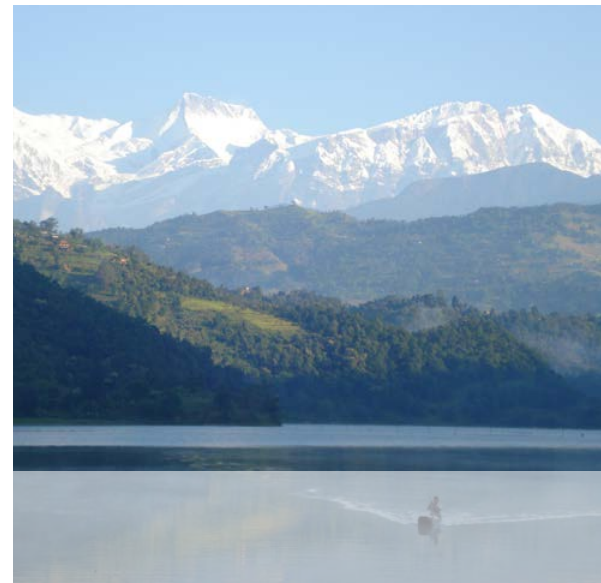




Securing sustainable small-scale fisheries: sharing good practices from around the world



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First row, left to right:

Women's roles are often seen as supportive of men's productive roles, such as cleaning the fish catch, Myanmar (©FAO/Bel Angeles); Beginnings of local tourism, Myanmar (©FAO/Bel Angeles); A pirogue in Andavadoaka, southwest Madagascar, prepares to sail to the octopus fishing grounds (©Blue Ventures/Anouk Neuhaus).

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Harvesting yellow clams in Uruguay (©FAO/Sebastián Horta); Carrying fish for sale, India (©FAO/V. Vivekanandan/Maarten Bavinck); Restored Rupa Lake in front of the Annapurna range, Nepal (©FAO/Rupa Lake Restoration and Fisheries Cooperative).

Securing sustainable small-scale fisheries: sharing good practices from around the world

FAO
FISHERIES AND
AQUACULTURE
TECHNICAL
PAPER

644

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Required citation:

FAO. 2019. Westlund, L. & Zelasney, J. eds. *Securing sustainable small-scale fisheries: sharing good practices from around the world*. FAO Fisheries and Aquaculture Technical Paper No. 644. Rome. 184 pp. Licence: CC BY-NC-SA 3.0 IGO.

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ISBN 978-92-5-131260-5

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Preparation of this document

This document on *Securing sustainable small-scale fisheries: sharing good practices from around the world* has been prepared by the FAO Fisheries and Aquaculture Department and contains a total of eight papers (see list of contributors). The papers have been technically edited by Lena Westlund and Joseph Zelasney. Assistance in reviewing papers by Anthony Charles (St Mary's University, Nova Scotia, Canada), Serge Garcia (Fisheries Expert Group, IUCN Commission on Ecosystem Management, Fiumicino, Italy), Felix Marttin (FAO Fisheries and Aquaculture Department), Clara Park (FAO Regional Office for Asia and the Pacific – RAP) and Florence Poulain (FAO Fisheries and Aquaculture Department) is gratefully acknowledged.

Abstract

This document includes eight studies showcasing good practices in support of sustainable small-scale fisheries. FAO commissioned these studies aiming to share experiences and promote the implementation of the Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines). The case studies were also intended to promote participatory approaches – in line with the SSF Guidelines principles – and to promote increased interaction between research and fishing communities, including the use of traditional knowledge and participatory research. It is hoped that the case studies will inform policy and policy processes and, in this way, promote sustainable small-scale fisheries according to the SSF Guidelines and the human rights-based approach to development (HRBA).

The case studies constitute a rich selection of experiences and are diverse, not only with regard to their geographical setting but also in scope and approach. They span from looking at one specific tool for sharing experiences (the fisheries learning exchanges methodology in Madagascar and Mozambique) or examining the enabling environment in a specific thematic area (disaster risks in Bangladesh), to regional policy formulation on small-scale fisheries (the SSF Guidelines protocol for Caribbean policies) and reflection on how to use the SSF Guidelines in participatory processes (the Myanmar step-by-step approach to discussions with small-scale fisheries communities). A few of the papers look at co-management, in some cases combining fisheries management and social development (Senegal, Uruguay and Nepal), with one focusing on the role of small-scale fisheries and community organizations (India).

Generally, the case studies refer to HRBA but, perhaps because many of the activities have taken place in the past, it seems that HRBA has rarely been consciously and explicitly implemented. Still, the case studies bear witness to a number of experiences and practices that are clearly steps in the right direction. Key good practices emerging from the studies refer to, among other things, holistic approaches to co-management and social responsibility; broad engagement, inclusiveness and partnerships; the power of communication; and gender equality and the role of women. As more experience is gained, our knowledge of how to go about implementing the SSF Guidelines will improve and nurture new and continued initiatives. For the present and the future, efforts should be made to apply HRBA, while continuing to share experiences and good practices showing how to do so when implementing the SSF Guidelines.

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Acknowledgements

FAO would like to extend its appreciation to all authors for their contributions to this document. We would also like to thank Nicole Franz and Sisay Yesheanew for their inputs into the planning and design of the publication as well as the members of the FAO Technical Network on Small-Scale Fisheries for their support. We are grateful to Andrew Park for editing the text, to Jose Luis Castilla Civit for the desktop publishing layout, to Marianne Guyonnet and Åsa Ljusenius for help with final document edits and to Gilles Kaboha for the translation from French of the paper on Senegal.

Abbreviations and acronyms

| | |
|----------------|--|
| AGM | Annual General Meeting |
| BEDROC | Building and Enabling Disaster Resilience of Coastal Communities |
| CANARI | Caribbean Natural Resources Institute |
| CARICOM | Caribbean Community |
| CCCFP | Caribbean Community Common Fisheries Policy |
| CCRF | Code of Conduct for Responsible Fisheries |
| CEDAW | Convention on the Elimination of All Forms of Discrimination against Women |
| CERMES | Centre for Resource Management and Environmental Studies |
| CIPPEC | Centre for the Implementation of Public Policies Promoting Equity and Growth |
| CLP | Local fishers' committee (Senegal) |
| CMZ | Coastal Management Zone (India) |
| CNFO | Caribbean Network of Fisherfolk Organisations |
| COFI | Committee on Fisheries |
| CPUE | Catch per unit effort |
| CRFM | Caribbean Regional Fisheries Mechanism |
| CRZ | Coastal Regulation Zone |
| CSO | Civil society organization |
| CZMP | Coastal Zone Management Plan (India) |
| DDM | Department of Disaster Management (Bangladesh) |
| DINARA | National Direction of Aquatic Resources (Uruguay) |
| DRR | Disaster risk reduction |
| EAF | Ecosystem approach to fisheries |
| ERG | Exponential Random Graph |
| FGD | Focus group discussion |
| FishMARC | Fisheries Management Resource Centre (India) |
| FLE | Fisheries learning exchange |
| GIFT | Gender In Fisheries Team |
| HRBA | Human rights-based approach |
| LI-BIRD | Local Initiative for Biodiversity, Research and Development (Nepal) |
| LMMA | Locally Managed Marine Area |
| MoDMR | Ministry of Disaster Management and Relief (Bangladesh) |
| MSSRF | MS Swaminathan Research Foundation |
| NDFSF | Nagai District Fishermen Sangams' Federation |
| NFF | National Fishworkers' Forum (India) |
| NGO | Non-governmental Organization |
| NRLM | National Rural Livelihood Mission |
| PFA | Protected fishing area (Senegal) |
| SHG | Self-help group |
| SIFFS | South Indian Federation of Fishermen Societies |
| SLORC | State Law and Order Restoration Council (Myanmar) |
| SNEHA | Social Need Education and Human Awareness (India) |
| SOD | Standing Orders on Disaster (Bangladesh) |
| SSF Guidelines | Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication |
| TNI | Transnational Institute |
| UWI | University of the West Indies |
| VGF | Vulnerable Group Feeding (Bangladesh) |
| VGGT | Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security |

Introduction

BACKGROUND

The small-scale fisheries sector is dynamic and diverse, engaging both men and women throughout its value chain and providing food and livelihoods for hundreds of millions of people around the world. Small-scale fisheries contribute around half of global fish catches and employ more than 90 percent of the world's capture fishers and fishworkers, of whom almost half are women (World Bank, 2012). The important role of small-scale fisheries for human well-being and sustainable development is increasingly recognized, especially in developing countries, because of their contribution to food and nutrition security and the opportunity they represent for poverty eradication.

Fishing communities are often marginalised and tend not to be involved in decision-making processes that influence their lives and future (FAO, 2018). Where poverty exists in small-scale fishing communities, it is of a multidimensional nature and is caused not only by dwindling fishery resources and low incomes but also by factors that impede full enjoyment of human rights, including civil, political, economic, social and cultural rights. The often complex livelihood strategies of fishing communities are not always understood and the issues of small-scale fisheries tend to be inadequately addressed, both with regard to resource management and from a broader social and economic development perspective (FAO, 2005; FAO, 2015).

The Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines), endorsed by the 31st Session of the FAO Committee on Fisheries (COFI) in 2014, were developed to address this situation (FAO, 2015). The SSF Guidelines are unique in that they represent the first international instrument dedicated entirely to small-scale fisheries. The objectives of the SSF Guidelines – to contribute to equitable development and a sustainable future¹ – are to be achieved by applying a human rights-based approach (HRBA). While HRBA has been recognized by FAO as a principle that informs the design, implementation, monitoring and evaluation of programmes and projects, there is still limited experience of its practical application in the context of small-scale fisheries.

One important goal of FAO's support to SSF Guidelines implementation is to encourage sharing of knowledge and experiences. Hence, with a view to promoting HRBA application and SSF Guidelines implementation, FAO commissioned a series of case studies to investigate and showcase good practices (Box 1), which are now shared in this technical paper. It is hoped that the case studies will inform policy and policy

BOX 1

What is a good practice?

A good practice is not only a practice that is good, but a practice that has been proven to work well and produce good results, and can therefore be recommended as a model. It is a successful experience that has been tested, validated and repeated, and hence deserves to be shared so that a greater number of people can adopt it.

Source: FAO, 2013.

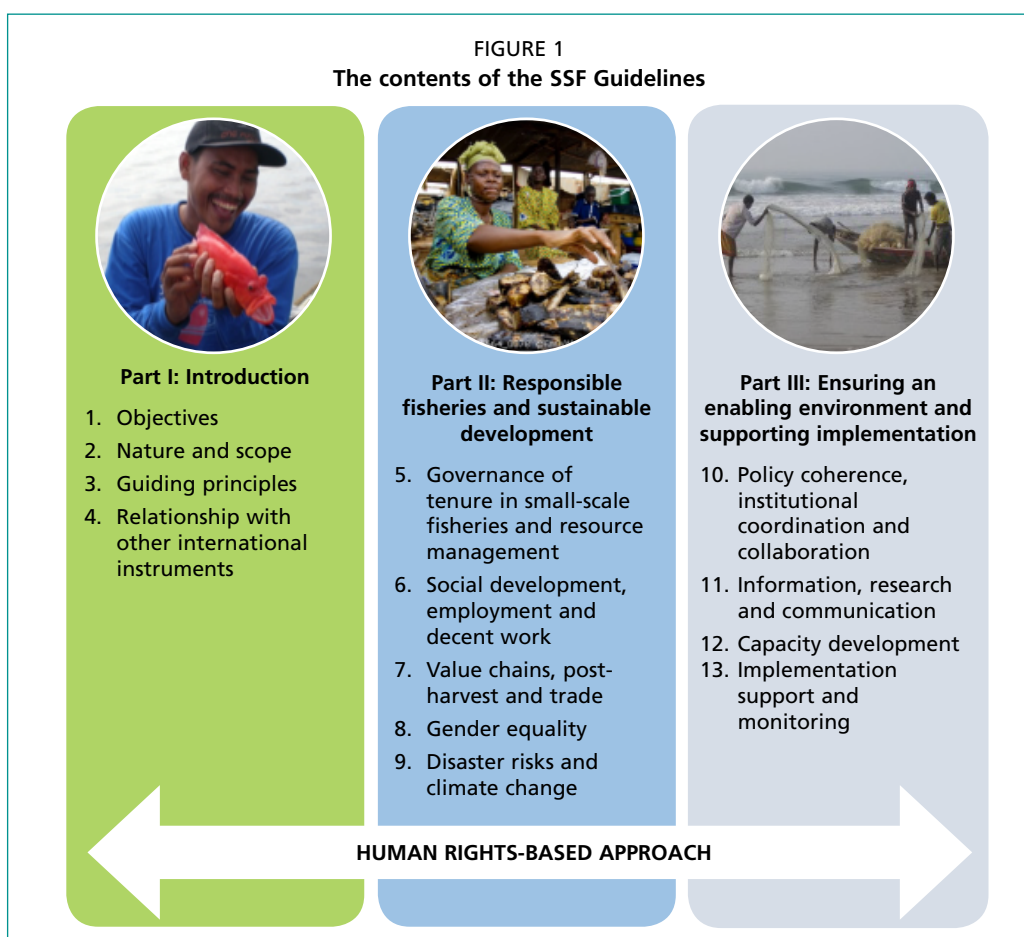
¹ See the SSF Guidelines for a complete list of their objectives (FAO, 2015).

processes, and in this way promote sustainable small-scale fisheries according to the SSF Guidelines and in line with international human rights standards.

THE SSF GUIDELINES AND HRBA

The SSF Guidelines were developed through a participatory process, with around four thousand small-scale fisheries representatives and other stakeholders in over 120 countries sharing their views and input on the contents of the document. The SSF Guidelines are structured in three parts (Figure 1):

- Part 1 (Chapters 1–4) specifies the objectives, nature, scope, and guiding principles of the guidelines as well as their relationship with other international instruments.
- Part 2 (Chapters 5–9) addresses key thematic areas including responsible fisheries and governance of tenure but also other crucial intersectoral topics.
- Part 3 (Chapters 10–13) provides implementation guidance and recommendations for how to create an enabling environment.



The SSF Guidelines are based on international human rights standards, responsible fisheries governance and a balance of the three dimensions of sustainable development: economic, social and environmental. They frequently refer to HRBA, which is generally defined as a conceptual framework of human development that is normatively based on international human rights standards and operationally directed towards promoting and protecting human rights. The overall objective of HRBA is to address the root causes of poverty, including discrimination, marginalization, exploitation and abuse, by bringing about systemic changes in policy, regulatory and institutional frameworks. HRBA involves analysing inequalities, vulnerabilities and responsibilities

and redressing discriminatory practices and unjust distributions of power that sustain poverty. The PANTHER principles – participation, accountability, non-discrimination, transparency, human dignity, empowerment and the rule of law – are at the core of HRBA implementation (FAO, 2017).

THE CASE STUDIES

The human rights of small-scale fishers, fishworkers and communities that are specifically provided for in the SSF Guidelines include: the right to adequate food; legitimate tenure rights to fishery resources and adjacent land, including rights against arbitrary/forced eviction/displacement; the right to participate in the management of fishery resources; the right to an adequate standard of living including housing, water, sanitation and source of energy; labour rights, such as the right to decent work; the right to protection from physical and sexual violence; the right to equal access to social security and services such as savings, credit and insurance; and the collective rights of women, indigenous peoples, migrants and other vulnerable and marginalized groups, including the right to special support in developing their organizations, accessing markets, benefitting from trade and accessing information (FAO, 2017). The case studies were commissioned to investigate how and to what extent these human rights have been respected and addressed in different situations. The papers do not cover all issues and aspects, but they do collectively address an important selection of the contents and thematic areas of the SSF Guidelines and their guiding principles.

The work carried out in relation to the case studies was usually done in support of already ongoing activities. The studies also aimed to create synergies, in particular by promoting participatory approaches – in line with the SSF Guidelines principles – and increasing the interaction between research and fishing communities, including the use of traditional knowledge and participatory research. The case studies provided an opportunity to examine and analyse particular issues in more detail with a view to creating new insights and informing existing activities. Likewise, the good practices that emerged are shared here to inspire SSF Guidelines implementation elsewhere.

