

The unintended consequences of ‘responsible fishing’ for small-scale fisheries: Lessons from the Pacific coast of Colombia

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ABSTRACT

The ‘Code of Conduct for Responsible Fisheries’ developed by the United Nations Food and Agriculture Organisation has been central for the governance of fisheries. Most responsible fisheries initiatives are market-driven and motivate transitions towards greener economies. These added-value fish economies have increasingly connected fishing grounds to external markets that demand high quality sustainable products. This article problematizes the framework of responsible fishing and examines its intersections with place-based institutional processes in the Pacific coast of Colombia. In doing this, it explores how the concept of ‘responsible fishing’ has been framed, arguing that it has been used to operationalize the expansion of neoliberal processes in the oceans. It draws on small-scale fisheries performed by Afro-descendant people in the Gulf of Tribugá, where responsible fishing narratives have been linked to the creation of marine protected areas and responsible fish supply chains. Two dominant framings of responsible fishing were identified; a ‘sustainability’ framing that denotes the sustainable use of fishing resources, and a ‘technical’ framing that refers to the use of environmentally safe practices. However, none of these framings accounts for social responsibility. Instead they have enforced the division of fishing practices between ‘responsible’/‘irresponsible’, and produced static, ahistorical and oversimplified understandings of fishing dynamics. All this has triggered a local need for external control over fisheries governance, disempowering place-based control mechanisms. This article concludes by questioning whether responsible fishing can successfully ensure a sustainable use of fishing resources, or if moving beyond ‘responsibility’ is needed to strengthen local institutional processes and autonomy among coastal peoples.

1. Introduction

Fisheries around the globe experienced accelerated industrialisation processes between the 1940s and the 1990s [60]. Governments played a key role in facilitating these processes through the introduction of fuel and capacity-enhancing subsidies, as well as funding the development of more effective fishing gear [61]. This has boosted fisheries overcapacity and overfishing, dramatically impacting marine ecosystems, in some cases triggering the collapse of entire industries (e.g. Peruvian Anchoveta and Atlantic cod) [26,43]. To counteract the impacts of industrial fisheries, top-down state control mechanisms started to be implemented around the globe using a precautionary approach to fisheries governance [16,2,29].¹ However, small-scale fishers and coastal dwellers have generally been excluded from national fisheries governance decision-making arenas [12,5]. ‘Responsible fishing’ emerged during the 1990s as a global institutional framework to ensure a sustainable use of fisheries, notably after the Food and Agriculture

Organisation of the United Nations (FAO) released the ‘Code of conduct for responsible fisheries’ (referred here as ‘the Code’) in 1995. This voluntary instrument is still in force, as an international guideline for the development of fishing policies and management. Although the Code provides an innovative framework that integrates fisheries management, conservation, exploitation, production, and consumption within the framework of responsible fishing, compliance around the world has been poor [53].

Questions regarding the responsible fishing framework include, responsible for whom? Who and how are responsible practices defined? Do responsible practices encompass the sustainability of aquatic resources? Does it include social responsibility? This article examines these questions and opens debate on the impacts of the ways responsible fishing narratives have been framed in the governance of small-scale fisheries. In doing this, it examines the framings of responsible fishing and their influence over place-based institutional processes in the Gulf of Tribugá on the Pacific coast of Colombia.² This

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¹ Governance defined as “the whole of public as well as private interactions taken to solve societal problems and create societal opportunities. It includes the formulation and application of principles guiding those interactions and cares for institutions that enable them” ([30], 17).

² Institutions conceived as the “regularised patterns of behaviour between individuals and groups in society” ([32], 225).

analysis critically engages the concept of ‘responsible fishing’ as a framing of a desired state, showing how it involves multiple and conflicting understandings of responsibility, concealing tension between top-down market-based control mechanisms and place-based institutional processes. Entman [13] defined framings as a feature of discourse that selects “some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item described” (1993, 52). To understand problems, identify causes, evaluate, and create possible solutions framings involve a simplification of reality that influences peoples’ ideas, behaviours, and communication [3]. Framings can be identified through the comparison of narratives, examining how particular meanings and understandings become more prominent than others [14]. It is important to position framings within their cultural context to analyse how they emerge and have been operationalized to influence institutional processes [19,6]. Moreover, Leach [31] and Dressler et al. [11] argued that the framings produced by environmental governance policies can often create static understandings of nature that support the political and economic agendas of the state and commercial actors.

