships in value chains. NGO-business partnerships hold some potential for developing standards; however, this may be limited by the extent to which those are inclusive of small-holders and developing world stakeholders and address the root of the problems they seek to address.

Seafood CSR standards and commitments, the rules of the game, are set by governance networks made of NGOs, industry and independent experts. Governance through networks is characterised by less formal processes where actors are inter-dependent of each other and are based on trust and diplomacy (i.e., negotiations) (Rhodes, 2007). In other words, networks are self-organizing and the interactions between actors are regulated by rules of the game that are negotiated and agreed by the network participants. The inter-dependence between NGOs and industry and the largely informal nature of the processes to set private seafood CSR standards carries risks of power struggles and strategic interaction, where the most powerful actor "wins" rather than the most legitimate, thus not following principles of democracy in rule-setting (Keohane, 2006; Sørensen and Torfing, 2005). Indeed, the emphasis on negotiations and partnerships implies symmetrical power relationships between actors, which is often not the case between NGOs and corporations (Newell, 2002). As such, networks are paradoxical. On the one hand, private governance merged following a growing consensus on the need to "democratize" global seafood governance with private-rule making systems, which are seen as more inclusive. On the other hand, many of those networks lack principles of true democracy (Bernstein and Cashore, 2007; Chan and Pattberg, 2008). Indeed, because networks are diffuse, complex and often weakly institutionalized collaborative structures, networks escape traditional mechanisms and conceptions of accountability without clear principal-agent relationship (Benner et al., 2004).

6.3 CSR INCENTIVES: REWARDS AND SANCTIONS

Incentives to comply, whether in the form of sanctions or rewards, are key for any accountability mechanisms to be effective (Bäckstrand, 2008; Mashaw, 2006). The SSM has been focused on developing social and market incentives for seafood companies with CSR standards and commitments. The effectiveness of those incentives depends on their strength and the extent to which they are enforced, and thus the power of the principal versus the agent.

As reviewed in **Chapter 2 (accountability)**, social incentives mostly consist of shaping the public image of buyers and seafood companies (through their brands) using blame-and-shame campaigns or endorsements. Given the value of reputation to retailers and brands, social sanctions have been effective in getting companies to engage in CSR, as seen for example in **Chapter 4 (traceability).** Indeed, one of the motivations for Anova (as a seafood company) to implement traceability was to enhance its reputation. However, as explained in the previous sections, the collaborative strategies taken by NGOs affects the extent to which they can negatively sanction poor performers. As a result, NGOs have been more focused on rewarding good performers through public endorsement rather than sanctioning poor performers. However, are positive incentives (the carrot) enough to drive voluntary changes in behaviour without the negative ones (the stick)? The second issue is whether NGOs have access to information about CSR performance of buyers and seafood companies and thus being able to monitor them (which I will review in the next section).

In terms of market sanctions, the SSM recommends buyers to sanction poor performing seafood companies that do not show willingness to improve by discontinuing business

until they (and their products) meet certain sustainability criteria (CASS, 2019). In terms of market rewards, the SSM aims to mobilize the public and increase consumer demand for sustainable seafood in order to create a market for sustainable seafood (with potential market premiums in certain markets). The theory of change is that the social and market incentives on buyers (especially retailers) will lead them to transmit those sanctions and rewards through their buying power to seafood companies. Two assumptions of this theory of change can be brought into question. First, to what extent are consumers rewarding and sanctioning buyers for their seafood CSR performance? Second, to what extent are buyers rewarding and sanctioning companies for their seafood CSR performance?

With regards to consumers, the demand and willingness to pay for sustainable seafood is increasing but varies across markets and is still limited to a small portion of the global market (Devinney et al., 2010; Forrer and Mo, 2013; Mcdonald et al., 2012). Even though there is a vast body of literature that suggests consumers prefer and are willing to pay more for sustainable seafood in certain markets (Bronnmann and Asche, 2017; Johnston et al., 2001; Sogn-Grundvåg et al., 2013; Sun et al., 2017), it is unclear whether they actually demand more or whether public opinion drives retailers to demand sustainable seafood from seafood companies (Barclay and Miller, 2018; De Vos and Bush, 2011). With regards to buyers, the extent to which buyers actually sanction poor performers and reward good performers depends on the extent to which NGOs are able to impose social sanctions on those buyers (which we have seen is limited by the collaborative nature of their relationship). However, it is unclear whether buyers and seafood companies suffer any negative consequences for not meeting their commitments, an avenue of research to be explored further.

For actors that are poor performers but are willing to improve, the SSM recommends buyers to partner with seafood companies to implement improvements by, for example, setting up FIPs (CASS, 2019). However, for this approach to work, monitoring of progress is crucial to avoid having poor performing FIPs receiving preferential market access over non-FIP fisheries. Indeed, a pre-condition for principals (i.e., consumers, NGOs and buyer) to hold agents (buyers and seafood companies) accountable through rewards or sanctions is the ability to differentiate between poor and bad performance by having access to information about performance and corresponding monitoring mechanisms. In the next section I will review the monitoring and information systems developed and being developed by the SSM, with a deep dive into two specific information systems: CSR reports **(Chapter 3)** and traceability **(Chapter 4)**.

6.4 CSR MONITORING AND INFORMATION SYSTEMS

6.4.1 Informational governance

The role of information in accountability is closely related to the concept of informational governance. Informational governance refers to the idea that information (and associated processes, technologies, institutions and resources linked to it) is restructuring environmental governance processes, institutions and practices of governance (Mol, 2006). Under informational governance, information is a source of power that can be used by various actors engaged in environmental governance. Due to the value of firms' reputational capital, legitimatory capital of NGOs, the central role of the media in environmental politics, and the power and influence of accountability mechanisms,

informational governance has become an integrative part of global environmental governance (Auld et al., 2010; Gupta, 2008; Mol, 2015; Watts, 2015).