Based on the abstracts of the papers that present them, below are short summaries of the eight case studies.

In the first paper, Pittman *et al.* look at **Securing sustainable small-scale fisheries through co-management: the yellow clam fishery in Uruguay**. Co-management is a practice recommended by the SSF Guidelines that strongly promotes participatory approaches to management (see in particular Chapter 5 of the SSF Guidelines). The case study in Uruguay used a participatory approach, including multiple community-based data collection methods such as face-to-face interviews, to examine the yellow clam fishery and investigate how co-management contributes to the implementation of the SSF Guidelines. There were three main findings. First, from the perspective of the fishers, co-management has proven successful in advancing gender equity, human rights and subjective well-being within the fishery, which aligns with the SSF Guidelines. Second, co-management is likely most effective at achieving the goals of the SSF Guidelines when it is accompanied by wide-scale structural changes in legislation and efforts to improve its coherence across areas of jurisdiction. Third, the nature and rate of socio-economic and ecological change currently being experienced – and which is expected to continue – requires a significant amount of flexibility in co-management arrangements in order for them to deliver on the intended outcomes of the SSF Guidelines. These findings help further the implementation of the SSF Guidelines through co-management in the yellow clam fishery, and serve as a learning platform for scaling up good practices to other small-scale fisheries of Uruguay. Additionally, the findings can also be applied in other regions dealing with similar issues in the management and governance of small-scale fisheries.

Sy *et al.* examine how the promotion of social responsibility has been important for small-scale fisheries in Senegal (**Implementing social responsibility – a key factor in promoting small-scale fisheries. A case study on lobster and associated species management in the Ngaparou coastal area, Senegal**). Social responsibility is one of the guiding principles (No. 12) of the SSF Guidelines, which promote community solidarity and collective and corporate responsibility and the fostering of an environment of collaboration among stakeholders. The case study in Senegal took an open, participatory approach, involving both national and local fisheries stakeholders and including a national workshop as well as focus group interviews, to look at how co-management has been used as a management approach in Ngaparou. A legal basis was provided for co-management arrangements under an agreement between the local fishers' committee (CLP) representing the community and the Fisheries Ministry. The CLP's management approach was holistic and aligned with the SSF Guidelines core messages, as it combined measures that focused on fisheries with social and economic development. This new management model had positive effects on fisheries stakeholder behaviour and the fishing methods used by local fishers, and also led to the emergence of social responsibility within the CLP. However, the study did recommend that the Senegalese Government take measures to improve participatory monitoring effectiveness and sustainability so as to lend more credibility to co-management.

From Nepal, Gurung *et al.* report on a case study of Rupa Lake in the Pokhara Valley (**Restoring lake fisheries and rural livelihoods through rights-based inclusive governance in Nepal**). The SSF Guidelines promote equitable distribution of the benefits resulting from responsible management of fisheries and ecosystems to small-scale fishers and fishworkers, both men and women (see, for example, paragraph 5.1 of the SSF Guidelines). The SSF Guidelines also recognize the need to build strong organizations, including cooperatives. In the study, a series of social science research methods were employed to assess the Rupa Lake cooperative's contribution to lake and fisheries restoration and socio-economic changes in the area. The cooperative introduced a rights-based management system that helped restore an overexploited fishery and reverse the degradation of the lake. The new system was inclusive, with the cooperative distributing benefits to both up- and downstream communities who contribute to lake restoration through different activities. A majority of respondents agreed that inclusive rights-based governance has contributed to socio-economic improvements. Among the keys to success were inclusion and representation, empowerment, transparency, equity in benefit- and burden-sharing, good management and governance, and resource leveraging and synergy. However, a few deprived communities also reported some grievances. Thus, potential conflict is likely in the future if proactive management and governance are not followed properly.

Next, Angeles, Barbesgaard and Franco consider **Trends in small-scale fisheries in Myanmar: tenure rights and gender**. In Myanmar, considerable changes are reshaping the small scale-fisheries sector, driven by new investment and diverse government policies oriented toward opening up the country and realizing its potential for fish production. Amid all this, the voices and aspirations of those who are among the most affected by these dynamics – men and women in the small-scale fisheries sector – are mostly invisible. The SSF Guidelines promote gender equality, both as a cross-cutting topic and in a dedicated chapter (Chapter 8), and call on all parties to “support small-scale fishing communities, in particular to indigenous peoples, women and those relying on fishing for subsistence, including,

as appropriate, the technical and financial assistance to organize, maintain, exchange and improve traditional knowledge of aquatic living resources and fishing techniques, and upgrade knowledge on aquatic ecosystems” (see paragraph 11.7 of the SSF Guidelines). The case study in Myanmar allowed for starting discussions on the SSF Guidelines in fishing villages in Mon State and Tanintharyi Region, as well as testing their use in settings marked by major pressures from various forms of control over key resources for agribusiness, large-scale extraction of oil and minerals, and special economic zones. The study offered an initial exploration on the issue of gender in small-scale fisheries as part of a broader, ongoing action-research effort with local civil society organizations (CSOs). The gendered production and reproduction of community roles and gendered access to resources and decision-making were noted, as well as potentially new impacts along gender lines as Myanmar’s political economy transitions. The study revealed the pivotal role played by women in small-scale fisheries and local and regional food systems, stressing the strategic importance of the struggle for gender equality in the pursuit of truly sustainable small-scale fishery economies.

Islam and Jentoft (**Creating an enabling environment to support disaster risk reduction in the context of the SSF Guidelines: a case study from Bangladesh**) examine Bangladesh’s natural disaster relief and risk mitigation programme, as well as the institutional, policy and legal framework supporting it, in the context of the SSF Guidelines (in particular Chapter 9 on disaster risks and climate change). Using a combination of desk research and field-work methods for primary data collection, this case study investigated how interventions from both government and non-government partners coupled with community strategies have helped to reduce disaster risk and improve disaster response in small-scale fishing communities. The empirical data was collected from three coastal zone sites in Bangladesh, where fishing is a principal occupation. The government, Non-governmental Organizations (NGOs) and the communities themselves adopted different strategies to mitigate disaster risk and climate change impacts. Apart from the community level, the study focused on various aspects of the institutional, policy and legal framework and how they align with provisions of the SSF Guidelines and provide support for successful disaster risk reduction (DRR) in Bangladesh. These aspects include a robust policy and legal framework, the presence of a strong network of NGOs, a functional social safety programme prioritizing food security for the most vulnerable, and disaster management organizations at all levels of local government. However, insufficient institutional coordination and collaboration among the partnering stakeholders was clearly evident. To remedy this requires capacity building among government organizations and empowerment of small-scale fishers so they can actively participate in DRR decision-making processes.

Shifting to the regional level, Compton *et al.* look at **Influencing regional Caribbean small-scale fisheries policy through a regional protocol**. Small-scale fisheries are prominent features of the 17 small island developing States that comprise the Caribbean Regional Fisheries Mechanism (CRFM). A binding treaty, the Caribbean Community Common Fisheries Policy (CCCFP), was approved in 2014 for implementation in the CRFM region. That same year, the SSF Guidelines were endorsed by COFI but the drafting of the CCCFP concluded in 2011, well before the SSF Guidelines were adopted, and thus the principles of the SSF Guidelines were not explicitly incorporated into the CCCFP. This case study analysed (and also provided support to) the participatory practices that were used to formulate a protocol to incorporate the SSF Guidelines into the CCCFP. The participatory process was led by a partnership of Caribbean fisheries stakeholders, prominently

featuring the regional fisherfolk network. Several methods were used within a conceptual framework for policy influence to which was added a participatory approach and capacity development. The influence exerted on policy advisers and policy-makers was successful: the Ministerial Council of the CRFM agreed to adopt the protocol in May 2018, and it entered into force immediately. The protocol aims to enhance food security, improve the socio-economic situation of fishworkers, and achieve sustainable use of fishery resources through the promotion of a human rights-based approach that includes gender.

Thompson *et al.* explore how sharing experiences among stakeholders can support the implementation of the SSF Guidelines (**Fisheries learning exchanges as a good practice in small-scale fisheries in Madagascar and Mozambique**). Fisheries learning exchanges (FLEs) have become increasingly popular as a tool for knowledge exchange. They involve peer-to-peer gatherings in which fisheries stakeholders from different communities freely exchange information and experiences surrounding fisheries challenges and solutions. They are usually organized by fishers, NGOs and governments and are credited as an integral tool for the diffusion and adoption of fisheries management strategies. This case study examined one such FLE between Madagascar and Mozambique to explore how FLEs can aid in the sharing of experiences and good practices among small-scale fisheries stakeholders, and also promote the further application of those good practices. Key informant interviews were conducted with FLE participants as the main source of data. Subsequent analysis found that hands-on or informal activities and a diverse participant group were two factors that promoted knowledge sharing and learning among participants. Key recommendations for FLE organizers include: maximizing hands-on and informal activities, fully understanding the cultural norms at play when inviting participants, dedicating adequate time and personnel to make travel arrangements for participants, and providing financial and logistical support for participants to implement what they have learned once the FLE has concluded.

Finally, Vivekanandan, Bavinck and Sajith analyse the **Good practices of civil society organizations in supporting small-scale fisheries in Southeast India**. The SSF Guidelines refer to the need to enhance the capacity of small-scale fishing communities in order to enable them to participate in decision-making and organizational development. CSOs representing small-scale fishers and fishworkers played a key role in the development of the SSF Guidelines and, with regard to implementation, they should remain the main drivers of change. This case study shows the relevance of CSOs in the small-scale fisheries of Nagapattinam and Karaikal district, Tamil Nadu, in the context of implementing the SSF Guidelines. The study covered four major types of institutions: traditional village councils, cooperatives, self-help groups and NGOs. While all four types occupy their own niche in the fisheries environment, the study showed that the village councils (or *ur panchayats*) are the most significant institution for small-scale fisheries – although others can play important roles as well. The case study identified important actions that were successful, including strengthening small-scale fishers' opportunities to market their catches for fair prices, ensuring equitable access to tsunami relief and rehabilitation, and defending the coastal area and traditional tenure rights. The authors note that local CSO action needs to be linked to larger national initiatives when issues are complex and cannot be resolved merely by local action. This is of great importance in a large federal nation like India where decision-making takes place at different scale levels.

The last chapter of this technical paper attempts to summarize the different good practices presented through the eight case studies. It also points to the need to continue supporting the implementation of the SSF Guidelines and the application of HRBA through partnerships, collaboration and the sharing of experiences.

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Harvesting yellow clams in Uruguay

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Securing sustainable small-scale fisheries through comanagement: the yellow clam fishery in Uruguay

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ABSTRACT

The yellow clam fishery in Uruguay provides a longstanding case study of co-management in small-scale fisheries. This paper employs a participatory approach to examine the co-management experience in the yellow clam fishery and distil numerous lessons for implementing the Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines). There were three main findings in the study. First, from the perspective of the fishers, co-management has proven successful in advancing gender equity, human rights and subjective well-being within the fishery, which align with the SSF Guidelines. Second, co-management is likely most effective at achieving the goals of the SSF Guidelines when it is accompanied by wide-scale structural changes in legislation and efforts to improve its coherence across areas of jurisdiction. Third, the nature and rate of socio-economic and ecological change currently being experienced – and which is expected to continue – requires a significant amount of flexibility in co-management arrangements in order for them to deliver on the intended outcomes of the SSF Guidelines. These findings help further the implementation

of the SSF Guidelines through co-management in the yellow clam fishery, and serve as a learning platform for scaling up good practices to other small-scale fisheries of Uruguay. Additionally, the findings can also be applied in other regions dealing with similar issues in the management and governance of small-scale fisheries.

1. INTRODUCTION

The world's fisheries are complex social-ecological systems that currently find themselves in crisis. The crisis does not revolve around a single issue but rather a series of complex, interdependent and multifaceted challenges affecting different types of resources, fisheries, communities, societies and markets (Castilla and Defeo, 2005; Hilborn, Orensanz and Parma, 2005; Ostrom, 2007, 2009; Worm *et al.*, 2009). Particularly, the marked dissimilarities between the intrinsic properties of large-scale industrial fisheries and small-scale fisheries lead to important differences in the potential effectiveness of management measures and the strategies that may work to combat crises (McClanahan *et al.*, 2009). Small-scale fisheries require distinct management solutions, and therefore cannot be lumped together with industrial fisheries in management and governance frameworks (Defeo and Castilla, 2005; Defeo, McClanahan and Castilla, 2007).

Small-scale fisheries are found mostly in developing countries, accounting for approximately 40 percent of world fish catches (around 90 million tonnes; FAO, 2016), and providing direct employment for more than 90 percent of the 39 million capture fishers worldwide (Kalikoski and Franz, 2014). Yet these fisheries as social-ecological systems are poorly understood due to the structure and dynamics of harvesting resources in a complex fishing process, which involves subsistence, recreational and commercial users as well as interaction with a governance subsystem influenced by cultural, social and political factors (Defeo *et al.*, 2016). Thus sustainability has been far more difficult to achieve in small-scale fisheries than is commonly thought. A mix of pressures, including intensive harvesting, increasing temperatures, rising sea levels, eutrophication, coastal pollution and distal drivers (e.g. markets, governance, human migration to the coast), have damaged both productivity and ecosystem health in small-scale fisheries, leading in several cases to collapses of fisheries and even to extirpations of certain locally exploited fish populations. Thus, when managing these fisheries as social-ecological systems one must consider not only the complex nature of the resource itself, but also the dynamics of the resource users and the governance subsystems, together with the relevant external drivers affecting them.

The Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines; FAO, 2015), endorsed in 2014 at the 31st Session of the FAO Committee on Fisheries (COFI), represent an important step towards managing small-scale fisheries as social-ecological systems, one which acknowledges fisheries management as involving more than just the management of fish stocks. The SSF Guidelines focus on managing fisheries in ways that improve the livelihoods of small-scale fishers, address equity and diversity issues in fisheries (e.g. gender participation), and ensure environmental sustainability (Jentoft *et al.*, 2017a). Importantly, the Guidelines are grounded in a commitment to securing the human rights of small-scale fishers, their families and communities, which places them firmly in the context of an approach to fisheries management based on social-ecological systems. Kearney (2007) has identified five key components of human rights in the context of small-scale fisheries; namely, the right to: (1) fish for food; (2) fish to earn a living; (3) healthy families, communities and cultures; (4) a healthy environment; and (5) participate in fisheries decision-making.

Co-management (used interchangeably here with co-governance) is an important element of the SSF Guidelines, and of the human rights-based approach to fisheries

more generally (Charles, 2011). Thus it emerges naturally as a promising way to promote fishery principles and goals (Gutiérrez, Hilborn and Defeo, 2011; Cinner *et al.*, 2012; Defeo *et al.*, 2016). In this context, the SSF Guidelines explicitly state that governments should involve small-scale fishing communities in the design, planning and (as appropriate) implementation of management measures, and that “participatory management systems, such as co-management, should be promoted in accordance with national legal frameworks” (FAO, 2015, p. 7). In addition, the SSF Guidelines also state that governments and small-scale fisheries actors should encourage and support the role and involvement of both men and women in the context of co-management (FAO, 2015). Moreover, co-management, in combination with a human rights-based approach that allows for active participation by resource users and is based on appropriate tenure arrangements, has been mentioned as the best bet to avoid sacrificing the interests of small-scale fishers in favour of a neoliberal agenda that focuses only on economic efficiencies (Jentoft *et al.*, 2017b). Yet it remains important to examine (a) how co-management contributes to applying the SSF Guidelines and (b) how human rights are best protected within co-management arrangements. With these issues in mind, this paper examines the yellow clam fishery in Uruguay as a longstanding example of co-management in small-scale fisheries to distil lessons for applying the SSF Guidelines and protecting human rights that could be transferable to other regions.