In exploring the interactions between responsible fishing and place-based institutional processes, this article draws on the work of Cleaver who demonstrated that “people consciously and unconsciously draw on existing social and cultural arrangements to shape institutions in response to changing situations. The resulting institutions are a mix of ‘modern’ and ‘traditional’, ‘formal and ‘informal’” ([7], 26). Where people actively use discursive symbols produced by the state, tradition, international agencies, and socio-natural processes to legitimise their institutional arrangements [10,37,7,8]. Thus, institutions are multi-purpose, complex, dynamic, and leak meaning from one context to another [9]. This article examines historical socio-natural processes that have shaped fishing practices and institutional processes, analysing them in relation to the power/knowledge dynamics in which they operate [33,51]. In referring to the concept of socio-nature this analysis recognises the inseparability between nature and society [62]. It builds on Foucault’s [23] understanding of power/knowledge dynamics as disciplinary forces that emerge when accepted forms of knowledge are conceived as ‘truth’, and are used to control the conduct of others. These dynamics participate in the establishment of governmentalities defined as “the art of exercising power in the form and according to the model of the economy” ([22], 92), which are not only performed by the state, but by individuals and groups [34]. It is important to note that ‘political economy’ has been the main form of knowledge – the dominant regime of truth that has informed the configuration of Western governmentalities since the 18th century. All of which has turned the market into “a site of verification-falsification for governmental practice” ([21], 32). Thus, the expansion of political economy has involved the institution of governmentalities that control peoples’ understandings and use of natural resources ([21], 15–16).

Two dominant framings of responsible fishing were identified in the Gulf of Tribugá; first, a ‘sustainability’ framing, which defines responsible fishing as the sustainable use of fishing resources, with a major focus on the maintenance of fish abundance; and second, a ‘technical’ framing that conceives responsible fishing as the use of environmentally safe fishing practices, referring to those practices that minimise impacts over fish stocks and marine ecosystems. Responsible fishing has contributed to the neoliberalisation of the ocean along the Pacific coast of Colombia.³ Mansfield [38,39] demonstrated that marine enclosures and property rights for fisheries governance have enabled the expansion of neoliberal imperatives in the oceans,

operating hand-in-hand with market incentives. This article adds to the understanding of neoliberalisation processes by showing how market incentives in the Gulf of Tribugá have thrived from responsible fishing narratives promoted by conservation Non-Governmental Organisations (NGOs) through biodiversity conservation projects, the creation of a Marine Protected Area (MPA), and the development of responsible fish supply chains. Overall, responsible fishing has involved a moralistic governance regime that has granted conservation NGOs and restaurants participating in responsible fish supply chains along the northern Pacific coast, the authority to govern small-scale fisheries under very limited government involvement. To build this argument, this article starts by exploring the fluid dynamics of fishing practices on the Gulf of Tribugá. Then, it examines the discursive framing of responsible fishing, showing how its boundaries are actively defined. Next, it discusses how responsible fishing has influenced social interactions and place-based institutional processes. Lastly, it argues that responsible fishing narratives have oversimplified fishing dynamics, unintentionally producing fixed imaginaries of fishing practices, and disempowering place-based social control mechanisms through the enforcement of a local need for external control mechanisms.

2. Methods

A multi-methods approach was used, drawing on ethnographic research and secondary data collection in Bogotá and nine coastal villages in the Gulf of Tribugá (Jurubirá, Tribugá, Nuquí, Panguí, Coquí, Joví, Termale, Partadó, and Arusí) between July 2014 and March 2015 (Fig. 1). In total, 94 semi-structured interviews were performed with community members and leaders, fisher people, fish traders, fisheries and environmental sectors officers, NGO officials, restaurant employees, and funding agents. The interviews explored fishing dynamics, fish value chains, local perceptions on responsible fishing, major threats to small-scale fisheries, place-based institutional arrangements, and fisheries governance. All interviews were conducted in Spanish, recorded, transcribed, and coded by emerging themes. Respondent’s names were replaced by pseudonyms. The analysis also included information from informal conversations, participant observation, meetings, reports, and historical archives. All quotes were translated by the author to English and the original Spanish quotes are available in [Supplementary material](#).

3. Fluid practices

The Gulf of Tribugá is located on the northern Pacific coast of Colombia (Fig. 1). It is predominantly inhabited by the descendants of African people who were forcibly brought to Colombia by the Spanish colony (16th and 17th centuries), and enslaved primarily to perform alluvial gold mining [44]. These people have survived a long history of dispossession and racial discrimination in Colombia that continues today [47,65]. The northern section of the Gulf was declared as a protected area – the *Ensenada de Utría* National Natural Park (PNNU) in 1987, causing the eviction of Afro-descendant families living within the park. South from the PNNU the coastal area was titled to nine Afro-descendant communities, as *Los Riscuales* collective territory in 2002.⁴ Further inland there are three indigenous *resguardos* (reserves) titled to the *Emberá* people.

Socio-natural interactions on the Pacific coast have been shaped by the pulsing dynamics of complex riverine systems that flow from the West Andean mountain range towards the Pacific Ocean [36,46]. Waterscapes along the coast change in response to semidiurnal tidal patterns – with a transition from high to low tides two times a day, and

³ Neoliberalism understood as a non-monolithic “political economic approach that posits markets as the ultimate tool for achieving optimal use and allocation of scarce resources” ([38], 65).