In the seafood industry, informational governance has been prevalent in private and public governance strategies used by firm and non-firm actors to govern environmental aspects of production and consumption through the chain. Indeed, NGOs and seafood companies have deployed a number of information-based tools that involve creation, use, access to, and control over CSR-related information to reveal CSR performance against what they define as more and less sustainable practices and to guide others in the seafood industry to adopt certain practices. For instance, eco-labels (e.g., MSC) and consumer guides (e.g., Monterey Bay's Seafood Watch guide) aim to make production practices more transparent to consumers with the goal of influencing consumer choice towards more sustainable options and thus incentivize retailers and their supply chains to improve. Companies also harness the power of CSR information to (re)position themselves in the network, for example, by using CSR reports, consumer-facing traceability and other marketing tools to portray themselves as sustainable (Banerjee, 2008; Fuchs, 2007; Henderson et al., 2002). Environmental information platforms and systems such as CSR reports (**Chapter 3**) and catch documentation and traceability (CDT) systems (**Chapter 4)** are examples of information tools put forward by the SSM and seafood companies to govern CSR practices in seafood value chains.

The development and deployment of information-based tools by the SSM to disclose and expose the CSR performance of firms and fisheries is based on the assumption that information will empower civil society to act as a countervailing power against markets (and states) by holding them accountable. In other words, the act of disclosing information

has become central to achieving social and environmental improvements in the seafood industry. However, in practice, transparency has many shortcomings as actors are unevenly positioned to create, access, control, and use information, and through these shortcomings can be made vulnerable and accountable. Therefore, whether transparency supported by information tools leads to greater accountability and inclusion in CSR governance processes depends on the transparency arrangements created by the information tools i.e., how the information disclosed is produced, (including its reliability and quality), who has access to what information and about whom, and for what purpose is the information used (Gupta, 2010; Mol, 2014). The impact of information systems on power relations and the repositioning of actors therefore depends on the nature of the transparency arrangements that arise from them (Mol, 2006). In following sections, I draw from **Chapter 2** to provide a summary of the various monitoring and information systems used by the SSM to collect and generate information about the performance of fisheries and seafood companies and, subsequently, dive deeper into two information tools: CSR reports (**Chapter 3**) and catch documentation and traceability (CDT) (**Chapter 4**).

6.4.2 Overview of CSR monitoring and information systems

In order to hold companies accountable, information systems that collect and present information about CSR performance are necessary to assess performance against the CSR standards and commitments (Bebbington and Unerman, 2017; Halpern et al., 2019). Disclosure of CSR performance to stakeholders impacted by companies' activities is key for stakeholder accountability (Gray et al., 2006; Watts, 2015). Without information about performance, stakeholders are not able to judge how companies are meeting standards and

expectations. Four categories of monitoring arrangements currently exist in the SSM depending on whether it is voluntary, the source of information used and the nature of the assessment (e.g., first or third-party).

The first monitoring arrangement is based on self-disclosure whereby companies signal their CSR performance through corporate communications (e.g., CSR reports, website, marketing campaigns). CSR disclosure is now increasingly common in the seafood industry, especially amongst the largest seafood companies. However, the extent to which CSR reports support CSR accountability depends on the information disclosed, a question that I explored in **Chapter 3**. The information disclosed in CSR reports is typically not verified by a third party, although some follow reporting guidelines and frameworks (e.g., Global Reporting Initiative or UN Global Compact Principles). NGOs have also developed platforms (e.g., SFP's Seafood Metrics) for retailers to collect information on the CSR performance of their suppliers (seafood companies) and thus assess progress against their commitments. However, this information is only shared with NGOs if retailers chose to.

The second monitoring arrangement is verified voluntary self-disclosure. For instance, the FisheryProgress.org platform assesses FIPs based on their progress towards MSC certification based on bi-annual self-reports and supporting evidence. The information is then cross-checked by FisheryProgress.org. As a result, seafood companies that are part of FIPs can make verified claims that their products meet a certain FIP standard. Some seafood companies may also produce a joint CSR report with NGOs – e.g., Thai Union Europe and WWF progress report (Thai Union, 2019).

The third monitoring arrangement is voluntary third-party assessment (e.g., MSC or FairTrade USA certification). This consists of an independent third-party assessment that

assesses performance against a standard. Third-party assessment is one of the more robust forms of monitoring and is often based on a process of stakeholder input and peer-review. However, third-party assessments are typically costly and therefore not widely accessible to all operations and companies. Moreover, the assessment is commissioned by the company, which hires an auditing body to carry out the assessment. Therefore, the process has been questioned due to the potential conflict of interest between the auditing body and the company they are auditing (e.g., McVeigh, 2020). Moreover, not all certification assessment reports are made public (e.g., Fair Trade USA assessment reports) or have a stakeholder input process.

Finally, a fourth monitoring arrangement is non-voluntary assessment such as Greenpeace's Supermarket ranking on seafood sustainability ("Carting Away the Oceans") and the Seafood Stewardship Index (Pinsky and Mitchell, 2018; WBA, 2019). These assessments are based on publicly available information and company surveys and evaluate companies without prior consent. If the entity does not participate in data collection, the assessment is based purely on publicly available information. The advantage of this kind of assessment is its independence from the entity being assessed. However, this potentially limits the information assessors have access to and thus the assessment may not always accurately reflect reality.

Product traceability allows companies and consumers to track the environmental and social credentials of seafood products (including whether it was legally sourced) (Lewis and Boyle, 2017). As such, traceability is key to measure the CSR performance of seafood companies. For instance, traceability allows buyers to track the sustainability profile of products and thus how they are meeting their sourcing commitments. However, the

implementation of traceability systems that can effectively track the sustainability and legality credentials of seafood products is still it its infancy and faces a number of challenges that require coordination between value chain actors across the globe to develop agreed standards. There are many initiatives to implement traceability in seafood value chains, including ones led by seafood companies. Whether traceability supports CSR accountability of seafood companies depends on who controls the traceability systems and the information it generates which in turn depends on design and implementation process, aspects which I explore in **Chapter 4**.