1.1 Small-scale fisheries in Uruguay: background and main characteristics

In Uruguay, small-scale fisheries are characterized by relatively low capitalization levels, and are carried out by single or a small group of fishers operating in small-scale vessels (with a GRT of less than 10) on coastal waters or through hand-gathering techniques on intertidal shores (Defeo *et al.*, 2011; Ligrone *et al.*, 2014). While this subsector represents only 3 percent of the total Uruguayan landings, it supports approximately 46 percent of the total number of fishers (the sector supports 1 250 full- and part-time fishers and 3 750 indirect workers; Defeo *et al.*, 2011; Horta and Defeo, 2012). Most small-scale fishers have historically worked under an informal and marginal system, which has prevented their social inclusion, access to credits and social security, and their active participation in the management process (Cossa *et al.*, 2015). Small-scale fisheries landings are mostly sold in local markets and represent a substantial source of revenue for low-income families. Pressure on Uruguayan small-scale fisheries appears to be continuously growing due to a combination of several factors, including technological interdependencies with industrial fisheries (Horta and Defeo, 2012), lack of control of and compliance with fishing regulations, lack of market competitiveness (Zurba and Trimble, 2014), habitat degradation (i.e. hatcheries and nursery areas) and, in some cases, overexploitation of stocks (Puig, Grunwaldt and González, 2010; Defeo *et al.*, 2011). Like most in the developing world, several small-scale fisheries in Uruguay are also data-poor. The synergistic effect of these factors further aggravates the already worrying state of these fisheries.

Given the abovementioned situation, it is no surprise that management of small-scale fisheries has been traditionally neglected in Uruguay (Gianelli and Defeo, 2017). More recently, the government implemented high-level policies as an attempt to transform local fisheries into sustainable production systems through the integration of ecosystem-related principles and concepts into national legal and planning frameworks. In 2013, a new national Fishery Law (20 December 2013, Montevideo, Uruguay) was passed. The law’s novel normative framework explicitly promoted the creation of Local Fishery Councils as a formal strategy to engage local communities in small-scale fisheries co-management. The formalization of community participation implies an explicit definition of the operational form of this governance mode, including the allocation of roles to be played by each stakeholder in shaping the co-management structure. The fishery councils consist of legitimately elected fishers’ representatives,

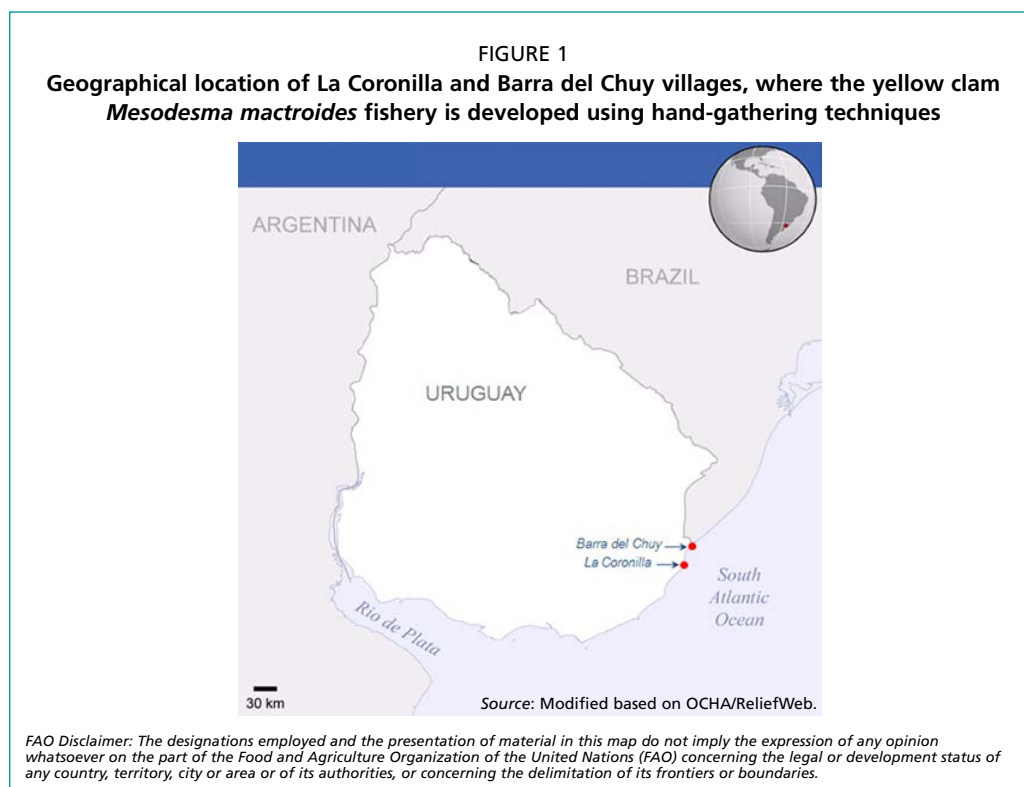
fishery managers, local government officers and Coastal Marine Authority officers. As the adopted co-management type is consultative (Berkes *et al.*, 2001), the ultimate responsibility in the decision-making process lies with the national government fisheries management agency, the National Direction of Aquatic Resources (DINARA, its acronym in Spanish). Despite a common institutional framework at the national level, operational contexts have varied widely among Uruguayan small-scale fisheries.

1.2 The small-scale yellow clam fishery in Uruguay: study area, history and current conditions

The case study area, situated between La Coronilla and Barra del Chuy villages in the southeast of Uruguay (33°45'S, 53°27'W), consists of an exposed microtidal (tidal range: 0.5 m) oceanic sandy beach (hereafter referred to as Barra del Chuy). This beach is wide (mean width \pm S.D.: 69 \pm 12 m) with a gentle slope (2.9 \pm 0.5 percent), fine to very fine sand (0.20 \pm 0.03 mm), and an extended surf zone of a longshore bar-trough type that defines its dissipative character (Ortega *et al.*, 2013) (Figure 1). This sandy beach harbours the highest macrofaunal richness, abundance and biomass in the Uruguayan coast (Defeo, Jaramillo and Lyonnet, 1992; Lercari and Defeo, 2015). In terms of biomass, the community is dominated by the yellow clam *Mesodesma mactroides*, which is the only harvested species in this intertidal system. Barra del Chuy represents the only beach in the country where the species is exploited for commercial purposes (Figure 1).

The experience of the small-scale yellow clam fishery provides an excellent example of how longstanding co-management regimes can enhance the capacity of small-scale fishers to address a host of difficult problems affecting small-scale fisheries. Uruguay's yellow clam fishery began as a small and stable open-access fishery in the 1960s and continued as such until 1980, when a period of rapid expansion began (Defeo, 1989). Landings from 1981 to 1985 increased to approximately 3.5 times their pre-1980 levels, but catches plummeted in 1986 due to severe reductions in yellow clam stock, resulting in the closure of the fisheries from 1987 to 1989 – a tactic agreed by fishers and DINARA (Defeo, 1996). The closure provided a window of opportunity to improve governance of the fishery, which reopened in 1989 with a new governance scheme and management tools in place (e.g. quotas, spatial-temporal zoning) (Castilla and Defeo, 2001). Most importantly, the new tools and previous experience of stock collapse led to high, voluntary participation of the fishers themselves in determining and enforcing rules – essentially creating a *de facto* co-management regime (Castilla and Defeo, 2001). This had positive effects, including the reduction of landings to low levels; an increase in species abundance, CPUE, unit prices and revenues per unit of effort; and reduced interannual variability in several fishery indicators, particularly in landings (Defeo *et al.*, 2016). This first co-management phase was therefore very successful and lasted until late 1994, when mass mortalities decimated populations of *M. mactroides* throughout its entire distribution range (Ortega *et al.*, 2012), leading to a full fishery closure between 1994 and 2008 (Gianelli, Martínez and Defeo, 2015). The closure was a short-term response of DINARA to rebuild the depleted yellow clam stock. However, the stock was unable to recover in the short to middle term from the mass mortalities, not only at the local level but also at the regional level (Defeo *et al.*, 2013). As demonstrated by the scale and magnitude of these events, mass mortalities were not related to fishing activities, but resulted from a range of putative factors including a long-term increase in sea surface temperature, harmful algal blooms, environmental stress, and parasitism (Ortega *et al.*, 2012, 2016). Some 40 fishers and their families (200 people) were directly affected by this force majeure event (Saul, Barnes and Elliot, 2016) beyond the control of the government and local communities.

Once the yellow clam stock showed signs of recovery the fishery was reopened in 2009, under an adaptive management approach that included the ecosystem approach



to fisheries (EAF) as a high-level policy goal. The EAF was institutionalized at the national scale and explicitly included co-management as the formal governance mode for stakeholder participation (Defeo, 2015; Gianelli, Martínez and Defeo, 2015). The process of EAF development in the yellow clam fishery included initial participatory planning, identifying performance indicators, deciding operational objectives, and creating feedback loops with stakeholders. Fisher participation in the decision-making process was strengthened through the establishment of a Local Fishery Council (Gianelli, Martínez and Defeo, 2015). From an operational perspective, a Functional Unit of Ecosystem-Based Fisheries Management (*Unidad Funcional de Manejo Ecosistémico Pesquero*, or UFMEP) was conceptualized for EAF co-management. The management unit was developed through a participatory process with stakeholders and subdivided into five different adjacent areas. Three were set aside for fishery grounds and two reserved for tourism and recreation (i.e. buffer zones where fishing is not permitted). Currently, these “coastal commons” constitute a multiple use area (McLachlan *et al.*, 2013) in which clam fishing and tourist activities share the biophysical system (i.e. beach). Several other operational management tools were also included for managing the yellow clam fishery (see details in Gianelli, Martínez and Defeo, 2015). To avoid illegal fishing and violations of established management tools, monitoring operations were undertaken jointly by DINARA, the coastal marine authority (the Sub-Prefecture) and the fishers themselves. Additionally, the yellow clam population and other macrofaunal components of the beach ecosystem began to be monitored seasonally through independent fishery surveys.

1.3 Problem focus

During the second co-management phase, which was implemented under a general EAF framework (Defeo, 2015), several biosocio-economic indicators showed plausible long-term trends that strengthened the social-ecological system and, at the same time, empowered the fishers to collaborate with DINARA in managing the fishery (Defeo *et al.*, 2018). Equally important, co-management also improved gender inclusion in the yellow clam fishery: women under the co-management regime have gone from

representing 17 percent of the industry to 40 percent, which is a substantial gain (Gianelli, Martínez and Defeo, 2015). However, external drivers, such as climate, red tides and market forces, still threaten the system:

- The southwestern Atlantic is a major global warming hotspot where warming occurs at several times the average global rate (Hobday *et al.*, 2016). Indeed, the occurrence of mass mortalities of the yellow clam has been attributed to increasing sea surface temperatures (Ortega *et al.*, 2012, 2016). The position of the warm water front (represented by the 20 °C isotherm, a proxy for the front of tropical waters) has shown a consistent long-term poleward shift at a rate of ca. 9 km·y⁻¹ (Ortega *et al.*, 2016).
- Increasing temperatures have been accompanied by an increase in speed and frequency of onshore southern winds, causing a significant long-term increase in the zone of wave action on the beach (i.e. swash width; Ortega *et al.*, 2013). The positive relationship between sea level rise and climatic forcing has generated an unstable erosive environment with potential loss of habitat for the yellow clam, but also of accessibility for fishers to intertidal clam patches, which has led in turn to a long-term decrease in effective fishing hours and a concurrent decline in daily catch rates (Defeo *et al.*, 2013).
- A critical proximate driver threatening the productivity of coastal clam fisheries worldwide (and the yellow clam fishery in particular) is the increasing occurrence of red tides. Exploitation of clams is often constrained by the accumulation of toxins, such as those associated with blooms of toxic algae, which can cause mass mortalities or render clams unsafe for human consumption. Increasing occurrence, periodicity and duration of red tides has been documented in the southwestern Atlantic (particularly at Barra del Chuy beach), and already DINARA has been forced to forbid yellow clam harvesting several times because of unsafe sanitary conditions.
- Seafood imports affect fishing communities' livelihoods through the displacement of domestic products from national markets. In Uruguay, favourable market conditions led to an exponential increase in the imports of frozen bivalves, mainly from Chile, particularly beginning in 2008. Subsequently, demand for yellow clams – a domestic product – dropped as retailers and consumers opted for cheaper seafood imports. Even though the local fishing community responded collectively by diversifying products and markets (Gianelli, Martínez and Defeo, 2015), this driver still represents an external threat to the community's livelihood (Castrejón and Defeo, 2015).

The present paper examines how co-management represents a conducive platform for the effective implementation of the SSF Guidelines, in particular to: (a) empower fishers in the management and governance of the fishery; (b) encourage gender inclusion in harvesting, processing and market processes; (c) promote the equitable and non-discriminatory distribution of benefits from fisheries; (d) improve the transparency, accountability and legitimacy of fisheries management and governance more broadly; and (e) build capacity and strengthen resilience to address the effects of market forces and climate change and related stressors (e.g. red tides, sea level rise). The paper also addresses how co-management helps shape shared visions for community empowerment, gender and other forms of equality and climate change resilience, and how these can become operationalized and institutionalized in formal management mechanisms and policy reforms. These issues are extremely important for the social and ecological sustainability of small-scale fisheries in the face of an increasingly uncertain future.

2. METHODOLOGY

2.1 Setting the scene for project implementation

This case study was guided by a general participatory action research approach, which included the active participation of the main stakeholders (government agencies, fishers and academics) from the very beginning. Stakeholders were consulted and empowered throughout all stages of research. The study included multiple community-based methods to collect data, such as face-to-face interviews.

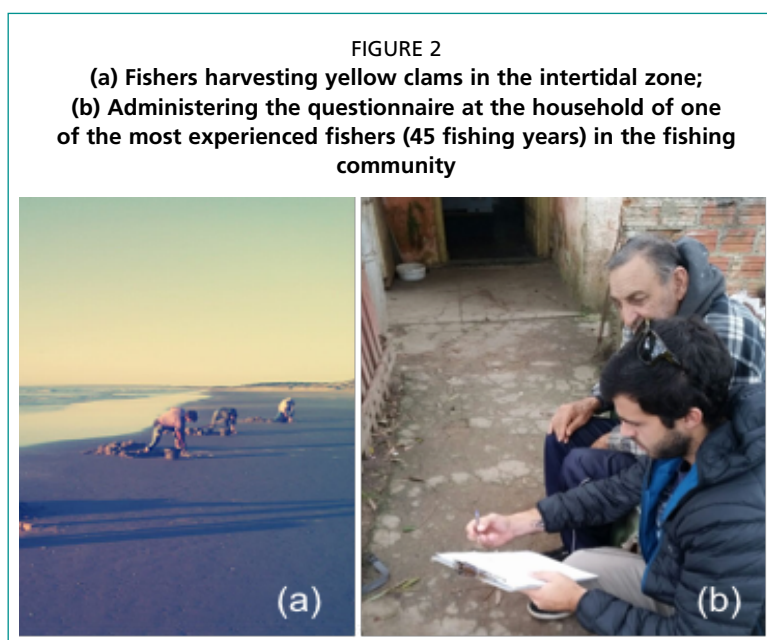
The first step was to host a kick-off meeting with fishers, managers and other members of the value chain (e.g. processors, buyers) to (a) introduce the project; (b) gather their input on the best approach for implementing the project; and (c) answer any questions they might have. All stakeholders were represented, including academic staff from the Faculty of Sciences and the East Regional University Center, officials from DINARA, and some 15 fishers (approximately 50 percent of the total) with an even gender representation (54 percent men and 46 percent women).

The main activities carried out at the meeting were to (a) explain the rationale and main objectives of future activities to complete the case study through a participatory research approach, (b) discuss the strengths and weaknesses of the current co-management arrangement institutionalized in the fishery, and (c) identify the main issues threatening the fishery, including mass mortalities, market-driven forces and climate change-related stressors. The problems faced by small-scale fisheries worldwide were introduced, and the SSF Guidelines were explained through an interactive audiovisual material available online. At the specific fishery level, biosocio-economic indicators of the current state of the yellow clam fishery were presented, and future management tools were discussed.