⁴ Law 70 (1993) granted collective territorial rights to Afro-descendant communities along the Pacific after the 1991 Colombian Political Constitution recognised Colombia as a pluriethnic and multicultural country.

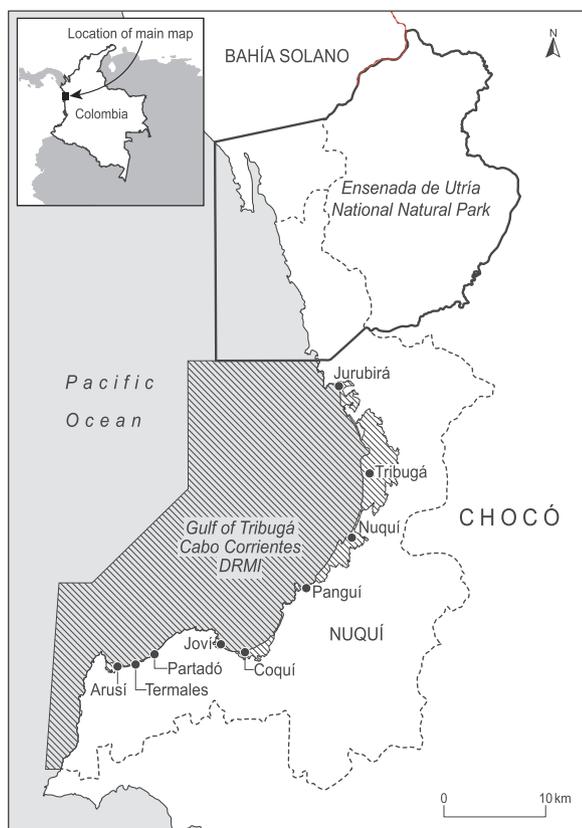


Fig. 1. Nine coastal villages along the Gulf of Tribugá. At north, the *Ensenada de Utría* National Natural Park, and further south the Gulf of Tribugá – Cabo Corrientes Regional District of Integrated Management (Copyright Chandra Jayasuriya).

moving from spring tides (*puja*) during the full moon and new moon to neap tides (*quiebra*) every quarter moon. These tidal rhythms shape socio-natural processes including coastal navigation patterns and fishing practices [58].

Small-scale fishers follow fish along the Gulf's coastal sea, rivers, water streams, and mangrove swamps. They buy, craft, and modify their fishing gear using diverse techniques and technologies. When fish abundance is low, most fishers transition from fishing to farming, others temporarily work in tourism or any other labour opportunities. Some fishers become experts in one fishing gear, while others diversify their practices moving from one gear to another in relation to the season, the moon, water conditions, the day, and their mood, among many other reasons. Coastal fishers learn to fish through their own and shared experiences, observations, and processes of trial and error, in time developing skills and techniques that enable them to increase the possibilities of a human-fish encounter. As mentioned by Alejo, an NGO official who has worked very closely with coastal fishers in Jurubirá:

"It is amazing how they make variants, for example, they can catch a marlin without a hook, and that is very crazy. In Jurubirá, they fish with a wick made from thread, they comb it and it looks like a squid – one of the prey of this species – and the marlin that has a rugged beak, bites, gets entangled and no one can release it. Imagine without a hook! [...] They have variants like, do you remember the 'pirulito' [a lollipop]? they introduce a hook to the stick so when the motorboat is moving it releases bubbles and attracts certain species. [...] I mean they have become technicised in a very impressive manner!" (Supplementary Text S1).

Fishing involves a constant conversation between past and present experiences on land and at sea. It is through this conversation that innovation unfolds as fishers develop unique solutions to place-based problems, this involves improving their techniques and experimenting with new tools and gear. Luis, who fishes in Jurubirá, has a basket filled

with hand-lines of diverse sizes for targeting different fish species. Like other fishers, he has constructed hand-lines by turning foam buoys found drifting at sea into hand-reels. Each reel has a monofilament fishing line of a certain strength and width, tied to hooks of different sizes, in some cases also attached to hairy and luminous fishing lures, locally known as '*penachos*'. Luis claimed that fish are becoming more aware of the lines, pushing fishers to change their fishing practices and gear, in his words:

"We as artisanal, set up our fishing gear with an idea of how to trick fish. When it works, you think, 'wow, fish are biting!' Early on we used to fish with a wick, like a rope, but nowadays the system has changed a lot, we have started to change because everything has become shy, they do not want to bite, the rope is too thick, so we have to find nylon" (Supplementary Text S2).

When Luis creates a new tool, he likes to brag about it with other fishers, claiming some have copied him and even improved his ideas. This shows how fishing practices are closely embedded with social interactions that take place on land and at sea. Luis and other fishers emphasised the importance of using diverse fishing gear and techniques to cope with the spatial and temporal dynamics of water and fish. As explained by Carlos, who fishes in Nuquí:

"There are fishing seasons, there are times when you go out with gillnets and you don't catch much, but you go out with the hand-line and you catch. So, this is why fishers need to have several fishing alternatives" (Supplementary Text S3).