6.4.3 Improving accountability through CSR reports

With the rising awareness of the negative environmental and social impacts of economic activities, and therefore sustainable development, there has been increasing pressure on the business community to measure and report transparently about those impacts, in the hopes that "what gets measured, gets managed" (Drucker, 1954). As a result, CSR accounting and reporting has become widespread across sectors and industries as a way to assess and communicate CSR performance (KPMG, 2017). As in other resource-based industries, seafood companies have started producing CSR reports (and web-pages) as a way to demonstrate and communicate their CSR commitments and performance to their stakeholders. Whether CSR reports do lead businesses to internalize and mitigate their negative impacts on society is certainly subject to debate (Unerman et al., 2018), with one of the main limitations being the lack of a consistent method to account for, measure, and compare social and environmental impacts over time and between companies, and how these are interlinked with financial performance and reporting (Cuckston, 2018).

In **Chapter 3** I analysed the CSR reports of the 25 largest seafood companies involved in wild-capture value chains. I used this analysis to understand the CSR practices of seafood companies but also the quality of the reporting and whether it supports stakeholder accountability. However, one of the biggest gaps I found was the lack of specific, measurable and timebound targets as well as the lack of consistent and systematic accounting of progress and impacts. Indeed, 80% of the companies failed to translate their CSR vision into a more structured and formalized action plan with specific targets. Similarly, more companies communicated CSR informally through their corporate website, rather than through a structured CSR report. This could be because high-level commitments are deemed to be sufficient to build a positive reputation and corporate image, while setting more specific goals would be too difficult or constraining. Indeed, it has been argued that CSR reporting primarily aims to build corporate legitimacy, rather than actually internalizing social and environmental externalities (Bachmann and Ingenhoff, 2016). As such, the results suggest that CSR among large seafood companies, at least partly, consists of image and impression management. Setting specific CSR targets may also be challenging for valid reasons. For instance, many of the issues which seafood companies face, such as fisheries management and labour issues, are partially out of their control and are defined by high uncertainties, especially in countries where regulations are weak, and any enforcement capacity is limited. The absence of explicit and quantified targets explains why only a handful of companies had monitoring systems in place and transparently report on progress. Less than half of the companies noted having a formal stakeholder engagement process and a dedicated CSR staff or committee without which it

is unlikely that CSR issues are fully integrated in business activities, as stakeholders can allow companies to ensure their CSR strategies align with stakeholder interests.

Overall, the lack of specific targets, robust internal CSR monitoring systems and stakeholder accountability makes it difficult to assess CSR performance accurately over time and is thus not conducive to CSR accountability by stakeholders. In the context of informational governance, the lack of standardized CSR reporting in the seafood industry limits the extent to which the information disclosed can be used as a source of power for stakeholders. Instead, CSR reports are empowering companies in portraying themselves as sustainable and therefore legitimate.

Given the SSM's focus on CSR, more standardized and robust CSR reporting must be implemented or else CSR risks being a simple public relations exercise for companies rather than true accountability. For instance, policy makers can play a role in enforcing non-financial corporate disclosure. Although global standardized guidelines exist for CSR reporting (e.g., Global Reporting Initiatives), which some of the companies assessed follow, these remain voluntary and companies can still chose which elements in those guidelines to use. A number of innovative developments are occurring in CSR accounting and reporting that could support CSR accountability. For instance, methods to support integrated accounting and reporting such as Life Cycle Assessments, Natural, Human and Social Capital assessments, and integrated reporting guidelines (Andersson, 2000; IIRC, 2013).

6.4.4 Improving accountability through traceability

Catch documentation and Traceability (CDT) systems are promoted as tools that will increase transparency of seafood production practices and thus increase accountability of firms in terms of social and environmental performance (Bailey et al., 2016; Lewis and Boyle, 2017). In the case study examined in **Chapter 4**, CDT indeed increased the transparency of production practices but did not lead to any changes in the environmental or social practices in the fishery and value chain. Rather, the CDT system allowed the value chain to comply with regulatory (SIMP) and market (buyers) informational requirements as well as chain of custody certification standards. Moreover, the CDT system implemented, allowed for the social and environmental credentials of the fishery to be made more visible to consumers through the consumer-facing feature. This allowed for product differentiation and reinforcement of customer trust in the seafood company (Anova); however, it did not empower fishers to take part in the marketing of their products and "tell their story" themselves, a potential benefit promoted by many NGOs (Bailey and Egels-Zandén, 2016; Future of Fish, 2016a; Oceana, 2016). Again, the socio-economic needs and aspirations of fishers (beyond the need to comply with Fair Trade traceability requirements) were not taken into account in the design of the CDT system, which means that it did not benefit them beyond compliance (e.g., operational efficiency, access to market data).

From this case, we can draw some conclusions on the role of information and CDT systems in governing environmental sustainability in SSF value chains as well as the need for attention to power relationships in seafood value chains more broadly. With regards to the role of information in governing sustainability in SSF value chains, the case study shows

that the implementation of CDT systems is crucial for SSFs to maintain market access by allowing SSFs to demonstrate legality as well as social responsibility and environmental sustainability. Moreover, we found that seafood companies such as Anova have a key role to play in the implementation of CDT systems in SSFs as they are able to leverage and provide the required human and financial capabilities to develop and implement CDT solutions. However, the case study provides another example of the challenges that come with seafood companies driving CSR activities that takes into account the interests of small-scale fishers in the design and implementation of those projects in a way that meets their social and economic needs (e.g., strengthened livelihoods, improved bargaining power through an improved understanding of the market). In this case, the incentives for fishers to take part in the CDT projects was closely linked to Fair Trade certification and the associated price premium. As such, implementing the CDT system was seen as a "worthwhile" additional burden for fishers.