2.2 Data collection and analysis

The second step was to conduct face-to-face, semi-structured interviews with fishers to understand (a) the social networks apparent among fishers within the co-management arrangements, (b) their perceptions regarding the function of co-management arrangements (including the ability of the arrangements to address human rights issues), (c) their thoughts on how co-management has been beneficial in the past, and (d) their thoughts as to how co-management can help address intensified challenges, including those related to climate change, extreme events and socio-economic shocks. The semi-structured interviews provided qualitative and quantitative information regarding the best practices for implementing participatory and empowering modes of governance in line with the SSF Guidelines.

All fishers completed the questionnaire between May and July 2017. The interviews lasted between 30 and 90 minutes and were usually conducted in an area chosen by the interviewee, usually at their household (Figure 2). In total, 28 interviews were completed, representing approximately 75 percent of licensed fishers ($n = 37$) and 90 percent of active fishers ($n = 31$). Of the survey participants, 40 percent were women and 60 percent men.



Three fishers were not interviewed because they declined to participate in the survey. Thus, rather than a subsample of the targeted population, this survey can be considered almost a census of the fishing community, allowing for robust results.

The interview guide contained structured Likert-type and social network questions (Appendix 1). Data from the Likert scores were presented in a traffic-light colour format and were statistically analysed in the packages “likert” and “dunnTest” of the R open-source software. Kruskal-Wallis and ad hoc Dunn tests were used to assess whether there were significant differences in Likert scores as a function of different socio-economic attributes of the fishers, such as gender, age (grouped into quartile categories), education level and previous experience in co-management initiatives.

Social network data were analysed to examine the social relationships embedded within the co-management process. Social networks play an important role in how co-management emerges and functions (Alexander, Armitage and Charles, 2015), and they were used here to evaluate patterns of fisher interactions within the co-management process. Fishers were asked numerous social network questions. A name-generator approach was used that asked fishers “Please name the top ten fishers with whom you exchange useful information regarding yellow clam harvesting.” Data were treated as unweighted and undirected for the analysis. The present study draws on data collected regarding fishers’ information-sharing networks. Gephi open source software (Bastian, Heymann and Jacomy, 2009) was used to visualize the networks and calculate network measures, such as degree, which counts the number of ties formed among everyone in the network (Bodin and Crona, 2009). The information-sharing network data was also analysed using Exponential Random Graph (ERG) models. ERG models were used to further interrogate (a) the network processes related to popularity and core group formation within the co-management process, (b) the role of women in the network, and (c) the role of key leaders in the network. ERG models treat the observed network as the dependent variable and examine the relative contribution of different social network processes (e.g. gender participation) in producing the observed network (Lusher, Koskinen and Robins, 2013). MPNet software was used for the analysis (Wang *et al.*, 2014). More details on the social network processes (effects) included in the models are provided in Appendix 2.

3. RESULTS AND DISCUSSION

3.1 Demographics of the fishing community

The yellow clam fishing community is composed of 37 licensed fishers (62 percent men and 38 percent women). Both men and women have equal tenure rights (i.e. individual fishing licences) and perform the same labour in the fishery. Fishing has a strong family tradition and most fishers develop the activity jointly with some family members, including young children and partners. Basic socio-economic attributes of the fishers interviewed are shown in Table 1.

TABLE 1
Socio-economic attributes, disaggregated by gender, of the interviewed members of the yellow clam fishery in Uruguay

| Socio-economic attributes | All (n = 28) Median ± S.D. | Men (n = 17) Median ± S.D. | Women (n = 11) Median ± S.D. |
|---------------------------------------|--------------------------------------|--------------------------------------|-------------------------------------|
| Fisher age (years) | 40 ± 15.5 | 46 ± 17.9 | 40 ± 10.7 |
| Fishing experience (years) | 10 ± 17.8 | 20 ± 18.8 | 8 ± 15.9 |
| Education | Primary school: 24 High school: 4 | Primary school: 16 High school: 1 | Primary school: 8 High school: 3 |
| Sons in charge | 1.0 ± 2.1 | 1.0 ± 2.1 | 1.0 ± 2.2 |
| Active participation in co-management | Yes: 23 No: 5 | Yes: 12 No: 5 | Yes: 11 No: 0 |
| Part of past co-management experience | Yes: 11 No: 17 | Yes: 7 No: 10 | Yes: 4 No: 7 |

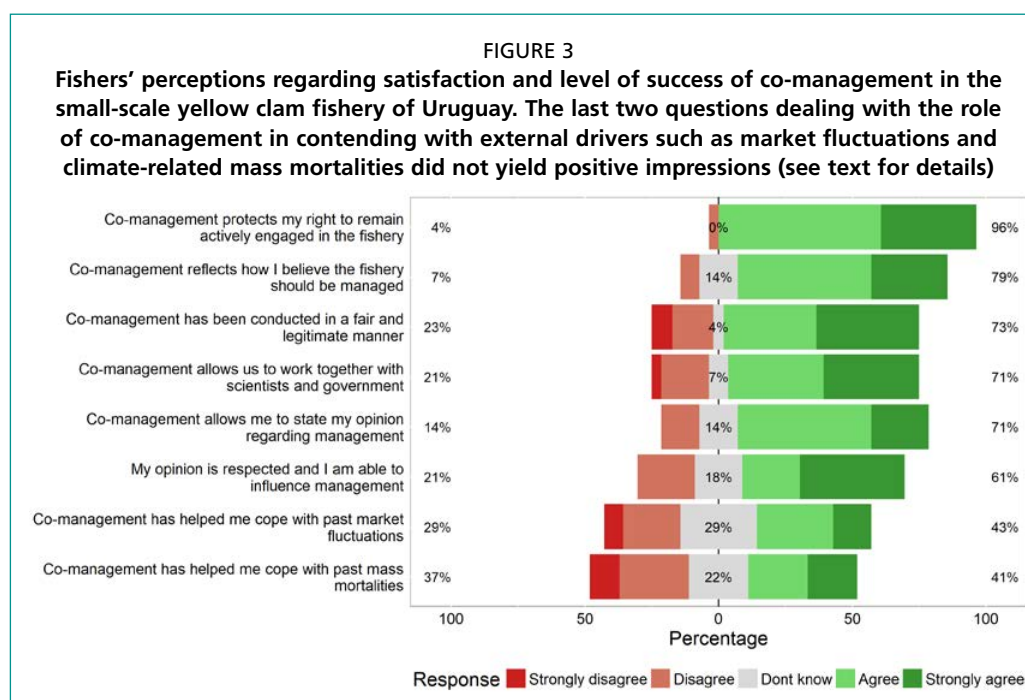
3.2 Co-management

According to the fishers, co-management has been useful for facilitating participation in the decision-making processes of the fishery (Figure 3). In this setting, almost all fishers considered that the co-management arrangements in place and institutionalized by the Fishery Law in Uruguay (a) protect their rights to remain actively engaged in the fishery (96 percent of the respondents); (b) reflect how the fishery should be managed (79 percent); (c) take their opinions on management issues into account (71 percent); (d) have been conducted satisfactorily (73 percent); and (e) allow them to work jointly with the management authority and scientists (71 percent). These results are in line with the SSF Guidelines, which promote the implementation of participatory co-management systems in accordance with national laws.

These findings suggest that fishers have high levels of satisfaction with the implementation of co-management in the yellow clam fishery and that various aspects of their rights are being protected. While most fishers think that co-management provides an ideal platform to share their opinions regarding management, younger fishers (those 20 to 30 years old) showed a significant difference in their perception of being able to state their opinion ($H = 7.79$; $P < 0.05$) and influence management decisions ($H = 9.32$; $P < 0.05$) when compared with older fishers (those 53 to 70 years old) (Table A2.1 in Appendix 2). This result suggests a marked tradition of respect for most experienced fishers and their key position in fisheries management decisions.

The ERG models suggest that a core – or potentially multiple cores – of close-knit actors is emerging, yet individual actors are not connected more than their peers in the network, which suggests that no individuals have essentially “taken over” the network (Table A2.2 in Appendix 2, popularity effect not significant, closure effect significant and positive). This does not undermine the importance of the formal fishery leaders in the network, who play a particularly active role (Table A2.2, leaders’ networking effect is significant and positive). Still, as no actors are potentially co-opting the network, the co-management process is thus resulting in a potentially positive form of social cohesion.

Two key questions remain, however, with respect to the role of co-management in dealing with market shocks and climate-related stressors. Fishers did not perceive co-management beneficial in this regard (Figure 3). Indeed, only 41 percent thought

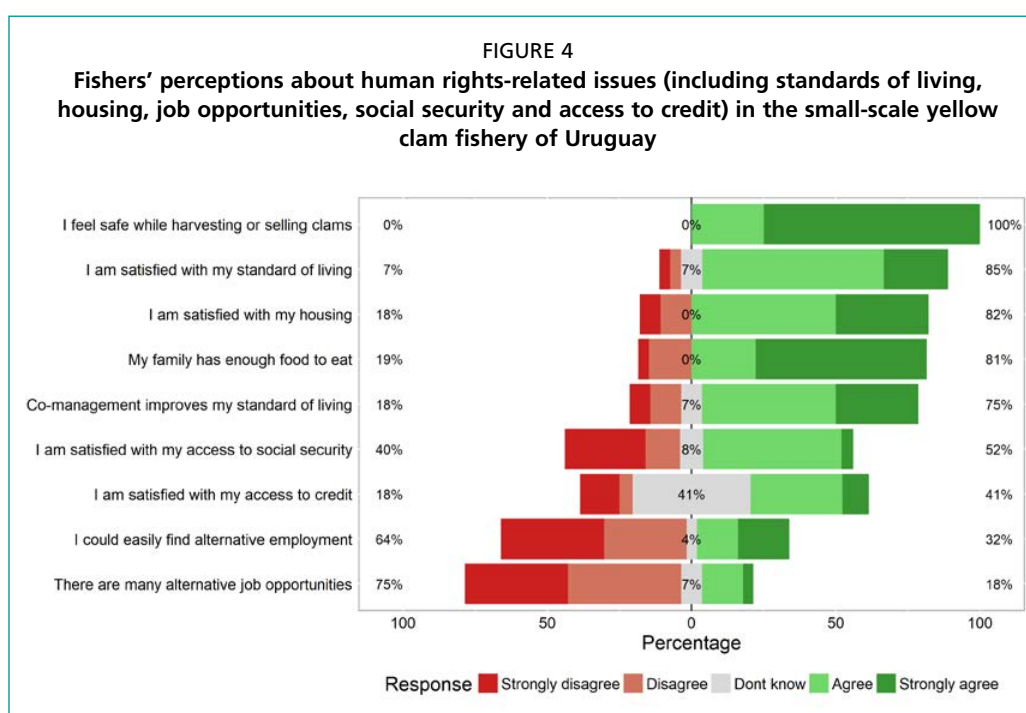


that co-management helped them to cope with mass mortalities, while 43 percent believed that the co-governance mode did not help to cope with market fluctuations. These are interesting findings, which suggest further efforts are needed to improve the capacity of co-management arrangements to adapt to climate and economic stressors.

Fishers' perceptions regarding the effect of force majeure events (e.g. mass mortalities) were reinforced by those of the fisheries management agency and the scientific staff. DINARA was unaware of the occurrence and impacts of mass mortalities in Uruguay. Managers were not prepared to cope with the unusual changes that occurred in the system when mass mortalities began, and no contingency plans were in place (Defeo *et al.*, 2018). Therefore, no options were provided to fishers to mitigate the economic impact of this disruption of their livelihoods, causing income losses and unemployment. Fishers responded by diversifying their livelihoods in other sectors of the economy (e.g. construction, agriculture and selling fuelwood), even though finding alternative employment was not easy for many of them (see Figure 4).

3.3 Human rights

The SSF Guidelines promote a human rights-based approach and therefore place a high priority on the realization of human rights and on the needs of vulnerable and marginalized groups. The interviews conducted revealed several interesting results concerning human rights in the yellow clam fishery (Figure 4). First, all fishers stated that they feel safe and proud when harvesting and selling yellow clams. Second, most fishers are satisfied with their standard of living and housing in general, and feel that the implementation of co-management improved their standard of living, including food security issues. By contrast, fishers had negative perceptions about job opportunities, with 75 percent stating that they have very little alternative employment opportunities, even when analysed separately by gender and age range. The opportunities available are limited, as this small-scale fishing community faces a lack of alternative livelihoods and 64 percent cannot easily find alternative employment. In the same vein, fishers, regardless of their gender or age, had a negative perception about their access to social security (40 percent).



3.4 Gender

The perception of both male and female fishers about the participation of women in both the fishing process and in governance issues was very positive (Figure 5). They feel that men and women have the same opportunities in terms of obtaining fishery licences (96 percent), harvesting (100 percent) and selling clams (100 percent). They also highlighted how women have increased their participation in the fishery (85 percent) and have a stronger voice in the decision-making process operationalized through the Local Fishery Council of Barra del Chuy-La Coronilla (89 percent). These results are in line with recent long-term analyses, which showed two remarkable positive changes that occurred in the composition of the fishing community (Gianelli, Martínez and Defeo, 2015): (a) an increasing number of licences allocated twice consecutively over time, which suggests the consolidation of a stable group of fishers; and (b) a significant increase in the number of women directly involved in the fishing activities. There were also positive perceptions when the analysis was performed by gender. Kruskal-Wallis tests, considering gender as a grouping factor, did not show significant differences between perceptions of men and woman in any of the responses (Table A2.1).

Due to the low harvestable biomass levels observed in the recent years, nowadays the fishery is open only during summer (the high-demand season). This seasonality means that in most cases fishing is not the main household livelihood strategy. This fact may have given rise to an increase in women directly involved in fishing activities, as men eventually diversified their labour occupations with more stable activities. Notably, one of the fishers’ representatives at the Local Fishery Council is a woman with clear leadership skills and an active role in the decision-making process (Gianelli, Martínez and Defeo, 2015).