Because fishing practices become subjected to changes in space and time, some gradually disappear. Armando in Tribugá, recalled growing up and watching people use gear and techniques that are rarely used nowadays:

"To fish from the 1960s to the 1980s, people used 'chinchorros' [small mesh nets] they used a net to block the mouth of a water stream so that when the tide was receding fish got trapped [...]. Other people used 'barbasco' [Tephrosia spp.], a plant that poisons fish, but is harmless to humans. When the tide was getting low they added the 'barbasco' killing all the fish. Others used dynamite, this was a very hard time because they created 'palizadas', which were places for collecting fish and water. After two to ten days when plenty of fish gathered around, they threw dynamite and killed so many [...] Beyond these, they used to fish with sticks and fish pens" (Supplementary Text S4).

Among these practices '*barbasco*' was traditionally used by different indigenous peoples in Colombia [48]. It is likely that coastal Afro-descendants learned this technique through their social interactions with *Emberá* and other indigenous peoples. These practices have been subjected to social control mechanisms, particularly when coastal dwellers started linking them with the reduction of fish abundance and the destruction of aquatic places. As Andrés, an NGO official who has worked in this area in recent decades stated:

"Those ways of fishing have disappeared not because they were not good, because they are good, but because the people started to do social control due to their damage, making them disappear. Then, when the gillnets came, they came because they were not from here, little by little people have stopped using them, again due to social control" (Supplementary Text S5).

Also in the words of Daniel, who fishes in Arusí:

"When I was little, we used to catch fish at the beach, we used to fish it with one of these sticks. At that time, there were not 'chinchorros', no gillnets, no [industrial] vessels, so what this is saying is that it is clear that when these types of fishing threats started to arise, the fish went away, it went away!" (Supplementary Text S6).

Deep-water shrimp and tuna industries seasonally fish along the Gulf's seascapes. These industries are locally regarded as responsible for

the depletion of fish stocks and high environmental impacts. Coastal respondents also blamed gillnets for the reduction of fish abundance. Gillnets were introduced from the end of the 1970s and the beginning of the 1980s. During this period fish abundance began to decline, a process linked to industrial overexploitation, high levels of bycatch, extreme *el Niño* climatic events (e.g. in 1973 and 1982), and the use of high impact small-scale fishing practices like dynamite and *barbasco* [67,68]. Respondents claimed that gillnets were brought by travellers coming from Panama. Gillnets were initially regarded as an easier way to catch fish, but due to their low selectivity and high environmental impacts, particularly small-mesh gillnets (known as *riflillo*), people started restricting their use nearby traditional fishing grounds. Generally, these grounds are surrounded by submarine basaltic rocks locally known as *riscas* or *morros* (those that can be seen from above the surface), as well as along the Gulf's mangrove swamps.

Social control mechanisms have taken multiple forms. These have included antagonistic encounters at sea between groups of fishers that block the entry to gillnet users near traditional fishing grounds. In villages like Jurubirá and Arusí, coastal fishers steal and destroy gillnets left around their fishing grounds. Oscar who lives in Nuquí and uses the gillnet, notes:

“In Jurubirá if someone throws a gillnet in front of the village they gather together, take the gillnet out, and steal it. If you don't pay them they do not return it back to you, and they say, ‘the next time you throw it we will damage it!’, so each fisher that has a gillnet knows that if you go and they take it, you are screwed” (Supplementary Text S7).

Some villagers enact control by avoiding buying fish from gillnet users. Small-scale landings are primarily used for local consumption. However, fish are also traded locally and nationally (to Medellín, Quibdó, and Bogotá) by two main fish traders that operate in Nuquí, and have fish collection points in Jurubirá, Panguí, and Arusí. Of the 55 fishers interviewed, 36 temporarily or permanently sold fish to these and other seasonal traders. During interviews, traders argued that gillnet catches are usually bought at cheaper prices because of the low quality of the meat. Moreover, local storytelling and songs have also contributed to limit the use of gillnets. For instance, Carolina who fishes along the mangrove swamps of Tribugá, remembered the *cumbancha* song (traditional musical rhythm) written to Margarita – a fisher who used to fish using gillnets along the mangroves. She sang the first verse:

“One Monday morning Margarita embarked, she was going to fish with gillnet gear, but the fish did not fall (bis) Margarita do not disturb, stuck in the mangrove, the African bees can even kill you (bis)” (Supplementary Text S8).

She argued that this song is not only telling Margarita's story, but is letting people know that gillnets are not welcome near the mangroves. She was very emphatic to acknowledge that mangroves are peoples' local *'despensa'* (pantry), and that they need to be taken care of to ensure present and future access to fish. Next, this article examines the arrival of responsible fishing narratives to the Gulf of Tribugá during the late 2000s.