Overall, the CDT system served primarily as a tool for compliance rather than a tool to improve fisher livelihoods and fisheries sustainability directly. This leads us to broader conclusions about the need for attention to focus on power relations in seafood value chains as CDT systems advance in efforts to address social and environmental concerns in fisheries. As sustainability related information becomes an important source of power in seafood CSR governance, special attention needs to be given to how information systems are used to reinforce or change power relationships. In the case study, we found that the CDT system implemented reinforced pre-existing uneven power relationships in favour of lead firms (Anova and its customers). If CDT systems are to contribute to fisheries sustainability and CSR accountability, these should be designed in a way that takes into

account the context and interests of all who are to contribute to their implementation and does not perpetuate uneven power relationships.

6.4.5 Concluding thoughts

In order to improve transparency, the SSM has developed monitoring systems or transparency tools that aim to increase CSR accountability of seafood companies. To what extent have these systems and tools reduced information asymmetries and increase accountability? Certification and other types of independent assessment of fisheries and companies regarding their social and environmental practices have contributed to reducing information asymmetries. However, there is still limited information regarding the operations and supply chains of companies that are not certified or engaged in a CSR project, and for those that are engaged in a CSR project, the actual impact of those projects remains vague thanks to largely unstandardized, unverified and selective CSR reporting. Investigative journalism and NGOs have played a role in exposing poor corporate practices(e.g., EJF, 2018; Greenpeace, 2018; Kelly, 2018; Levitt, 2016). However, this information remains anecdotal and does not constitute a comprehensive assessment of the industry or individual companies and their supply chains.

6.5 CSR PRACTICES

What CSR practices result from this accountability system and what is their potential to lead to improvements?

As a result of the current CSR accountability mechanisms, companies implement CSR activities. In **Chapter 3**, I sought to analyze what the largest seafood companies are doing

in terms of CSR and provide commentary and analysis on the potential for these CSR practices to drive change. It was evident from the results that the top 25 seafood companies have CSR on their radar, with almost half the companies producing a CSR report, and almost all of them maintaining a section of their website communicating about CSR, tackling a range of issues, and doing things through different approaches. It was also evident, however, that having CSR on one's radar does not necessarily translate into formalized actions and targets, as previously mentioned. In this section I discuss the extent to which the main CSR activities: *Power; Practices; Partnerships; Public policy; and Philanthropy*, are being used in the service of the Sustainable Seafood Movement. No matter the form, however, most seafood CSR is aimed at improving and communicating two primary domains, environmental and social, which are discussed next.

6.5.1 Environmental impacts

As in other industries, the global seafood production system has a range of negative social and environmental impacts. The most obvious type of wild-caught seafood is the impact of fishing activities on marine ecosystems such as overfishing, bycatch and habitat destruction. Ecosystem impacts have been the main focus of the SSM and thus the main focus of seafood companies' CSR activities. Seafood companies address ecosystem impacts by 1) increasing their sourcing from fisheries that are recognized as sustainable by NGOs (e.g., green or yellow rated by NGO seafood recommendation list or certified) by setting sourcing commitments and policies and 2) investing in Fishery Improvement Projects (FIPs) that aim to meet a certain environmental standard, either in their own fisheries operations or together with their suppliers (Cannon et al., 2018). Participation of

seafood companies in FIPs varies from simply asking suppliers to engage in a FIP to directly investing in FIP activities such as gear modification (e.g., circle hooks), modifying fishing operations (e.g., avoiding breeding seasons), improving catch documentation (e.g., logbooks and observers) and advocating for improved fisheries management (e.g., catch limits, enforcement) (Holt et al., 2019). FIP participants typically include seafood companies (importers, processors, fishing companies) and an NGO partner. In some cases, government fisheries agencies and fisheries research institutes may also formally support and join the FIP (CEA, 2020b). FIP management varies but typically a fisheries expert is hired to design a FIP workplan and, industry actors partner with an NGO to validate the legitimacy of the FIP and report on progress. The drive for companies to take voluntary steps to improve ecosystem impacts has been the need to mitigate reputational risks, potential loss of market access and the opportunity to increase competitiveness by marketing sustainability as an additional product value (in some cases also reaching higher prices) (CEA, 2020b).

Much less attention has been given to the environmental impacts of wild seafood production outside of the direct effects on marine ecosystems. These missing issues include greenhouse gas emissions, water use, pollution (including plastics) and food waste. I would speculate that the lower attention to those issues is because compared to other proteins, seafood has one of the lowest environmental footprints (Hilborn et al., 2018). However, given the recent media attention to ocean plastics and the contribution of food packaging and ghost gear to ocean plastics, some seafood companies have developed activities to address those issues.

6.5.2 Social responsibilities

In recent years, the SSM has increased its attention to social issues such as human and labour rights abuses (Shepherd, 2018; Teh et al., 2019). As a consequence, seafood companies have expanded the scope of their CSR activities to address social issues, which are proving to be much more pervasive than previously known, especially in certain types of fisheries (e.g., high-seas fisheries) and certain parts of the world (e.g., Thailand) (Greenpeace, 2018). In order to mitigate human rights risks in their own operations (whether processing or fishing operations), companies can improve internal policies, standards and audit processes. Companies can also get social certification for processing plants (e.g., SA 8000, BSCI) or vessels (e.g., the Responsible Vessel Fishing Scheme).