Women have played a key role in fisheries management by strengthening governance initiatives, which is further evidenced by their social network positions. Figure 6 shows the position of women and men in the fisheries information-sharing network (i.e. the social network that fishers use to share important information about the fishery). The analysis shows that women (red circles) play a similar role to men (green circles) in terms of facilitating information flows and having influence within the fishery (as measured by degree, a measure of connectedness within the network). These findings

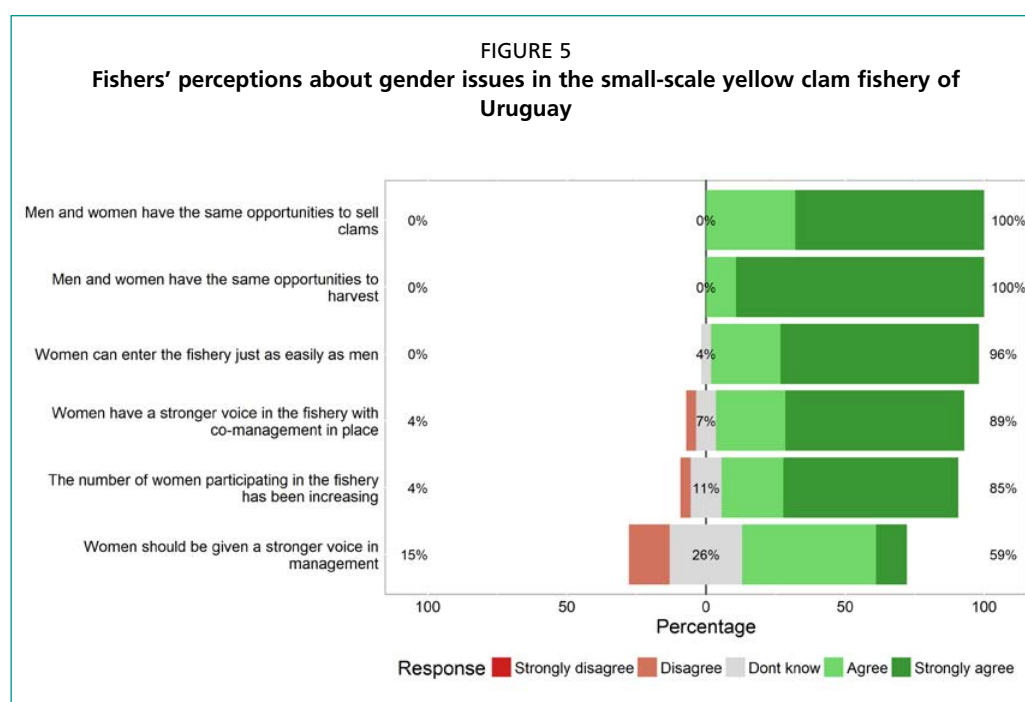
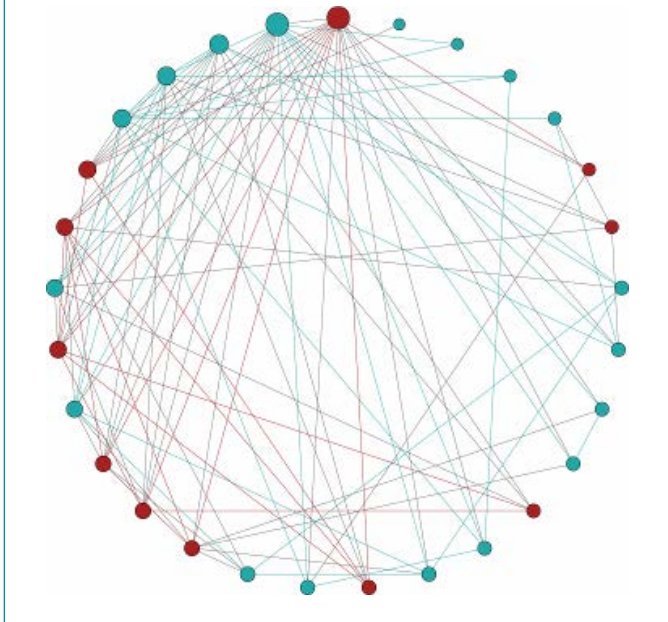


Figure 6
Fishers’ information-sharing network. Green nodes represent men and red nodes represent women. The nodes are sized according to their betweenness centrality, which is a measure of control in the network



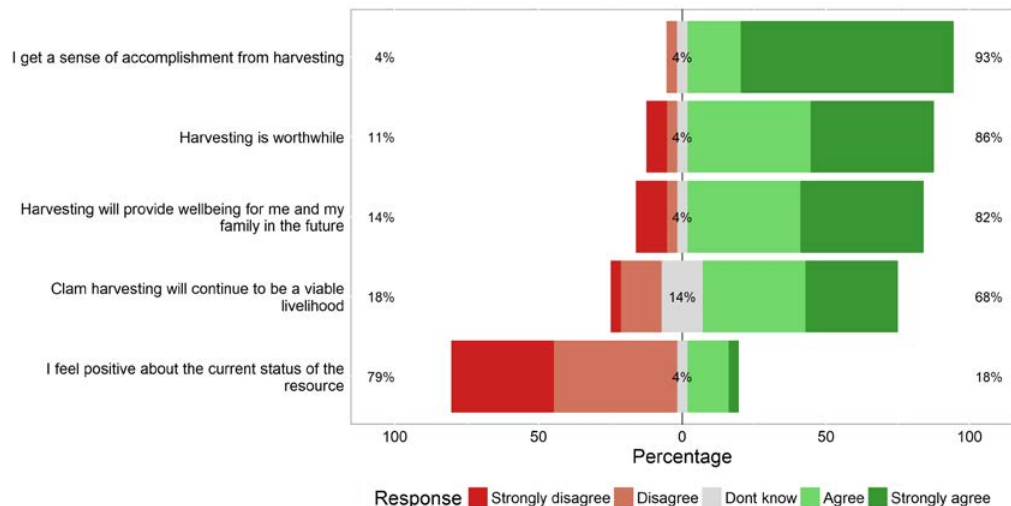
are corroborated by the social network modelling results. The models show that women and men occupy roughly the same roles in the network (Table A2.2). Additionally, women and men are just as likely to interact with each other as they are with members of the opposite gender (Table A2.2), which highlights the potential for cohesion across genders in the co-management process.

3.5 Fishers’ subjective well-being

Our research examined fishers’ perceptions of how the yellow clam fishery contributed to their subjective well-being, which is one of the three main dimensions of small-scale fisheries’ well-being (Weeratunge *et al.*, 2014). Yellow clam fishers are proud of their livelihood activities, a sentiment consistently expressed when they were asked about the importance of harvesting clams to their well-being (Figure 7). Around 90 percent feel satisfied harvesting clams and remarked

that it is a worthwhile activity. Most fishers also believe that harvesting will provide a vital supplement to their livelihoods not only in the near future, but also for subsequent generations at Barra del Chuy and La Coronilla villages. Kruskal-Wallis tests, considering different grouping factors such as gender, age ranges, educational level and experience in past co-management initiatives, also revealed positive perceptions, with no significant differences found between groups (Table A2.1). By contrast, a great majority (79 percent) of fishers are worried about the status of the yellow clam stock. This agrees with recent stock assessments that have provided low estimates of

FIGURE 7
Fishers’ perceptions about well-being in the small-scale yellow clam fishery of Uruguay



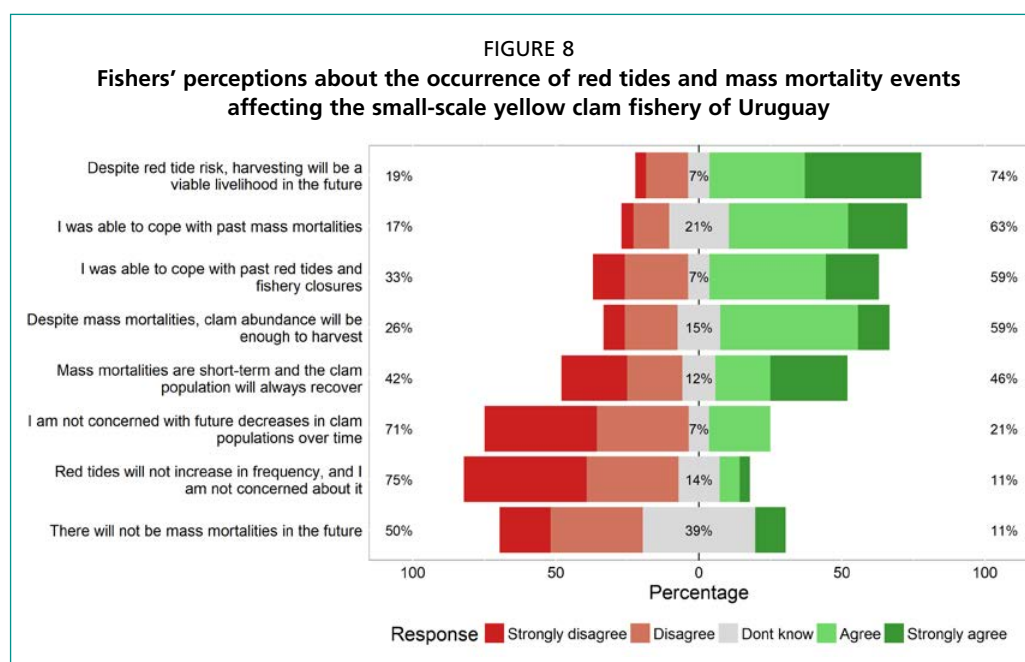
the harvestable population, particularly after the occurrence of the El Niño event in 2015–2016. The heavy rainfall in April 2016 resulted in very low salinities for several consecutive months, thus causing strong mortalities not only for the yellow clam population but for several sessile and sedentary stocks all along the Uruguayan coast.

3.6 External drivers: climate and red tides

Pollution, environmental degradation, red tides, climate change impacts, and natural and human-induced disasters add to the threats facing small-scale fishing communities. All these factors make it difficult for small-scale fishers and fishworkers to secure the sustainable use of the fishery resources on which they depend (FAO, 2015). This is particularly noticeable in the case of the yellow clam, where mass mortalities, driven by climatic stressors, have decimated the stock throughout its geographic range in the past (Ortega *et al.*, 2012, 2016).

The issues mentioned above were echoed when fishers were asked their perceptions about red tides and mass mortalities (Figure 8). Around 70 percent of the fishers are concerned with stock status and the possible declines in the standing stock in the near future. In addition, 75 percent have a strong perception that red tides will increase in frequency, and are therefore very concerned about their occurrence. Moreover, half of the fishers are worried about the occurrence of possible mass mortality events, even though they feel that they could cope with mass mortalities, red tides and fishery closures by looking for other livelihood opportunities – which, in reality, are scarce in the region (see Figure 4).

The negative perception of the fishers about the impact of red tide events coincides with the increase, both in frequency and duration, of fishery closures due to the presence of harmful algal blooms in the area. Despite the overwhelming negative perception about the future occurrence of red tides, women were even more concerned about them than men ($H = 6.12, P < 0.05$, Table A2.1). Red tide events reached their record highs during the last summer fishery seasons (ca. 30 days in 2014, 33 days in 2015 and a total closure during the 2017 fishing season). As the threat of both onshore winds (Ortega *et al.*, 2013) and red tides are becoming more serious for local fisher communities, adaptive responses to cope with bioeconomic losses should be integrated in the decision-making process to mitigate the effect of losing fishable days within fishing seasons, as demonstrated by Defeo *et al.* (2013).

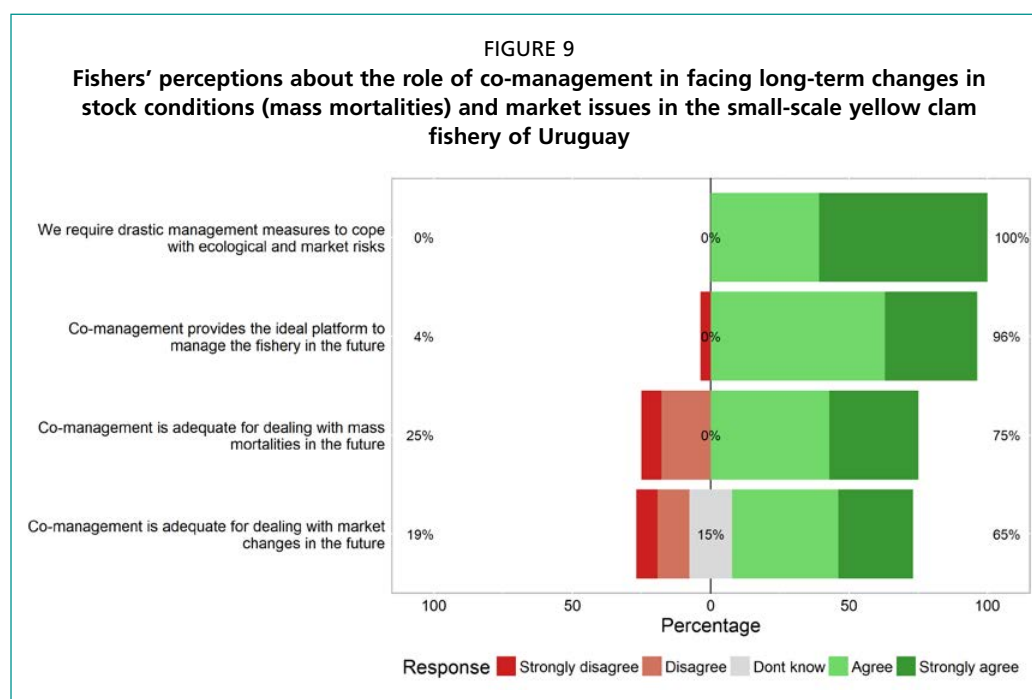


3.7 Long-term governance adaptability

One critical component of a social-ecological system is the governance subsystem (Ostrom, 2009), because institutional factors affect the behaviour of the system. Governance represents the structures (e.g. rules, networks), traditions and institutions by which authority is exercised and through which management occurs (Pittman and Armitage, 2016). This dynamic and adaptive process should be regularly monitored, as changes in governance structures could have important implications for managing the yellow clam fishery as a social-ecological system (Defeo *et al.*, 2018). This is particularly important in situations where political instability leads to short-term changes in governance structures and the absence of long-term policy goals, undermining the capacity of the system to provide reliable and long-lasting management plans.

The foregoing concepts highlight the role of governance as a critical component of any social-ecological system and especially across the land-sea interface, where it is perceived as an acute problem (Jentoft and Chuenpagdee, 2009; Defeo and Castilla, 2012; Pittman and Armitage, 2016). The management of the yellow clam fishery is no exception. Indeed, the external drivers mentioned previously (market forces, climate change, red tides) are increasing the multidimensionality and complexity of the governance process. These issues are also perceived by yellow clam fishers (Figure 9): all of them stated that the fishery requires drastic management measures to cope with ecological and market risks. However, they believe co-management will still help them manage the fishery in the future.

The fishers also feel that co-management is a helpful mechanism for dealing with mass mortalities and market changes in the future (Figure 9). During the first occurrence of mass mortalities in 1994, the governance system did not respond to the problem at hand. No contingency plans were in place, and no options were provided to fishers to mitigate the economic impact of this disruption to their livelihoods. Therefore, there was poor collective capacity within institutions to cope with disturbances. But there was relatively higher performance in terms of resilience in the longer term for governance initiatives. This is reflected in the capacity of the Uruguayan Government to reform existing institutions and strengthen the adaptive capacity of the system through the implementation of high-level policy goals directed at developing and implementing the EAF co-management approach (Defeo *et al.*, 2018). The



social-ecological system also demonstrated the capacity to strengthen collaboration among different stakeholders (notably including fishers, scientists and DINARA staff) and to provide rules and action mechanisms based on previous successful co-management experiences (Defeo, 2015; Gianelli, Martínez and Defeo, 2015). However, up to now it is not clear which government measures could help deal with the increasing consequences of mass mortalities, price shocks or massive importation of seafood, which is increasingly displacing domestic products and could strongly affect the yellow clam fishing community (Castrejón and Defeo, 2015; Defeo *et al.*, 2018). In this context, the governance system should provide enough flexibility to deal with complexity and uncertainty in the biophysical environment and in the globalization of international seafood markets that affect this fishery. Adaptive governance systems could provide elements to respond to pressing and varying conditions in ways that maintain the fishery's resilience (Defeo *et al.*, 2018). Additionally, this issue points to the need for increasing coherence between the policies and institutions governing the yellow clam fishery and those governing the importation of seafood.

4. CONCLUSIONS

This case study supports the implementation of the SSF Guidelines by demonstrating good practices for implementing and institutionalizing co-management regimes and policy reforms at local and national levels. The yellow clam fishery in Uruguay offers up a longstanding case study of co-management in small-scale fisheries that helps demonstrate both the promise and perils of participatory management in this type of fishery. Further, because of its rich history with co-management, it can more accurately characterize the potential benefits and challenges of such approaches than other case studies (see Table 2). This history is particularly important for understanding certain human rights issues associated with fisheries co-management and how these issues have changed over time. The longstanding nature of the case allows us to assess how the process of institutionalizing co-management can produce shared visions and priorities for the future, which can help mobilize adaptive capacities and address some of the major external drivers facing small-scale fisheries: climate change, disaster risks and socio-economic shocks. This is in line with recent findings that highlight how social protection, occupational safety and disaster risk management measures are critical in small-scale fisheries, because of the high vulnerability of the fishing occupation to accidents, disasters and climate change impacts (Willmann *et al.*, 2017). Additionally, the case study provides an account of the mechanisms and processes within co-management that can be particularly beneficial in achieving community empowerment, gender equality and inclusion of vulnerable and/or marginalized small-scale groups in the fishing sector of Uruguay.