4. Framing responsible fishing

Responsible fishing became internationally institutionalised from the end of the 1990s. The 'International Conference on Responsible Fishing' (ICRF) held in Cancun in 1992, supported the transition towards responsible fisheries, defining them as:

“The sustainable utilization of fisheries resources in harmony with the environment; the use of capture and aquaculture practices which are not harmful to ecosystems, resources or their quality; the incorporation of added value to such products through transformation processes meeting the required sanitary standards; the conduct of commercial practices so as to provide consumers access to good quality products” ([18], 35).

Drawing on this definition, responsible fishing involves four key elements: the sustainable use of fishing resources, the use of environmentally safe practices, the added value to these products, and the provision of quality products to consumers. However, this framing fails to include a sense of social responsibility, disconnecting responsible fishing from the protection of artisanal fishing cultures, local food security, or to promote poverty alleviation.

Later that year, the 'United Nations Conference on Environment and Development' (UNCED) in Rio de Janeiro in late 1992, fixed 'sustainability' as a global priority, leading to the creation of 'Agenda 21' – a non-binding action plan that had a whole chapter (Chapter 17) focused on the sustainable development and management of the oceanic resources. FAO positioned responsible fishing as a global institutional framework for fisheries governance when the Code was created in 1995. The Code used the definition of responsible fishing created by the ICRF, and developed 19 general principles that define the obligations of states and users in terms of management, exploitation, conservation, and handling of fish products. This framework acknowledged that traditional knowledge should be used to inform conservation and management decision-making processes (principle 6.4). In 2015, the Code was complemented by the 'Voluntary guidelines for securing sustainable small-scale fisheries' which highlighted the contribution of small-scale fisheries for food security and poverty alleviation. These guidelines promote the development of more participative bottom-up fisheries policies to protect small-scale fisheries, endorsing the inclusion of fishing communities that have historically been marginalised from the design and discussion of fisheries governance [17,4].

The Code has influenced the management of MPAs and sustainable fish value chains, positioning the transition towards responsible fishing as one of the solutions to the global depletion of fish stocks [49]. However, there has not been much discussion about what responsible fishing entails, or how it has been subjected to multiple interpretations. ([59], 364) argued that the meaning of 'responsible' has not been clarified. They defined four criteria for responsible fisheries stating they “must be (i) sustainable, (ii) produce human benefits, (iii) have a 'fair' distribution of benefits, and (iv) not cause 'unacceptable change' in marine ecosystems.” Their definition introduces a sense of social responsibility, however, FAO's definition has yet to be updated. This article now examines how the framing of responsible fishing has interacted with the place-based institutional processes that shape small-scale fisheries along the Gulf of Tribugá.

4.1. Responsible fishing in Colombia

In Colombia, fisheries have been governed by an outdated policy (Law 13 of 1990, regulated by decree 2256 of 1991), created before the Colombian Political Constitution recognised the rights of Afro-descendant and indigenous peoples. This policy makes no reference to responsible fishing and does not include fishing communities in decision-making arenas [57]. In 2015, the Programme on Fisheries and Aquaculture of FAO and the Ministry of Agriculture in Colombia proposed guidelines for the design of an 'Integral policy for the sustainable development of fishing in Colombia', using the concept of responsible fishing extensively, but without a proper definition. But the fisheries policy law has not yet been updated. Therefore, the framing of fisheries in terms of responsible fishing on the northern Pacific coast of Colombia has mainly been enforced by biodiversity conservation projects related to the creation of MPAs and the development of sustainable fish commodity chains (e.g. the eco-gourmet project led from 2011 to 2016 by Fondo de Acción and Conservation International).

The creation of MPAs in the northern Pacific coast has been one of the main outcomes of local participatory efforts to ban industrial fisheries from fishing in artisanal fishing grounds. MPAs have been locally conceived as an opportunity to defend coastal food security and legitimise local authority over the sea. To the north, along the coastal sea of Juradó and Bahía Solano Municipalities, a participatory process led to

the declaration of the Exclusive Artisanal Fishing Zone (ZEPA) in 2013, banning industrial vessels from the coastline to 2.5 nautical miles out to sea. Further south in the Gulf of Tribugá a Regional District of Integrated Management (DRMI) was declared in December 2015, where only sustainable fishing is permitted. Importantly, the deep-water shrimp industry that temporarily enters the Gulf to access *el Filo*, one of the main pink shrimp (*Farfantepenaeus brevivirostris*) fishing grounds in the Pacific, has argued that it fishes sustainably and continues to fish inside the DRMI.