Mitigating social issues in supply chains (i.e., operations not owned) is challenging for companies as it requires complex risk assessments to be conducted and, where high risks are identified, improvements rely on close cooperation and coordination between different actors (e.g., government agencies, recruiting companies and the supply chain actors). Some companies simply require their first-tier suppliers to sign a code of conduct, against which compliance is verified either through first, second or third-party. Companies can also conduct comprehensive risk assessments that assess entire supply chains and develop a robust due diligence procedure that is supported by third-party verification and traceability systems (Nakamura et al., 2018). While there are social standards and audits for processing operations, there are still few standards for fishing operations. These include for example the Responsible Fishing Scheme, the Fair Trade USA standard for capture fisheries and the Seafood Task Force vessel audit scheme. More recently, a group of NGOs released the

Social Responsibility Assessment Tool based the Monterey Framework laying out principles of social responsibility in the seafood industry.

Except for the Fair Trade USA certification which only applies to small-scale fisheries, there are no consumer-facing third-party labels for social certification for wild seafood. Therefore, mobilizing consumer power on this issue has been more challenging and has mainly been done through investigative journalism and reporting (e.g., Kelly, 2018; Levitt, 2016; Pinsky and Mitchell, 2018). Mitigating reputational risks, is therefore, the main incentive for companies to engage in social improvement activities rather than market rewards (e.g., market access, price premium), especially as retailers have not made public commitments to meeting certain levels of social performance and consumers are not able to differentiate whether seafood was produced socially responsibly or not.

More recently, the SSM has also increased its attention to broader socio-economic impacts of seafood production activities on local communities, i.e., communities located close to either processing or fishing operations. The intent here is that seafood production activities should not only do no harm but also benefit local stakeholders socially and economically. Socio-economic impacts include a wide variety of issues such as prioritizing local employment and contracting of local businesses, giving back to the community through charitable donations and community events, fair trading practices, respecting local access rights and ensuring local food security. CSR activities targeting these issues include some of the most "traditional" forms of CSR such as charitable donations, community events and training and employing people from local communities. However, issues of local access rights (e.g., Indigenous rights), food security and fair trading practices have generally received less attention. Moreover, while companies may have processes in place

to engage with local communities and stakeholders in the vicinity of their operations (whether processing or fishing), companies seldomly look into the socio-economic impacts down their supply chains where they are not directly present. To address this issue, NGOs have developed the concept of triple impact FIPs, which aim to address socio-economic and environmental impacts simultaneously (Ocean Outcomes, 2018).

In the next three sub-sections, I come back to 3 approaches that companies take in dealing with social and environmental issues in their operations and their value chains: power, partnerships and public policy. The reason for this focus on three of the five approaches identified is that they carry a certain level of risk in terms of transparency, democratic participation and co-optation with business interests.

6.5.3 Power: top-down CSR governance?

CSR in the seafood industry is implemented for the most part in a top-down fashion by seafood companies (often in partnership with NGOs). Indeed, CSR governance often consists of supply chain control mechanisms (power) such as codes of conduct and sourcing requirements that require suppliers and producers to comply with certain social and environmental standards. Some argue that private voluntary standards can complement or be a steppingstone to public regulation by filling regulatory gaps, especially in poorly regulated environments. This "compliance model" allows companies to bypass slow (inter)governmental regulatory processes, and issues of state sovereignty (Falkner, 2003; Locke et al., 2009).

While relying on private standards and audits to exert supply chain control may seem like a straightforward way to operationalize CSR, there are a number of challenges around

compliance, as well as legitimacy of standards developed by western organizations and markets, thus limiting its acceptance in non-western regions (Bailey et al., 2018; Ponte, 2012). For instance, the effectiveness of the MSC standard and FIPs in improving fisheries management globally has been limited with only 10% of MSC certified fisheries being in the developing world (Bush et al., 2013; Jacquet et al., 2010; Kalfagianni and Pattberg, 2013; MSC, 2017; Tlusty, 2012). Similarly, the effectiveness of social audits in achieving sustained improvements through "social upgrading" (Barrientos and Gereffi, 2011; Gereffi and Lee, 2016) has been criticized, as these usually only address "outcome" aspects of working conditions and fail to address "process" aspects e.g., worker empowerment. Moreover, large seafood companies do not typically make the results of social and environmental assessments (except for certified fisheries) publicly available, making it hard to judge their performance against their commitments, nor the quality of audits. The effectiveness of the "compliance model" of CSR is also limited by the current business model of most seafood companies which is based on increasing volumes, razor thin margins and a constant push for lower prices than contradict incentives to invest in (often costly) improvements.

Despite those limitations, supplier codes and sourcing requirements have had positive impacts, and sometimes complement public regulation and enforcement. For instance, it was found that supplier codes of conduct can outperform government enforcement for health and safety issues and formalization of employment, while government regulations perform better in relation to the illegal use of short-term contracts and non-permanent workers (Bartley and Egels-Zandén, 2015).

6.5.4 Partnerships: pooling resources?

Fishery improvement projects and the implementation of traceability require partnerships where seafood companies work with suppliers, producers and NGOs. Given the limitations of the "compliance model", some authors advocate for a "cooperation model", which means buyers and suppliers working together through joint-problem solving, diffusion of best practices and capacity building to solve non-compliances with substantial investments also coming from the buyer (in this case seafood companies) (Gimenez and Sierra, 2013; Locke et al., 2009; Lund-Thomsen and Lindgreen, 2014; Seuring et al., 2008). In addition to partnering with suppliers, seafood companies also partner with NGOs to implement improvements. There are two main potential benefits for businesses partnering with NGOs. First, when NGOs endorse a CSR program, it supports a credible sustainability image and reputation in the market. Moreover, cooperative (as opposed to adversarial) business-NGO relationships can help advance both agendas by combining expertise and capabilities to implement programs that deal with complex issues such as human rights and overfishing (Austin and Seitanidi, 2012; Blowfield and Frynas, 2005; Vellema and Van Wijk, 2015). However, similar to the risks of NGO-partnerships in developing private standards, there are also risks in these partnerships in implementing those standards including greenwashing and free-riding. Moreover, the direct investments made by seafood companies varies and is not always made transparent, with many projects still largely funded by philanthropic foundations and upstream actors doing the ground work (including investing in improvements themselves) (CEA, 2020b). It is therefore unclear whether seafood companies are investing their "fair share" in those improvements and

whether new financing mechanisms need to be developed to foster greater investment such as blended finance (Jouffray et al., 2019).