The co-management of the yellow clam fishery in Uruguay provides useful lessons to other regions of the world that are particularly vulnerable to climate change and environmentally driven factors, and which are struggling to implement and institutionalize governance reforms. The particularities of the fishery and its value chain (e.g. tenure system with territories allocated to clam harvesters, gender equality in both harvesting and processing activities, and critical importance of the fishery for social development) make this case study applicable to a wide range of global scenarios. Yet the case study results can also be used to advance co-management in other small-scale fisheries throughout Uruguay. Indeed, co-management and governance regimes are already being replicated in other coastal (i.e. Ciudad de la Costa, Piriápolis, Punta del Este, San José) and inland (i.e. San Gregorio del Polanco – Rincon del Bonete, Salto, Andresito) Uruguayan fisheries. Therefore, the results provided in this paper could be used to promote the implementation of the SSF Guidelines at the national level as well.

4.1 The promise of co-management for implementing the SSF Guidelines

The case study demonstrates four main beneficial outcomes from co-management related to the SSF Guidelines: (a) gender equity, (b) well-being, (c) human rights, and (d) evidence-based management. The outcomes, and the specific good practices of the co-management strategy that produced them, are detailed below.

First, gender equity has been substantially increased in the fishery through implementation of the co-management arrangements (Gianelli, Martínez and Defeo, 2015; Gianelli *et al.*, 2018). In previous decades and in the first years of co-management implementation, women traditionally participated in the fishery without fishing licences, by accompanying their partners in fishing activities. However, through workshops conducted with the fishing community, women were encouraged to apply for their own fishing licences. Nowadays fishers believe that women and men have very similar opportunities to harvest and access the fishery. Further, women are perceived as being influential and having a significant voice in fisheries management decisions. They also play similar roles to men in the information-sharing network of the fishery, which highlights their key role in moderating the flow of information within the community.

Second, most fishers (75 percent) believe that co-management has increased their standard of living and their economic well-being. This aligns with recent findings showing that co-management has led to an enhancement of bioeconomic indicators in the yellow clam fishery, including abundance, CPUE and unit price, with important impacts on well-being. In this context, economic indicators show improvement as a result of co-management implementation (Gianelli, Martínez and Defeo, 2015; Gianelli *et al.*, 2018): for example, unit prices of yellow clam significantly increased over time, reaching their highest during the co-management fishery phase when compared with past fishery regimes. The formalization of community participation in the Local Fishery Council has played a critical role in strengthening local cohesion and empowerment, which is reflected in how prices are regulated more by the local community. Indeed, unit prices are now fixed during the local fishers' assembly at the beginning of each fishing season to avoid conflicts and rent-seeking behaviour by external intermediaries. These decisions have been supported by the Local Fishery Council as well. Additionally, total revenues for the local community increased two-fold after the implementation of co-management, highlighting the increasing economic importance of this fishery. These economic improvements mainly resulted from a shift in the marketing strategy developed jointly by the fishing community and the government, which was catalyzed by the institutionalization of co-management. The product, originally channeled as bait for sport fishing, is now sold as a luxury seafood product for human consumption, thus increasing economic revenues for the local community. This does not imply that co-management implementation was the single explanatory factor for the observed patterns; rather, it highlights the role of co-management as a useful strategy for sustainable resource exploitation.

Third, co-management is perceived to be protective of certain aspects of human rights. In particular, the active participation of fishers in decision-making and the positive economic outcomes have had human rights implications. The interviews conducted revealed that all fishers feel safe and proud when harvesting and selling yellow clams. They also feel that the implementation of co-management has improved their standard of living, including their food security. Most fishers believe that clam harvesting is worthwhile and will continue to be in the future, and a clear majority have a feeling of accomplishment from participating in the fishery. These are key aspects of subjective well-being, which are important considerations for small-scale fisheries (Weeratunge *et al.*, 2014). Furthermore, a clear majority of the fishers interviewed (96 percent) feel that co-management protects their right to remain in the fishery, and 79 percent feel that the co-management regime reflects their beliefs about how the fishery should be managed. The empowerment of fishers is a key aspect of the human

rights-based approach (Willmann *et al.*, 2017), and the yellow clam co-management process in Uruguay appears to be aligning with this approach.

Fourth, co-management of the yellow clam fishery has fostered an enabling environment for evidence-based management through collaborative and participatory data collection, analyses and research. The quality and quantity of fishery information have been substantially improved over time and have fostered the consolidation of management schemes and the governance mode itself. This process included the development of a community-based data collection program jointly developed by the fishers, the management agency (DINARA) and the Faculty of Sciences of Uruguay (Gianelli, Ortega and Defeo, 2019). This programme was started in 2010 and consisted of recording each fishing event in individual fishing logbooks, including daily landings, fishing effort, fishing grounds visited, selling price and final destination of landings (e.g. processing plants, intermediaries, own consumption). This information was complemented by participatory fishery-independent data gathered through regular surveys of stock abundance. The active participation of the yellow clam community in gathering both fishery-independent (surveys) and fishery-dependent (logbooks) data substantially increased the flow and exchange of high-quality information; strengthened the relationship between the local community, the government and academia; and ensured that decision-making procedures were impartial and robust. The combination of data from various sources and the refined detail of information received through the community-based data collection programme – including ecological, social and economic data relevant for decision-making – allowed for: (a) uncertainty reduction in stock estimates; (b) assessment of the relative contribution of different predictors to the short-term (Gianelli, Ortega and Defeo, 2019) and long-term (Defeo *et al.*, 2018) dynamics of the fishery; and, therefore, (c) an integration of this knowledge into decision-making processes. Nowadays, the Faculty of Sciences and governmental organizations are supporting several transdisciplinary capacity development projects to allow this small-scale fisheries community to participate in research, to benefit from market opportunities, and to build resilience and adaptive capacity in relation to the increasing and pervasive influence of red tides and climate change. These capacity-building initiatives, in partnership with fishers, are intended to provide flexible and suitable learning pathways to meet the needs of the yellow clam community.

4.2 The perils of co-management for implementing the SSF Guidelines

The case study also demonstrates two continued challenges of using co-management as a means for implementing the SSF Guidelines. First, the co-management arrangement has not been successful at protecting human rights that extend beyond the scope of typical fisheries management. These include elements such as alternative employment, access to credit and social security. The co-management arrangement has generally performed well on issues firmly within the mandate of DINARA. Yet its capacity to address broader issues has been limited, which is likely largely due to many constraining structural factors underpinning the other issues. For example, different agencies and legislation are required to influence the scope of human rights issues. These findings point to a critical lesson for applying the SSF Guidelines in co-management, which is that co-management is likely to perform better in terms of addressing human rights issues when it is accompanied by wider-scale structural and institutional change. Second, only about half of the fishers believe co-management has helped them deal with important shocks and stressors affecting the fishery, namely mass mortalities and market fluctuations. The fishers seem to view co-management as generally positive; yet the perceptions regarding its performance in dealing with the most difficult challenges deserve further attention. The current inability of co-management to address market and ecological shocks suggests that the arrangements are somewhat rigid or limited in scope, and efforts must be taken to improve their adaptive nature. This point highlights

a second key lesson, which is that adaptive co-management is likely required to implement the SSF Guidelines in light of the challenges of the Anthropocene.

TABLE 2

Basic principles of the SSF Guidelines, their presence in the yellow clam fishery, and how co-management has been useful in addressing them and in informing fisheries policy and governance. Based on results detailed in Gianelli, Martínez and Defeo (2015), Defeo et al. (2018) and this paper

| Guiding principles of SSF Guidelines | Brief description of the elements observed in the yellow clam fishery | How co-management has been useful |
|---|--|--|
| Human rights and dignity | Human rights respected, including non-discrimination, equality, participation in fisheries management and inclusion; government regulation of activities according to human rights standards. | Most fishers believe that co-management has improved their standard of living. |
| Respect of cultures | Local traditions and knowledge considered in determining and implementing management measures. | Local fishers have priority in obtaining fishing licences. The management agency shows respect for forms of local organization and has incorporated local knowledge in management measures discussed at the Local Fishery Council. |
| Non-discrimination | No forms of discrimination in the fishery. | Independent fishers not involved in local organizations also have the right to participate in the fishery. |
| Gender equality and equity | Equal tenure rights for both men and women; equal rights for harvesting and selling clams; gender equality in fisher representatives. | Women are encouraged to apply for their own fishing licences and are empowered through capacity building. Nowadays women are perceived as being influential and having a significant voice in fisheries management. |
| Equity and equality | Equitable tenure rights in the form of fishing licences and individual fishing quotas, based on equal sharing of total allowable catch (TAC). | Individual quotas were established at the very beginning of the process. Mechanisms of quota allocation are discussed at the Local Fishery Council. |
| Consultation and participation | Consultative co-management with two nested decision-making bodies: fishers' assembly and Local Fishery Council of La Coronilla-Barra del Chuy. | Co-management has allowed participation in decision-making processes. Fishery councils are open to a broad audience. The academy has played a significant role in catalysing the co-management process. |
| Rule of law | Novel normative framework implemented for small-scale fisheries in Uruguay. | Co-management in the yellow clam fishery serves as a learning platform for scaling up co-management to other small-scale fisheries of Uruguay. |
| Transparency | Clearly defined and widely publicized management policies, laws and procedures; booklets produced using very simple language to raise awareness of the importance of EAF and of fishers' benefits and rights. | The implementation of co-management has facilitated the flow of information within the community, particularly at the Local Fishery Council. |
| Accountability | Yellow clam stock monitored and results communicated to fishers; fishers register their activity and report to the management agency through logbooks and voluntary community-based data collection programme. | Fishers participate in sampling events to assess the stock. The community-based data collection programme established through co-management allows each fisher to provide fishery data on a daily basis. |
| Economic, social and environmental sustainability | Periodic assessment surveys have allowed for deciding precautionary TAC and effort levels that favoured desirable biosocio-economic outcomes. Multiple use zones, combining fishing and tourism activities, have improved local economic conditions. | Participatory assessment surveys and development of zoning schemes favoured the implementation of management measures, which were self-enforced by the community. |
| Holistic and integrated approaches | EAF as a holistic framework to address multiple needs. | Local participatory workshops promote EAF as a holistic framework to address multiple needs. |
| Social responsibility | Participatory workshops and meetings (e.g. Local Fishery Council) promoting collaboration among stakeholders. | Co-management promotes community solidarity and fosters an environment that has improved collaboration among fishers, academics and government staff. |
| Feasibility and social and economic viability | The fishery is economically feasible, revenues per unit of effort have increased over time, and the fishery provides a significant seasonal source of income. | Before each fishing season, letters of agreement among fishers set sale prices among the fishing community that have helped to avoid conflicts and rent-seeking behaviour of external intermediaries. |

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Appendix 1

BACKGROUND

This section is designed to gather background information on the participant.

How long have you been harvesting yellow clams?

Is yellow clam harvesting your primary source of income? Do you have other sources?

If so, what are they?

Were you involved with co-management from 1988 to 1994?

If so, how did the closure of 1994 impact your livelihood? How did you cope?

Are you engaged with the co-management initiative that started in 2007–2008?

If so, have you been involved since it began? Or when did you become engaged?

| Sections | Questionnaire statements | Likert scale | | | | |
|------------------------------|---|-------------------|----------|------------|-------|----------------|
| | | Strongly disagree | Disagree | Don't know | Agree | Strongly agree |
| Actual co-management | Co-management allows me to state my opinion regarding management | | | | | |
| | My opinion is respected and I am able to influence management | | | | | |
| | Co-management allows us to work together with scientists and government | | | | | |
| | Co-management has helped me cope with past mass mortalities | | | | | |
| | Co-management has helped me cope with past market fluctuations | | | | | |
| | Co-management has been conducted in a fair and legitimate manner | | | | | |
| | Co-management reflects how I believe the fishery should be managed | | | | | |
| | Co-management protects my right to remain actively engaged in the fishery | | | | | |
| Human rights | My family has enough food to eat | | | | | |
| | I could easily find alternative employment | | | | | |
| | There are many alternative job opportunities | | | | | |
| | I feel safe while harvesting or selling clams | | | | | |
| | I am satisfied with my housing | | | | | |
| | I am satisfied with my access to credit | | | | | |
| | I am satisfied with my access to social security | | | | | |
| | I am satisfied with my standard of living | | | | | |
| | Co-management improves my standard of living | | | | | |
| Gender | Men and women have the same opportunities to harvest | | | | | |
| | Men and women have the same opportunities to sell clams | | | | | |
| | Women can enter the fishery just as easily as men | | | | | |
| | Women should be given a stronger voice in management | | | | | |
| | The number of women participating in the fishery has been increasing | | | | | |
| | Women have a stronger voice in the fishery with co-management in place | | | | | |
| Actual and future well-being | I feel positive about the current status of the resource | | | | | |
| | Harvesting will provide well-being for me and my family in the future | | | | | |
| | Harvesting is worthwhile | | | | | |
| | I get a sense of accomplishment from harvesting | | | | | |
| | Clam harvesting will continue to be a viable livelihood | | | | | |

Appendix 2. Statistical results

TABLE A2.1

Kruskal-Wallis tests on each questionnaire statement by: (a) gender; (b) age categories (ages 20–30, 31–40, 41–52 and 53–70); (c) education (i.e. primary and high school) and (d) by experience in past co-management activities. When statistically significant results were found (highlighted in bold), multiple comparisons across groups (Dunn test) are shown. P-value: * < 0.05, ** < 0.01, *** < 0.001

| Sections | Questionnaire statements | K-W test (H) | | | | Multiple comparisons |
|--|---|--------------|-------------------|--------------|-------------------------------------|---|
| | | by gender | by age categories | by education | by experience in past co-management | |
| Actual co-management | Co-management allows me to state my opinion regarding management | 0.16 | 7.79* | 2.89 | 5.93** | Age: 20–30 < 53–70 Past co-mgmt.: no ~ yes |
| | My opinion is respected and I am able to influence management | 0.22 | 11.46** | 0.30 | 12.19*** | Age: (20–30 = 31–40) < 53–70 Past co-mgmt.: no < yes |
| | Co-management allows us to work together with scientists and government | 0.27 | 3.55 | 0.81 | 1.03 | - |
| | Co-management has helped me cope with past mass mortalities | 0.79 | 2.16 | 0.41 | 0.10 | - |
| | Co-management has helped me cope with past market fluctuations | 0.15 | 3.42 | 0.90 | 0.06 | - |
| | Co-management has been conducted in a fair and legitimate manner | 0.17 | 8.02* | 0.12 | 6.39** | Age: (20–30 = 31–40) < 53–70 Past co-mgmt.: no < yes |
| | Co-management reflects how I believe the fishery should be managed | 1.90 | 5.38 | 2.46 | 5.51* | Past co-mgmt.: no < yes |
| Human rights | Co-management protects my right to remain actively engaged in the fishery | 0.25 | 0.34 | 0.12 | 0.25 | - |
| | My family has enough food to eat | 0.28 | 2.18 | 0.26 | 0.16 | - |
| | I could easily find alternative employment | 1.62 | 2.84 | 0.62 | 5.18* | Past co-mgmt.: no < yes |
| | There are many alternative job opportunities | 0.27 | 3.19 | 2.34 | 0.22 | - |
| | I feel safe while harvesting or selling clams | 0.43 | 6.18 | 1.50 | 5.82* | Past co-mgmt.: no ~ yes |
| | I am satisfied with my housing | 1.92 | 3.84 | 1.39 | 0.44 | - |
| | I am satisfied with my access to credit | 0.80 | 2.48 | 2.21 | 3.11 | - |
| | I am satisfied with my access to social security | 0.25 | 1.91 | 1.82 | 0.38 | - |
| | I am satisfied with my standard of living | 0.23 | 0.31 | 0.51 | 0.88 | - |
| Co-management improves my standard of living | 0.11 | 5.59 | 1.42 | 0.46 | - | |
| Gender | Men and women have the same opportunities to harvest | 2.10 | 0.90 | 0.54 | 1.02 | - |
| | Men and women have the same opportunities to sell clams | 1.56 | 0.58 | 0.66 | 0.14 | - |
| | Women can enter the fishery just as easily as men | 0.60 | 3.49 | 0.02 | 1.03 | - |
| | Women should be given a stronger voice in management | 1.99 | 2.66 | 1.19 | 0.46 | - |
| | The number of women participating in the fishery has been increasing | 0.74 | 2.43 | 0.20 | 1.28 | - |
| | Women have a stronger voice in the fishery with co-management in place | 0.52 | 5.35 | 0.05 | 2.77 | - |