The establishment of these MPAs has produced a close relationship between coastal Afro-descendant leaders and conservation NGOs, particularly the MarViva Foundation, which has supported local participatory processes and acted as a bridging organisation between coastal leaders and agents from the fisheries authority (the National Authority for Fisheries and Aquaculture – AUNAP) and the regional environmental authority (Regional Autonomous Corporation for the Sustainable Development of Chocó – Codechocó). Importantly, MarViva and Conservation International have also provided technical assistance and support for the creation of sustainable fish commodity chains. This involves the use of added value responsible fish products incentives to promote the conservation of fishing resources, which led to the development of a commercial partnership between one fisheries association that operates along the ZEPA and a gourmet restaurant chain in Bogotá from 2009. In the Gulf of Tribugá, a local and privately-owned fish trading company began trading responsible fish products in 2013 with a group of nine restaurants and a supermarket chain in Bogotá. MarViva has played a key role in the creation and maintenance of these partnerships, acting as a control agent by defining responsible fishing guidelines. As explained by Lina, who has supported the emergence of responsible fishing supply chains in the northern Pacific coast of Colombia:

“Responsible fishing, well yes, it has been 100 per cent an initiative from MarViva, starting with fisheries monitoring, developing a traceability program, training them [coastal fishers], giving them rules, information, fish mean sizes, everything” (Supplementary Text S9).

In addition, MarViva created the ‘Environmental responsibility standard for the marketing of sea fish’ (referred to as ‘the Standard’), a certification process for the commercialisation of fish products that follow their criteria for the conservation of marine ecosystems and the responsible consumption of fish ([42], 6). On the Standard’s webpage (<http://estandar.marviva.net/>), responsible fishing has been defined as “the extraction of fishing resources in a way that generates the least possible impact to the sea and the species”. Complying with responsible fishing involves: using fishing technologies that reduce bycatch and juvenile fish catches; no catches of threatened species; following fish size limits and fishing bans; respecting protected areas and fishing restrictions; a proper handling of fish; and the traceability of fish. This definition is aligned with the one used by the Code, lacking any recognition of socio-cultural dimensions, or social responsibility. Local traders trading responsible fish products in Nuquí Jurubirá, and Arusí, oversee that fishers comply with the Standard’s regulations. Lina argued that MarViva developed the Standard because global certification programs like that of the Marine Stewardship Council (MSC) were very expensive and demanded high quality requirements that small-scale fisheries in the Pacific coast of Colombia are not able to meet (see Jacquet and Pauly [27] and Pérez-Ramírez et al. [50] for more details on the exclusion of small-scale fisheries from certification programs).

Government officials from the fisheries and environmental sectors present different understandings of the notion of responsible fishing. Marcelo, who worked for the AUNAP, understood responsible fishing as the control of fishing practices to limit the catches of threatened species and follow fish maturity size standards. Alberto, another AUNAP official, argued that responsible and sustainable fishing are two different things. In his words:

“One thing is to have a responsible fishing and the other is to have a sustainable fishing. Because I can have a thousand fishers doing responsible fishing. I can make them use good fishing practices, using curved hooks, but they are a thousand, too many to guarantee resource sustainability.” (Supplementary Text S10).

But not everyone agrees with this division. For instance, Mauricio who worked for the Nuquí municipality said:

“Responsible fishing is done by respecting the ecosystem, respecting the resources, the one that is done thinking of performing a sustainable activity that treats fish properly so that consumers can receive a good quality product” (Supplementary Text S11).

Mauricio’s framing of responsible fishing is more aligned to FAO’s definition than the one provided by fisheries authority officials. Moreover, Pablo, who works for the Marine and Coastal Research Institute (INVEMAR) attached to the Ministry of Environment and Sustainable development, noted:

“Accessing the resource in a responsible way goes hand in hand with the Code of Conduct, which talks about technology, but in this country, there has not been much attention to this. The [fisheries] authority, they do not know about technology, that is what we and the fishers have noticed. So, responsible fishing is about the use of technology, it does not mean fishing more, but fishing better, following fish sizes, not fishing during spawning season, etc.” (Supplementary Text S12).

Each of these framings has implications, and they illustrate the complexity behind the implementation of universal policies for the governance of resources. Particularly, as regulatory measures developed by international agencies and eco-certification programs forestall the authority of the state [64]. The responses provided by fisheries and environmental officials revealed two major ways in which responsible fishing has been framed. First, responsible fishing has been conceived as a strategy to promote the sustainable use of resources, while the second has been pegged to the use of certain technological and practical guidelines. These framings draw on different assumptions to create coherent understandings of reality. The sustainability framing links fishing practices to broader socio-natural processes, while the technical framing is more associated with compliance with access rules for added-value fish supply chains. One question that arises from this ambiguity is why would small-scale fishers transition into responsible fishing practices if these are not targeting the sustainable use of aquatic resources? This article now discusses how responsible fishing has been interpreted and deployed by coastal dwellers along the Gulf of Tribugá.