6.5.5 Public policy: non-democratic?

Despite the growing influence of private actors in the governance of fisheries, and a shift of power away from the nation-state towards private actors, the responsibility for many kinds of social and environmental improvements requires government regulations and enforcement. Seafood companies can put in place monitoring systems and include CSR requirements in their own policies; however they cannot replace the role and authority of government in protecting human rights and managing fisheries (Foley, 2013). Government engagement is pursued either individually or pre-competitively by participating in groups such as SFP's supplier roundtables, ISSF and the Global Tuna Alliance. Government engagement activities usually consists of sending letters to regulators and in some cases directly participating in meetings. The extent to which seafood companies engage with policy makers and how effective the engagement activities are in driving improvement remains unclear. Moreover, engaging with policy makers and regulators can be a complex political game that requires careful understanding and knowledge of often non-transparent political processes, networks, interests, and relationships. For instance, tuna regional fisheries management organizations (RFMOs), which bring together governments to negotiate tuna management measures for stocks that span over multiple jurisdictions, have very complex political actors and processes including industry, governments and civil society organizations operating in plenary and in the margins (Petersson et al., 2019; Sinan and Bailey, 2020). What we then find is not a "pure" form of private governance, but rather

"a 'mixed' regime, where the boundary between public and private spheres is blurred" (Clapp, 1998, p. 295) and where public and private actors have become inter-dependent (Falkner, 2003).

6.6 Opportunities to improve CSR accountability and CSR practices

What are key opportunities to improve CSR accountability and CSR practices?

Looking back at the SSM's theory of change as presented in the introduction, in this section I briefly reflect on how my research findings inform its validity. Overall, I found that one of the main weakness of SSM's theory of change is the ability of NGOs to hold value chain actors, specifically seafood companies, accountable for their corporate performance. This weak accountability between NGOs and companies is due to several reasons. First, the multiplication of standards means a broadening definition of seafood sustainability, including both social and environmental aspects, which makes measuring and comparing performance challenging. Second, the tightening of the partnerships between NGOs and companies may lead to co-optation and alignment of interests which limits NGO independence and their ability to hold companies accountable. Third, the challenge of obtaining verified information on companies' improvement in performance makes it particularly difficult to apply the rewards and sanctions in a consistent way. Therefore, to improve the effectiveness of the SSM's theory of change, CSR accountability must be improved. In the following sections, I outline 4 ways in which CSR accountability can be improved through an enhanced role of actors other than NGOs such as financial institutions and policy makers (Figure 6.1).

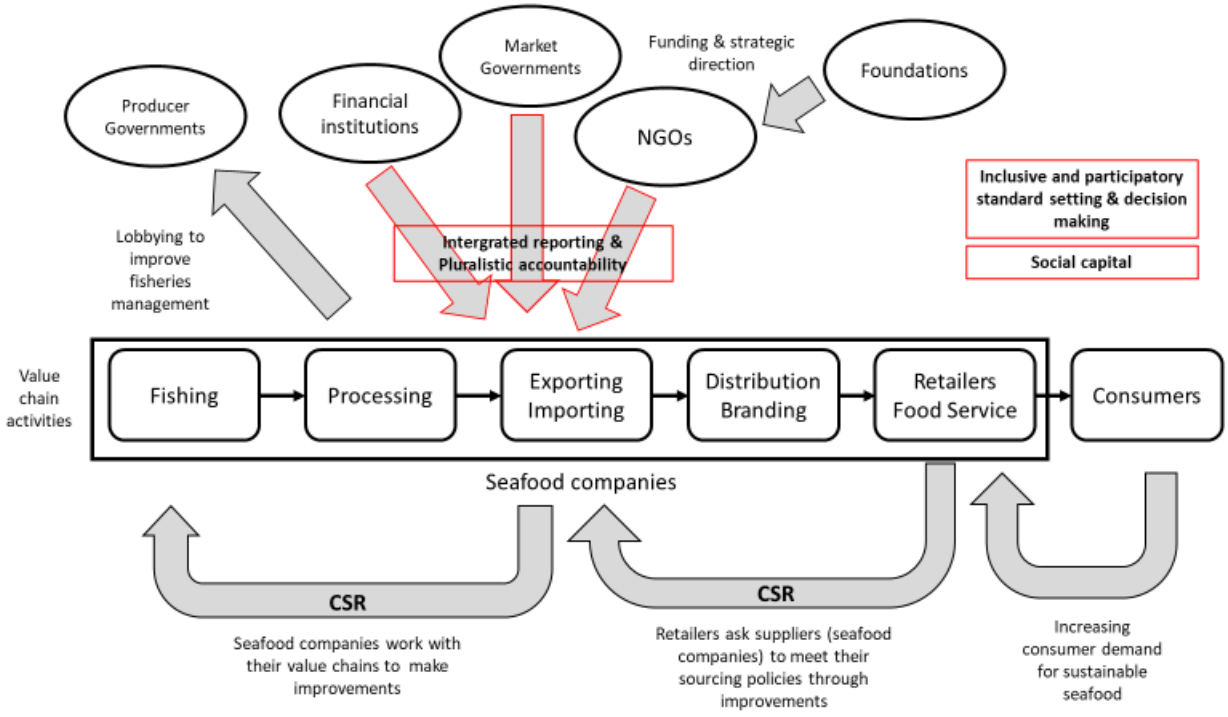

Figure 6.1. Improving CSR accountability to increase the effectiveness of the Sustainable Seafood Movement's Theory of Change