TABLE A2.1 (CONTINUED)

| Sections | Questionnaire statements | K-W test (H) | | | | Multiple comparisons |
|------------------------------|---|--------------|-------------------|--------------|-------------------------------------|------------------------------|
| | | by gender | by age categories | by education | by experience in past co-management | |
| Actual and future well-being | I feel positive about the current status of the resource | 1.17 | 6.40 | 0.97 | 0.06 | - |
| | Harvesting will provide well-being for me and my family in the future | 1.74 | 0.81 | 0.18 | 1.42 | - |
| | Harvesting is worthwhile | 0.35 | 2.19 | 1.94 | 2.06 | - |
| | I get a sense of accomplishment from harvesting | 0.84 | 1.87 | 0.00 | 0.03 | - |
| | Clam harvesting will continue to be a viable livelihood | 0.01 | 6.19 | 1.79 | 2.71 | - |
| Ecological impacts | I was able to cope with past mass mortalities | 0.19 | 1.54 | 0.03 | 0.50 | - |
| | Mass mortalities are short-term and the clam population will always recover | 1.59 | 1.22 | 0.02 | 0.11 | - |
| | I am not concerned with future decreases in clam populations over time | 0.55 | 1.40 | 0.01 | 0.30 | - |
| | There will not be mass mortalities in the future | 0.67 | 3.87 | 1.08 | 0.14 | - |
| | Despite mass mortalities, clam abundance will be enough to harvest | 2.10 | 2.66 | 4.82* | 1.50 | education: high < primary |
| | I was able to cope with past red tides and fishery closures | 2.53 | 3.99 | 1.05 | 0.13 | - |
| | Red tides will not increase in frequency, and I am not concerned about it | 6.12** | 3.89 | 1.09 | 0.18 | gender: women < men |
| | Despite red tide risk, harvesting will be a viable livelihood in the future | 0.79 | 3.25 | 1.46 | 0.05 | - |
| Future co-management | Co-management is adequate for dealing with mass mortalities in the future | 0.28 | 5.08 | 0.12 | 0.49 | - |
| | Co-management is adequate for dealing with market changes in the future | 1.49 | 1.26 | 2.46 | 3.81 | - |
| | We require drastic management measures to cope with ecological and market risks | 0.07 | 1.68 | 1.11 | 0.00 | - |
| | Co-management provides the ideal platform to manage the fishery in the future | 0.21 | 6.49 | 0.01 | 2.09 | - |

TABLE A2.2

Exponential Random Graph model results. Positive parameters represent effects that are more apparent than expected by chance; negative parameters represent effects that are less apparent than expected by chance

| Effect | MPNet code | Parameter | Std error | t-ratio | Description |
|---------------------|---------------------|-----------|-----------|---------|--|
| Density | EdgeA | -1.436 | 1.832 | 0.048 | The propensity for ties to form throughout the network (i.e. density) |
| Popularity | ASA | -0.8774 | 0.571 | 0.047 | The propensity for certain actors to be popular within the network |
| Closure | ATA | 1.5349* | 0.358 | 0.053 | The degree of triadic closure within the network (i.e. the degree of core formation) |
| Female networking | Gender_ActivityA | -0.0145 | 0.237 | -0.027 | The propensity for women to form ties in the network |
| Female interaction | Gender_InteractionA | 0.3155 | 0.511 | -0.06 | The propensity for women to form ties with other women in the network |
| Leaders' networking | Leader_ActivityA | 0.8463* | 0.246 | 0.028 | The propensity for the fishery's leaders to form ties in the network |

*significant effects.



Small-scale women fish traders on the beach of Ngaparou

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Implementing social responsibility: a key factor in promoting small-scale fisheries in Senegal

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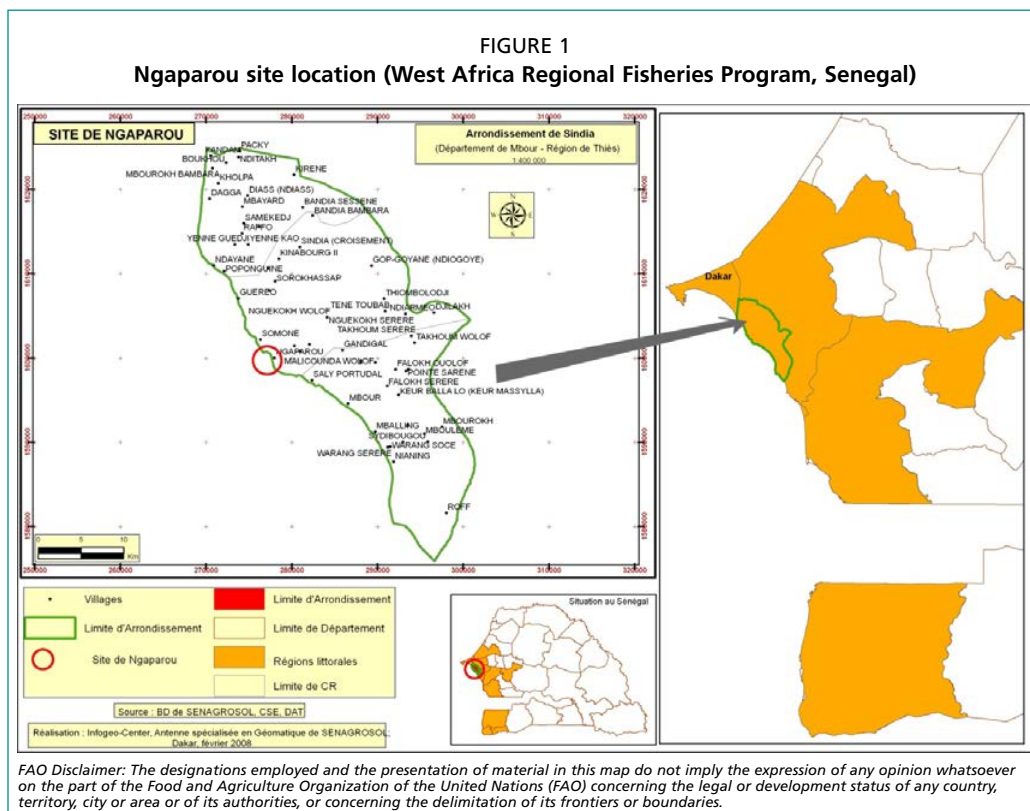
ABSTRACT

The case study presented in this paper highlights the decisive role played by social responsibility implementation in the success of a pilot co-management trial conducted on the Ngaparou small-scale fisheries site in Senegal. The trial was based on promoting local co-management initiatives defined by the fishers themselves and consisting of regulations for fishing in the adjacent maritime area. For the purposes of the trial, the Senegalese Government granted the local fishing community a measure of autonomy and collective responsibility for managing fishery resources. A legal basis was provided for these arrangements under a co-management agreement between the local fishers' committee (CLP) representing the community and the Fisheries Ministry. This new management model had positive effects on fisheries stakeholder behaviour and the fishing methods used by local fishers. It also led to the emergence of social responsibility within the CLP, thus helping strengthen the foundations of co-management. The local co-management initiatives were sustained through broad community support, including from quarters that were initially reluctant or opposed to such initiatives. The CLP's management approach was holistic, as it combined measures that focused not only on fisheries, but also social development and business support within the industry while integrating equity and gender. It approached small-scale fisheries from a new angle that was different from traditional government methods. The study confirmed the relevance of including social responsibility in the Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines). Other key aspects of the SSF Guidelines were also promoted by the management system set-up, namely co-management and participatory monitoring. Similar studies on other current co-management trials in Senegal are recommended to either confirm or qualify the importance of social responsibility in co-management processes. The Senegalese Government could also take measures to improve participatory monitoring effectiveness and sustainability so as to lend more credibility to co-management.

1. INTRODUCTION

This case study was conducted in Ngaparou, a traditional fishing village on the waterfront of the Senegalese coast, commonly known as Petite-Côte (“small coast”) and renowned for its large, vibrant small-scale fishing industry and related businesses. The village is connected to the main highway network by a tarred, 9-km all-weather road. It is located 70 km from the Senegalese capital, Dakar, and 8 km from Mbour, Petite-Côte’s main city. Ngaparou has a total population of 10 338, of whom 54 percent are men and 46 percent women.¹ Approximately 10 percent of the population work in the fishing industry with 950 fishers identified in the area, of whom 12 percent are migrant fishers from the surrounding localities of Mbour, Mbao, Yene, etc. There are 120 women estimated to be working in fisheries, of whom 70 are processors, 35 fish wholesalers and 15 micro-wholesalers.² The fishing fleet consists of 261 canoes with the main fishing gear being single lines (38 percent), setnets (33 percent) and octopus lines (14 percent).³

2008 was a turning point for small-scale fisheries management on the part of the Government of Senegal. That year, a co-management trial was begun on four pilot sites based on legal arrangements between the Government and local fishers’ committees (comités locaux des pêcheurs, or CLPs). A co-management agreement was signed by the Senegalese Government and the Ngaparou CLP, a private co-management association created in the lead-up to the World Bank-funded Integrated Marine and Coastal Resources Management Project (GIRMAC). The Ngaparou CLP is recognized by an order issued by the Thies Region’s governor, and represents all the sites’ fisheries stakeholders. Its governing bodies are the Annual General Meeting (AGM), an elected 21-member Board of Directors, and an executive committee selected from the Board and from specialist committees on finance, monitoring, scientific and technical issues, and social matters. Any fisheries stakeholder may join the CLP regardless of gender or occupation.



¹ Source: Agence Nationale de la Statistique et de la Démographie (ANSD).

² Micro-wholesalers are women who they lack equipment and funds and so purchase small amounts of fish for on-site sales, unlike wholesalers who sell off site.

³ Source: Maritime Fisheries Direction (DPM).

The co-management agreement acknowledges the important role played by traditional law, under which village communities have managed fish resources, thus legitimizing the local fisheries management system set-up. It provides a legal basis for local sustainable management initiatives developed by the community itself to solve the issues of resource scarcity and decreasing local fishing yields. The initiatives involve:

- a) *Managing green lobsters*: in particular, protecting juvenile and berried female lobsters by placing a ban on fishing, landing, selling and eating them.
- b) *Setting up a protected fishing area (PFA)*. The PFA in Ngaparou aims to instil a responsible fishing approach by keeping the fishing levels low. It includes three areas, two of which are off limits for any kind of fishing (i.e. a restricted area and a buffer zone, also known as the artificial reef zone), while a third regulated area is subject to certain restrictions: no spearfishing, longlining, purse seining, beach seining, trammel nets or setnets with side meshes smaller than 60 mm and no more than 20 nets per canoe.
- c) *Sinking artificial reefs and fish aggregating devices (FADs) in the buffer zone*. The purpose of artificial reefs is to strengthen habitats that are beneficial to demersal species' ecology in the Ngaparou coastal area. The Ngaparou CLP opted for building mixed reefs made up of natural stone blocks and cinder blocks plus FADs made of wooden planks, old nets and octopus spawning jars. The artificial reefs were built by local stakeholders using local materials.

Implementing these local co-management initiatives led the community to coordinate their efforts within the CLP so as to meet their sustainable fishing duties.

While co-management is a gateway to change, and thus a good practice in itself, the study showed that the social responsibility that was engendered by this management system change was the key to its success, as it ensured the co-management initiative remained sustainable and that the local stakeholders were committed to and took part in implementing the newly introduced management measures.

Social responsibility is referred to in the Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines) and involves measures such as **promoting community solidarity and collective and corporate responsibility as well as fostering an environment that promotes collaboration among stakeholders**. These social responsibility measures were the core values of the Ngaparou CLP's work.

Had social responsibility not been implemented through concrete action, it would have been difficult to get the local fishers to adopt the common fishing rules and willingly comply with them. The study's objective was to assess the role played by fostering social responsibility in co-management promotion in Ngaparou.

2. METHODOLOGY

2.1 Literature review

The case study included a literature review phase. Several study reports had been written on the small-scale fisheries management system set up in Ngaparou, and they were used to document the case study and enhance the discussion. A bibliography is appended.

2.2 Start-up workshop

The case study was carried out in close collaboration with the Ngaparou CLP, which was involved in every stage of the process, thus allowing local fisheries stakeholders to take stock of their own management system. The study took an open, participatory approach involving both national and local fisheries stakeholders. At the outset, a national workshop was held to inform the participants about the case study's origins and implementation process and to foster discussion on the links between the SSF Guidelines and the lobster and associated species management system in the Ngaparou

coastal area. In Senegal, this management system is generally considered to be a fairly successful small-scale fisheries governance model, despite its limitations. The workshop participants discussed the trial's successful aspects and noted whether or not they applied certain SSF Guidelines. A representative of the Senegalese Fisheries Minister chaired the national workshop, which was attended by 30 participants. They came from a range of backgrounds and were involved in small-scale fisheries management both locally and nationally, or had in-depth knowledge of the industry (Table 1).

TABLE 1
Case-study start-up workshop participant list

| National workshop participant backgrounds | Number | | |
|---|-----------|-----------|-----------|
| | Men | Women | Total |
| Local Small-Scale Fisheries Council members from other localities | 06 | 02 | 08 |
| Central fisheries department officers | 02 | | 02 |
| Local fisheries department officers | 03 | 01 | 04 |
| Small-scale fisheries support project representatives | 02 | | 02 |
| Ngaparou CLP representatives and fishing community members | 04 | 03 | 07 |
| Small-scale fisheries NGO support representatives | 01 | | 01 |
| Fisheries research representatives | 02 | | 02 |
| Resource persons | 04 | | 04 |
| TOTAL | 24 | 06 | 30 |

3.3 Focus group interviews

The case study methodology also involved a series of interviews with focus groups made up of local fishing industry stakeholders. The Ngaparou CLP facilitated the surveys by providing use of its offices and by inviting the local fishers and fishery businesses to attend and play an active part.

The first survey was aimed at learning community members' perceptions of the Ngaparou small-scale fisheries management model success factors. The survey covering 22 stakeholders highlighted the following three main factors, listed by order of importance:

- 1) CLP participatory monitoring measures (noted by 50 percent of respondents);
- 2) CLP community welfare initiatives (noted by 27.28 percent of respondents);
- 3) economic measures taken by the CLP for local industry stakeholders (noted by 22.72 percent of respondents).

Based on the survey results, the case study sponsors conducted three more focus group surveys of 44 stakeholders (25 men and 19 women), most of whom had received welfare or financial assistance from the CLP. The purpose of the focus groups was to determine the types of assistance received, the beneficiaries' experience, how they viewed the assistance, and the effects it had had on the performance of the local fisheries management system.

3. RESULTS AND DISCUSSION

3.1 Key outcomes

The key case study outcomes fell into the following categories (developed further below):

- a) community responsibility and empowerment;
- b) holistic management;
- c) strengthening community solidarity through welfare initiatives;
- d) responsibility for and involvement in fishery resources management;
- e) transparency and good governance.

a) Empowerment of fishing communities is a prerequisite for improving small-scale fisheries governance

The Ngaparou fishing community was empowered to manage the adjoining maritime area with legal rights granted by the Senegalese Government under three instruments, namely:

- a co-management agreement between the CLP Chair and the Fisheries Minister defining the regulatory framework for empowering the CLP to co-manage local fisheries;
- a ministerial order recognizing the local co-management initiatives identified by the Ngaparou CLP; and
- an order issued by the Sub-Prefect setting forth the terms and conditions for implementing local co-management initiatives.