5. The (ir)responsible divide

Responsible fishing narratives have permeated and transformed local understandings of fishing practices in the Gulf of Tribugá, particularly since 2010. These narratives gain force in response to local concerns over the decline of fish stocks and the creation of the DRMI. Along the Gulf coastal dwellers started relying on a technical approach to responsible fishing, which has temporarily been aligned with existent local control mechanisms intended to discourage the use of gillnets. All this has increased the discursive use of responsible fishing as a way to endorse control over the use of gillnets. As explained by Rafael who fishes in Arusí:

“The gillnets that come, I feel sorry to say this but they come from Nuquí. Every now and then we have problems with them, because we say, ‘no, no, no, in Arusí we fish in a responsible way, while you come here to throw gillnets, it is not fair!’” (Supplementary Text S13).

These antagonistic interactions take place on land and at sea, between fishers coming from different villages, as well as within villages. When discussing the meaning of responsible fishing in interviews, coastal dwellers primarily referred to the use of less harmful

environmental practices. Some even argued that the use of gillnets is ‘irresponsible fishing’. In the words of Flor, a village leader:

“I believe ‘irresponsible fishing’ is a way of fishing, for example, there is a net that kills many tiny fish, that is a bad net, it is totally irresponsible fishing. The direct word is ‘destructive’. It destroys, it kills species, not just one, but many species” (Supplementary Text S14).

As fishing practices become divided between ‘responsible’ and ‘irresponsible’, the fluid heterogeneity that has governed fishing dynamics along the Gulf’s waterscapes is relegated to the background. In this way, responsible fishing encompasses the use of hand and long-lines, framing them as positive, artisanal, and environmentally safe. Whilst other techniques such as gillnets, *barbasco*, dynamite, and *chinchorros* are framed as irresponsible, having negative and destructive connotations. Although this technical framing has currently overlapped with the local control over the use of gillnets, referring to fishing practices as ‘responsible’ or ‘irresponsible’ has produced simplistic understandings of reality. As such, fishing gears are conceived as the only determinants of changes in the abundance of fish. This causal interpretation disregards other local and extra-local factors that also influence fish abundance and distribution patterns, such as overfishing, habitat degradation, and climatic and environmental changes [54]. The production of binary oppositions within this environmental governance scheme has positioned responsible fishing as something that is needed and required [45,66]. As explained by Felipe, a village leader:

“Gillnets are a very bad way of fishing that scares and kills species. This is why we are struggling with the DRMI, thinking of the future of our children, our grandsons and great-grandsons, because our ancestors conserved for us and that is the reason we have, so our vision is to conserve, to use but in a responsible manner!” (Supplementary Text S15).

However, these binaries reinforce rigid and extratemporal understanding of fishing dynamics. During an informal conversation with Sara and Santiago in Nuquí, Sara noted that only those fishers that use hand and long-lines were ‘real fishers’ (*pescadores verdaderos*), while the others were a threat to the local access to fish. Santiago completely disagreed, arguing that gillnet users were also fishers and that it was important to give them fishing alternatives.

The sense of stability enforced by responsible fishing promotes the homogenisation of fishing practices, normalising certain conduct as ‘good’, making them inseparable from the power dynamics in which they operate ([52], 5). For instance, coastal fishers that participate in responsible supply chains are required to use isothermal boxes, curved or J-hook sizes larger than No. 7 (No. 16 for catching bait), follow fish size limits, and avoid catching threatened species. These rules have been designed under limited local involvement, overlooking the active role played by fishers in the development, maintenance, and enforcement of control mechanisms. Moreover, they have oversimplified fishing dynamics and neglected that fishing practices change in space and over time. Particularly, as fishers follow fish and water dynamics, many of whom transition from one technique to other to maximise the probability of a human-fish encounter. These corresponded to 34 of a total of 55 fishers interviewed, where the remaining 21 included fishers who only used hand-lines (15), gillnets (4), fishing spears (1), and those who collected shellfish (1).

Interestingly, those landings that fail to meet responsible requirements are traded locally, as explained by Laura who trades responsible fish products:

“We have a selection process, because there is a local market, in the local market we leave the smaller fish, those that were caught without meaning to do it, or non-commercial varieties, and whatever is in best condition is sent to Bogotá” (Supplementary Text S16).

In this context, market incentives are partially disciplining the conduct of fishers to trade ‘responsible’ catches outside the Gulf, but not

so much within villages. Another unintended consequence of the technical framing of responsible fishing has been an overall feeling of despair and lack of trust of the viability of local control mechanisms for the eradication of gillnets. Of the 75 coastal dwellers interviewed, 68 manifested the need for the state to control the use of gillnets. Most respondents expressed that state intervention was necessary to avoid conflicts between fishers, arguing that the state should ban the trading of gillnets and effectively control their use along the Gulf. In turn, offering gillnet users alternatives and covering fishing gear substitution costs. As Chepe who fishes in Joví, noted:

“The state needs to find a way to help us. See how it solves the problem of giving something to gillnet users: isothermal boxes or long-lines, and things so that they leave those nets. That has been the struggle!” (Supplementary Text S17).