6.6.1 Social capital

Since CSR governance occurs through networks, the analysis of social networks may be a worthwhile exercise to understand better how CSR governance is organized e.g., how resources flow and mapping distribution of power. As seen in **Chapter 5** through the example of Fishery Improvement Projects, social capital is one resource that arises from social networks that may be of relevance to CSR governance networks. Social capital typically consists of abstract social resources such as trust, reciprocity, accountability, and a common understanding of collective issues and how these should be resolved and arise from social relationships and how these are organized and structured (Burt, 2003; Putnam, 2000; Scrivens and Smith, 2013). As such, social capital is an important resource to solving

complex multi-stakeholder problems such as those being addressed by the SSM (Grafton, 2005; Gutiérrez et al., 2011; Nenadovic and Epstein, 2016).

To that end, social networks have been identified as an important denominator to effectively deal with natural resource problems by facilitating 1) the generation, acquisition and diffusion of different types of knowledge and information about the systems under management; 2) the mobilization and allocation of key resources for effective governance; 3) commitment to common rules among actors fostering willingness to engage in monitoring and sanctioning programs; and 4) the resolution of conflicts (Bodin and Crona, 2009). However, not all social networks are created equal, and the characteristics of a network can affect the ability of the network to govern responsible practices and to manage resources sustainably. How the structure of social networks affects social processes and the governance of networks can be understood through the concept of social capital.

Pre-competitive platforms are one kind of governance network that could be strengthened through social capital. Social capital creates opportunities for information sharing and collective action (Provan and Kenis, 2008). Indeed, many of the CSR and sustainability challenges that the seafood industry faces are shared and common, such as overcoming certain environmental challenges like overfishing. The effectiveness and performance of governance networks rely on social capital to encourage network members to collaborate and ensure they stay engaged and are held accountable for their responsibilities (Sandström and Carlsson, 2008). This idea aligns with the work of Ostrom and others, who argued that social capital is a crucial factor to promote collective action (Ostrom and Ahn, 2003). In that context, social capital refers to the norms and networks that facilitate co-operation

(Grafton, 2005). The importance of social capital and social relationships in facilitating cooperative action to solve some of the negative consequences of destructive human behaviours should not be underestimated. Indeed, social capital decreases the transaction costs of working together: people will invest in collective action if they trust others will do so as well and not engage in private actions that damage the common good (Pretty, 2003).

Social capital can not only facilitate cooperation but also increase accountability, especially if there is strong social capital between stakeholders that have the same expectations from companies. For instance, stakeholders that lack representations (e.g., workers and small-scale fishers) could increase their influence and agency (Nannicini et al., 2013).

6.6.2 Participatory and inclusive CSR

The way seafood CSR standards and guidelines are set and defined tend to lack representation from certain stakeholder groups such as workers, minority groups and small-scale fishers. This means that seafood CSR standards tend to be biased towards the interests of a powerful few rather than based on democratic principles of governance. The same holds true for access to information about the CSR performance of seafood companies and buyers. If CSR is to improve sustainability governance and complement national-policy making and international cooperation, it must integrate more democratic processes in order to hold powerful actors such as seafood companies accountable. Indeed, the increasing political role of business in governing social and environmental aspects of

society leads to concern about a democratic deficit and represents a shift from liberal democracy to deliberative democracy (Scherer and Palazzo, 2011).

Governance through CSR is characterized by a weakening of the elected government and an increase in self-regulation by non-democratically elected companies, which, therefore cannot be held accountable through a liberal model of democracy. In the liberal model of democracy, NGOs and companies are not seen as political actors because politics are the realm of formalized government institutions (Habermas, 1996; Scherer and Palazzo, 2007). However, as CSR becomes a growing feature of global governance, including in the seafood industry, Scherer and Palazzo (2011) argue that a deliberative model of democracy is better suited to deal with governance through networks and to address the democratic deficit, as it recognises the role of both public and private actors in both traditional institutionalized processes and in processes of public deliberation that occur outside of the traditional realm of government (Habermas, 1996). The deliberative model of democracy thus focuses on strengthening the ties between the public and private spheres of society and is based on the idea that democracy requires that important issues of public concern be regulated through free and open deliberation.

Deliberation occurs through a regulated argumentative process during which parties present their positions and proposals while not making any offers or threats. All parties have an equal opportunity to heard and make contributions to the discussion. The idea is that the better argument wins, as opposed to following dynamics of power. However, as Hussain and Moriarty (2018) point out, the deliberative model presented by Scherer and Palazzo for making corporations more democratically accountable violates a fundamental principle of deliberative democracy: it considers corporations as a politically

representative organizations (PROs) and thus allows them to participate in governance arrangements in a decision and rule making capacity (e.g., participating in setting private certification standards).

Notably, however, people do not typically join a company (as an employee) because it aligns with their political conviction, they join for self-interest and economic reasons and employees are unlikely to share the same political outlooks. Moreover, when companies engage in governance processes, they will defend economic interests and not political viewpoints (which may often be at odds with its economic purpose). Thus, because companies do not meet the definition of a PRO like some NGOs and civil society groups, they cannot represent individuals in social deliberation. That is not to say that business should not participate in decision and rule making of political CSR. Rather, as Hussain and Moriarty (2018) argue, companies should participate in multi-stakeholder network governance as technical experts, providing information about the likely consequences of various decisions but not as voting representatives as they are neither members of the public or political representatives.

6.6.3 Pluralistic accountability

As the CSR movement tries to re-embed companies by acting as a form of social regulation and to develop expectations for companies to contribute to wider development goals, it is important that the right incentives are provided by developing improved accountability and rewarding mechanisms that go beyond the market. As Benner and colleague (2004) argue, accountability in networks will likely require a combination of accountability

mechanisms such as peer accountability, reputational accountability, market accountability, fiscal accountability and legal accountability.