Sustainability and technical framings of responsible fishing have informed the configuration of a neoliberal environmental governmentality that turns coastal dwellers into environmental subjects, enforcing protective views of the environment ([1], 226). This environmental governmentality has been operationalised through morally binding disciplinary techniques, as well as market inceptives produced by conservation NGOs and added-value fish supply chains [20]. Importantly, these processes have also empowered coastal dwellers to pursue their own interests [63]. For example, the alignment between conservation objectives and Afro-descendant territorial struggles in the Gulf of Tribugá facilitated the rise of a place-based participatory process that led to the creation of the DRMI. This process was promoted as a strategy to ban industrial fishing and legitimise local authority over the coastal sea, subverting the state legal exclusion of aquatic spaces from Afro-descendant collective territories defined by Law 70 (1993) [58]. Future research needs to assess the long-term impacts of responsible fishing over place-based institutional processes and socio-natural interactions.

6. Discussion and Conclusion

Responsibility framings have not been exclusive to fisheries. They have been used by FAO to frame the governance of forests, agriculture, consumers, and tenure systems. These framings operate through the emergence of binary oppositions that divide practices, people, commodities, and markets in terms of ‘responsible’ and ‘irresponsible’ [45]. This article has found multiple understandings of what responsible fishing entails and the problems it attempts to solve [11]. Among these multiple understandings there are two main framings, one that sees responsible fishing as a tool to ensure the sustainable use of resources, and the other to promote the use of technologies and techniques that are less environmentally harmful. These framings are part of a moralistic governance regime that governs fishers, traders, and consumers through codes of conduct, turning them into moral subjects [24]. The universal moral agenda for fisheries emerges as an expression of a dominant neoliberal logic, where individual actions are not regulated by the government, but by individuals own morality and economic rationality [25,35]. In this neoliberal governmentality, economic incentives become a central tool to influence people’s behaviours [20]. This is made evident when analysing the passive role played by the Colombian state in the governance of fisheries in Colombia, as responsible fishing initiatives are facilitated by conservation NGOs through the development of added-value responsible fish supply chains.

Notions of responsible fishing have largely overlooked the complexity of fishing practices. Instead, they have enforced fixed imaginaries of fishing that neglect the spatio-temporal dynamics of human-fish interactions, and the key role played by fishing heterogeneity in coping with social and environmental changes [41]. Still, a technical framing of responsible fishing has permeated local control mechanisms, fostering static imaginaries of fishing practices. This approach has promoted the homogenisation of fishing practices, which can potentially

limit a fisher's ability to respond to environmental changes, as well as increase the pressure over certain species that are more likely to be fished when following responsibility criteria [40,41]. This article raises major concerns regarding the technical framing of responsible fishing, revealing that it has triggered a sentiment of dependency on external control mechanisms that has disempowered place-based institutional processes in the Gulf of Tribugá.

MPAs in the northern Pacific coast of Colombia have played a key role introducing market-based instruments for the governance of small-scale fisheries. Historically, coastal dwellers have been exposed to armed conflict, racial discrimination, and processes of socio-economic marginalisation [15,46]. This context enabled the deep-water shrimp industry to claim it fishes sustainably and continue to fish inside the DRMI. It is important to note that responsible fish supply chains have granted local fish traders access to (more) fair trading conditions, reducing the number of intermediaries. However, they have also contributed to the unequal distribution of fish, by attaching 'responsible' landings to external markets, leaving the landings of 'irresponsible' and non-commercial species for local consumption. This is a process in which there has been limited scrutiny over short- and long-term socio-natural impacts [55]. Rather than promoting the sustainability of small-scale fisheries, responsible fishing initiatives have focused on the transition to less harmful fishing technologies, giving low priority to safeguarding the long-term viability of small-scale fisheries. Similarly, on a global level, the MSC sustainable seafood certification scheme has included a responsible use of fishing resources as part of one of its three main principles (i.e. the effective management principle), but has failed to define what responsible use entails. This scheme has been criticised for deliberately eluding the inclusion of social criteria to facilitate industrial compliance with the certification scheme [56].

The absence of a sense of social responsibility emerges as a major drawback to the dominant ways in which responsible fishing has been framed. In its present form, it disregards concerns over social equity, food security, and environmental justice. In conclusion, it is important to highlight the role that the framework of responsible fishing has played in operationalising the development of market driven incentives in Colombia and oceans around the globe [27,28]. It is necessary to engage critically with responsible fishing narratives, and to promote a dialogue that brings together fishing communities, conservation NGOs, environmental and fisheries authorities, traders, and consumers to move beyond the production of pervasive binary oppositions. In addition, such a dialogue needs to view fishing practices as part of wider and dynamic socio-natural processes. This calls for a transition towards a more participatory, inclusive, and place-based small-scale fisheries governance, that instead of disciplining fishing practices to serve markets, empowers local institutional processes to serve the needs of coastal dwellers.

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Appendix A. Supplementary material

Supplementary data associated with this article can be found in the

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