The behaviour of seafood companies can be influenced from multiple angles including the market (i.e., buyers and consumers, which has been the primary focus of the SSM), financial actors (e.g., investors, banks, shareholders) and governments. Therefore, CSR accountability mechanisms should combine systems and tools that can be used by multiple actors to hold seafood companies accountable. For instance, Jouffray and colleagues (2019) present three potential leverage points in the sector that could be used to drive seafood sustainability: banks through loan agreements, stock exchanges through listing requirements and shareholders through activism. However, mobilizing the financial sector will require it to become more aware of the socio-ecological risks associated with seafood production and understand how these lead to financial and reputational risks. Ultimately, financial actors will have to change their own practices and business models in order to change the business model and attitude of seafood companies.

There has been a recent increase in sustainable finance initiatives in the seafood sector including impact investment funds such as Rare's Meloy Fund or Encourage Capital. Some more traditional financial institutions have also adopted sustainable policies (e.g., Rabobank). However, these initiatives still represent a very small percentage of global financial flows as these remain niche and have not yet entered the mainstream. Key to this process of responsible investing is that seafood companies disclose their nonfinancial activities and performance through integrative reporting, which we will review in the next section.

Governments, even though they may not have the ability to design policies and regulations to directly regulate the social and environmental impacts of companies abroad, governments still have tools at their disposal such as import regulations to prevent seafood caught using illegal practices (e.g., the EU IUU regulation or the US Seafood Import Monitoring Program). Governments may also design regulations requiring companies to have robust due diligence processes in place to prevent and mitigate risks such as human rights (e.g., the UK's Modern Slavery Act).

6.6.4 Integrated and non-financial reporting

The SSM has contributed to getting companies to commit and/or recognize the importance of social responsibility and environmental sustainability. However, this now needs to be complemented with more robust systems that monitor and disclose risks, mitigation measures and performance. Indeed, when a company's performance is assessed and presented publicly to its stakeholders, it will be more incentivized to improve. Without access to independent information on the CSR performance of seafood companies, it is simply not possible to impose appropriate rewards and sanctions. A potential solution to this issue would be to make non-financial disclosure and integrated reporting compulsory for seafood companies (IIRC, 2013).

Integrated reporting is based on the idea of integrated thinking, which means considering the relationship between different operating and functional units of a company as well as how the capitals that it uses or affects. As such, integrated thinking can lead to integrated decision-making and actions, which takes a short, medium and long-term view to value creation. Indeed, studies suggests that integrated reporting (in both the public and private

sectors) can significantly contribute to our understanding of the links between strategy, governance, financial performance and social and environmental impacts (Babber, 2012; Lozanoa et al., 2016). All stakeholders can play a role in making non-financial disclosure and integrated reporting compulsory, especially financial institutions and governments.

There are number of guidelines that companies can use to improve their non-financial reporting such as the Global Reporting Initiative guidelines (which is currently developing specific guidelines for the agriculture and fisheries sector) and the International Framework for Integrated Reporting (IIRC, 2013). Some governments have already taken steps to do so such as the EU Directive 2014/95 on non-financial disclosure for large companies (Dunlap et al., 2017). Moreover, stakeholders' assessments of a company's level of responsibility and stewardship should not only be focused on improved performance but most importantly on improved transparency, whatever the performance.

6.7 Conclusion

In this dissertation, I aimed to **investigate the CSR accountability systems created by the SSM to hold mid-chain seafood companies accountable for their CSR practices** in order to understand better the extent to which the SSM and CSR can contribute to a socially responsible and environmentally sustainable seafood industry. To do so, I examined the accountability of seafood CSR and the CSR practices of seafood companies that result from the accountability mechanisms developed by and through the SSM. I asked what level of CSR accountability the SSM has created to hold seafood companies accountable and whether the CSR practices that result from it are likely to lead to the social and environmental improvements that the SSM is demanding, and in some ways claiming.

Based on these questions, I reflected on how CSR accountability can be improved to further drive social and environmental improvements in the seafood industry by using the following central questions are used to guide this research:

1) **What is the level of CSR accountability of mid-chain seafood companies created by the SSM through standards, monitoring and sanctions?**
2) **What CSR practices result from this accountability system and what is their potential to lead to improvements?**
3) **What are key opportunities to improve CSR accountability and CSR practices?**

I used theories and concepts of CSR, network governance and informational governance to provide elements of answers to those questions. I focused the analysis on mid-chain seafood companies involved in the production of seafood from wild-capture fisheries, and their role in governing environmental sustainability and social responsibility in seafood global production networks. I structured the analysis around three key elements of accountability mechanisms: 1) a standard that describes the behaviour or outcomes that the one being held to account is expected to meet or produce; 2) procedures to monitor and access information about the behaviour and outcomes of the one being held to account against the standard and; 3) means to reward and sanction the one being held to account to enforce compliance. I focused on one particular element: transparency tools and how these contribute to monitoring and accessing information about the CSR performance of seafood companies.

I conclude that the SSM as a network of private actors, which is part of wider sustainability governance network made of both public and private actors, has contributed to making companies more accountable for their social and environmental impacts, mainly through social and market mechanisms. However, these mechanisms are constrained in terms of how much they can drive change due to the limits such as risks of co-optation between NGOs and companies and a market for sustainability that is limited to certain parts of the world's market and consumers. Therefore, I suggest that improving the accountability of seafood companies for their CSR practices and their social and environmental impacts will require 1) stronger social capital among stakeholders; 2) more participatory and democratic processes to design CSR standards and policies; 3) pluralistic forms of accountability that are not only focused on market leverage points but also financial and regulatory leverage points and; 4) integrated and non-financial reporting.

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