These legal rights were a turning point in administrative procedures, as fishing communities had not previously enjoyed such prerogatives. The definition and subsequent monitoring of management measures had always been the exclusive purview of the fisheries department based on national laws and regulations and exercised by the Fisheries Ministry's local branches. The new rights empowered the CLP to regulate the adjacent maritime area by formulating and implementing local co-management initiatives. Such measures were required to comply with fisheries legislation, i.e. the maritime fisheries code and its enabling instruments, as well as with industry policy guidelines as defined by the Government Fisheries and Aquaculture Industry White Paper (LPS/PA). These were the preconditions for signing set by the Fisheries Minister. Up until then, only the government could regulate small-scale fisheries through the fisheries code and enabling instruments. This new right enjoyed by the CLP applied to all fishers operating in the prescribed area. Non-resident fishers were not barred from entering, but needed to comply with any management measures defined by the CLP when operating in the area.

The major change was that these management measures were defined totally independently by the communities; the government's role was simply to approve them and give them full legal force under the above-mentioned instruments. This change had the effect of i) nurturing a sense of collective responsibility for fishery resource use and development of the local fishing industry; and ii) committing the fishers to developing local fisheries by, for example, willingly donating land to the CLP to build collective facilities, as did some community members.

b) Developing a holistic management approach

The Senegalese Government had always managed small-scale fisheries centrally and locally by focusing on regulating fishing operations. The main management duties performed by fisheries officers were developing practical measures for preserving resources and for monitoring. The case study revealed that moving from a government to a community management mode broadened the management focus. The Ngaparou CLP committed human and financial resources to many welfare and business initiatives that were not directly related to fisheries, but were highly appreciated by the recipient community members, as can be seen from the testimony gathered during focus group surveys. As such, the CLP's management approach proved holistic in that it combined initiatives in fisheries, social development and business support for industry stakeholders while also integrating gender and equity factors.

c) Strengthening community solidarity through welfare initiatives

The CLP developed financial and welfare instruments to create a social safety net for the most disadvantaged fishers and those who suffered most from the unforeseen effects of the initiatives. The money collected through community fundraising was used first and foremost by the CLP to provide periodic support to affected families. The CLP assisted community members on several occasions with education and health

needs. The CLP Board of Directors selected the beneficiaries based on proposals from a social committee of traditional leaders. The only requirements were that the applicant be a community member and in real need of assistance. The amount of support granted depended on the nature and severity of the issues submitted to the social committee and the availability of CLP funds. For the sake of transparency, the amounts and type of assistance were presented publicly to the community at the AGM.

During the surveys, beneficiaries attested to the assistance received.

In health, three examples deserve highlighting:

- A three-year-old fisher's son suffering from an inguinal hernia was granted full medical coverage by the CLP and has since fully recovered. The case is particularly noteworthy because the patient's father was very unenthusiastic about local co-management initiatives, but during his testimony he said he was now convinced the CLP's work was useful and believed a moral contract now existed between the CLP and local stakeholders.
- The CLP contributed financially towards the hospital and pharmaceutical expenses of a villager who had suffered from heart failure, although he was neither a fisher nor a fisher's son. The CLP leadership justified their decision by stating that the fishing industry should benefit the whole village.
- A retired fisher suffering from prostate issues had all his surgical costs covered by the CLP.

In education

Given the context of overfishing, the CLP also provided assistance to improve the educational prospects of children from fishing families. The aim was to reduce the number of "potential fishers" and thus help reduce fishing activity to sustainable levels. To this end, the CLP provided scholarships for some ten children from the most disadvantaged families. One noteworthy beneficiary was a paddle fisher who had been adversely affected by the management measures because he operated in the restricted area, but whose children (now in secondary school) had had their fees paid by the CLP since entering primary school. The CLP also allowed the schoolchildren unrestricted access to their computers (free of charge) and provided free remedial lessons and support to those who were most deserving. These measures led to good marks for the children at school.

d) Responsibility for and involvement in fisheries resource management

Three areas best illustrate the community's sense of responsibility for and involvement in fishery resources management, namely participatory monitoring, local fundraising to support CLP initiatives, and support for female process workers and fish wholesalers.

Participatory monitoring

One of the areas that best illustrates the community's sense of responsibility for and involvement in fishery resources management is participatory monitoring, which was overseen by a CLP monitoring and inspection committee. This committee reported to a government officer who investigated offences and wrote the corresponding reports as provided for by the co-management agreement. CLP member fishers involved in the monitoring operations on a voluntary basis were often referred to as "fisher-sentinels" or "sentinel-fishers". Their main duty was to provide information on possible offences and accompany government-appointed officers on monitoring missions on land and at sea. Their presence during these operations was of major assistance in detecting infractions and identifying offenders. In the first quarter of 2016, participatory monitoring operations led to 94 vessel inspections and 44 offence reports – a 45 percent offence rate. The amount of the fines and how they were allocated were still decided by

decree,⁴ but this had become obsolete insofar as it did not provide for a participatory monitoring scenario involving non-government workers. Because the legal framework did not reflect the new management system, the proceeds from fines were allocated arbitrarily, and thus the amounts received by the CLP were well below the cost of its human and financial contribution to the monitoring operations.

CLP fundraising

The CLP also exercised responsibility through its fundraising initiatives for fishery resources management activities and welfare work. The funds raised were in addition to assistance received under Ngaparou co-management support projects from the World Bank and USAID. The financial contributions made by CLP members from 2006 to 2012 totalled XOF 34 million, coming from the following sources:

- a) **Travel allowance balances** from members (per diems and accommodation) paid into CLP accounts: The CLP was often invited to meetings and workshops held by other organizations, such as projects and NGOs, who paid members travel allowances. The fishers decided that all members representing the site at meetings would pay their travel allowance balances to the CLP after deducting their expenses for meals, transport, etc.
- b) **Boat hardware proceeds** from the GIRMAC-funded business: Part of the profits were used by the CLP to help fund social welfare initiatives and management measures, such as buoy repairs, inspection costs, etc.
- c) **Welfare fee on fuel:** An fee of XOF 500 on all fishing canoe fuel purchases, regardless of volume, was introduced for all site stakeholders, whether internal migrants, indigenous locals or foreign nationals.
- d) **Membership card sales:** All CLP members and supporters must possess cards (valid for two years) costing XOF 500 each or XOF 2000 for Board members.
- e) **Mbar⁵ fees:** A daily fee of XOF 500 for fish wholesalers and XOF 200 for fish micro-wholesalers was introduced.
- f) **Share of transactions** and seized goods sales revenue: Offences gave rise to fines and a 20 percent share of this revenue was allocated to the CLP.

Business and financial support to disadvantaged groups

A concern for equity was the guiding principle behind this CLP service that was extended to include disadvantaged groups, particularly women in the fishing industry. Based on a partnership between the Credit Mutuel du Senegal bank and the CLP, a line of credit was opened to fund women's business operations. A revolving fund of XOF 4 000 000 was authorized for the CLP to grant individual loans to women of up to XOF 200 000. The CLP also requested and obtained a grant from the World Bank project to purchase a refrigerator lorry for Ngaparou's female fish wholesalers who had formed the Tefess Economic Interest Group. A depreciation fund was set up for the lorry, with the Group providing daily payments of XOF 15 000.

e) Transparency and good governance

The Ngaparou CLP regularly held its AGMs to report on progress and elect its board and committee members. A financial and progress report was prepared by the CLP Board of Directors and shared with all stakeholders at each AGM. Since

⁴ Decree No. 91-0600 of 18/06/1991, providing for the allocation of revenue from fines, transactions, seizures and confiscations under the Maritime Fisheries Code, stipulates the following distribution rates: 45 percent for CEPIA (Fisheries and Allied Industries Incentive Fund); 20 percent for the enforcing agency's operating costs; 10 percent for the monitoring agency's operating costs (Fisheries Surveillance and Protection Department); 15 percent for the reporting officers and third parties who helped uncover the offence; and 10 percent for the Maritime Fisheries Department (DPM) officers.

⁵ a wholesale fish outlet on the beach.

the local co-management initiatives began in 2008, the CLP has held seven AGMs, with a new Board elected on each occasion. The Ngarparou CLP has had three Chairs and Secretaries and special emphasis has been placed on empowering women on the Board, to the point where the positions of Chair of the Information Awareness and Communication Commission and Auditor were set aside for them.

3.2 Progress in ensuring fundamental rights

Some aspects of the management system helped enforce the fundamental rights of fishers, craftspeople, fisheries workers and communities. The most notable result in the case study was the land rights related to fishery resources that were acknowledged by the co-management agreement. Discussions about the case nevertheless revealed some resistance to change that hindered full enjoyment of these rights. Transferring management duties previously performed by government to the fishing communities led some areas of government to feel they had lost power, which resulted in them holding up or even counteracting local co-management initiatives. A deeply entrenched reluctance to hand over monitoring and inspection powers to the communities was observed, as was a tendency to relegate community members to observer/helper roles. In addition, according to the fishers, the planning of monitoring operations was poor, and there were also delays in updating regulations to bring them in line with co-management and participatory monitoring. Fisher focus groups pointed to many cases where fishing restrictions were breached and government agencies responsible for fisheries or the courts did not rule in favour of the CLP, either because they had been pressured by lobby groups who protected offenders or because they ruled that small-scale fishers were not subject to zoning restrictions. The co-management agreement predated the 2015 fisheries code reform, which has since provided for fishing communities to have access rights to allocated areas, but the previous code was subject to interpretation in terms of the legal basis for the management measures taken by the Ngarparou fishing community. The new provisions may help give local management a stronger legal footing and, therefore, provide the CLP with the powers it requires to effectively protect the area under its care. Ultimately, the future of this management model will depend on the ability to overcome resistance to change, the active commitment of government to co-management, and the updating of regulations in favour of co-management.

In terms of women's collective rights, it was reported that the CLP has advocated for preferential treatment for women, but they remain under-represented in its management bodies. This is a reflection of the general environment in traditional decision-making bodies, where women's representation is low or non-existent. Even when leaders are democratically appointed, as in the CLP for example, women tend not to stand for election to certain positions, such as the chair. The discrimination is internalized rather than openly expressed. It is an issue that affects society at large, but some headway can be made within sectors through education and by strengthening women's economic standing.

Another positive aspect observed in the study was that the CLP provided support for the disadvantaged, for example through welfare initiatives. Being near an urban area, the Ngarparou fishing community can enjoy the right to health or education, insofar as it has access to social services. The country's poor development standards, however, mean that such rights are the stuff of rhetoric rather than real life. The CLP's social support goes a long way towards addressing this shortcoming.

3.3 Administrative, economic, social and environmental prerequisites for successful co-management

The Senegalese Government's commitment, signalled by the legal instruments that provided an institutional framework conferring responsibilities on the CLP, was a key

factor in the co-management initiatives' success. Such empowerment gave the CLP the confidence and legitimacy it needed to operate in the community and deal with third parties.

When the CLP took management measures to reduce fishing levels by restricting certain areas and the amount of fishing gear (no more than 20 nets per canoe), the immediate result was that some fishers suffered income losses, and so the measures were challenged. Unless these losses were offset or moderated by income-generating activities and welfare assistance to the affected community members, there was a major risk that the management measures would not be complied with. In the beginning, the CLP did not, however, have the means to offset or alleviate the negative effects of the management measures on fishers. Hence critical assistance was required from external partners, particularly the World Bank and USAID, who provided support for the co-management system and strengthened the CLP's financial capacity.

To reproduce the same successful management system, the fisheries in question must be based on relatively low-mobility species. It would be more difficult with small pelagic fisheries, for example, as those species are highly migratory, unless a mechanism is set up for collaboration between the communities that fish them in the various localities and who share the same management system. Green lobsters are fished throughout the Ngararou coastal area, which stretches as far as the neighbouring North Sindia Local Small-Scale Fisheries Council villages. Even though fishers report some species migration, for reasons which have not as yet been locally determined scientifically, lobsters are fished all year round in the Ngararou coastal area.

3.5 Challenges

In addition to the prerequisites mentioned above, there are several challenges for implementing co-management initiatives. The main one is sustainability, due to external environmental factors beyond the community's control. Ngararou fisheries must interact with other fisheries that are not co-managed or subject to any restrictions under management rules. Also, as fishery resources have been observed to be regenerating⁶ and abundance indices have risen since the management measures were applied, fishers are drawn from other areas to poach the resources. This has complicated participatory monitoring operations, as they now require more human resources and equipment and have become a major burden. Unless the issue is nipped in the bud, it is likely to have negative effects on all the successful outcomes achieved by the current management system. The CLP leadership is certain that the solution lies in extending the management system to neighbouring villages and then nationally. Indeed, they were the main driving force for setting up a national network of Local Small-Scale Fisheries Councils in 2016 aimed, *inter alia*, at developing a small-scale fisheries management network of community organizations.

The other main challenge is that of properly managing fish stocks. In this regard, the CLP has already started reducing fishing levels through restricted areas and regulating the amount of gear allowed, which is a major improvement. It is not yet clear whether these measures will be enough to achieve the maximum sustainable yield. This raises the question of whether the CLP is willing and able to apply more difficult measures, such as restricting the number of canoes and fishers, which such a management objective would require. Opinions differed on this when CLP member fishers were consulted. In addition, it raises the question of whether a scientific stock monitoring system should be set up involving the CLP and government assistance through CRODT⁷

⁶ The CLP made these observations in collaboration with the local fisheries department that gathers the statistics. They show an increase in average landed lobster size (+45 percent), a higher lobster setnet CPUE (+133 percent), a return of fish shoals to the coastal area, a proliferation of juveniles and pelagic species in the co-management area, and some migratory species (e.g. *Caranx* spp.) staying longer in the PFA.

⁷ Dakar Thiaroye Oceanography Research Centre.

to measure biomass developments in the area and improve knowledge of the species and areas targeted by Ngaparou local co-management initiatives. Concerning these developments, a satisfactory solution needs to be found for the issue of fair distribution of the biological profits derived from co-management activities. Management measures like PFAs have led to an increase in the biomass of some key species, which frequently draws fishers from other areas to operate in Ngaparou's fishing area, including its PFA. This doesn't sit well with CLP members, however, as they are the ones who have made the sacrifices in order to better manage their fishery resources.

3.6 Good practices

There are several good practices that came out of this case study:

- Small-scale fisheries governance in a country like Senegal can be improved if the duly organized local fishing communities are granted independence and fishery resource management responsibilities. Any co-management that is promoted must, however, have a formal, legal basis defining the contractual framework between the government and the communities. This confers legitimacy and provides a legal basis for the measures taken by organizations representing the community when dealing with community members and third parties. It should be noted, however, that in this case the community did not have the monitoring and inspection resources needed to fully enforce their rights. The locally managed marine area's legal status also needs to be more assertively defined.
- Although co-management is a gateway to change, it alone cannot precipitate all desired changes. In the Ngaparou study, the community response to the new management mode resulted in an unprecedented degree of social responsibility. This communal mindset created an environment conducive to effective fishery resources management, where fishers were willing to make sacrifices (e.g. fishing capacity reduction measures to ensure the sustainability of the fisheries) for the common good.
- The Ngaparou CLP experience underlines the need to adopt a holistic management approach for improving small-scale fisheries management. Social development and human rights in general were the core values of the CLP initiatives, helping the community accept the management measures, fostering community solidarity and giving community members a sense of involvement in a common project for everyone's benefit.
- An important means of instilling a sense of responsibility for and involvement in fishery resources management is through participatory monitoring. The presence of volunteer "fisher-sentinels" during monitoring operations was also very useful in detecting infractions and identifying offenders.
- Given the backdrop of multiple interactions and extensive interdependence in fisheries, a successful pilot trial such as this should be replicated in order to ensure the sustainability of the good practices that have come out of it.

4. CONCLUSION

This case study shows the decisive role played by social responsibility in successfully implementing the Ngaparou local co-management initiatives. This confirms the relevance of including social responsibility among the SSF Guidelines (Guideline 12). Further, two keys to the success of the Ngaparou management system, co-management and participatory monitoring, are contained in point 5b of Part 2 ("Responsible fisheries and sustainable development") of the SSF Guidelines. The case study also reveals synergistic effects between several good practices, especially between social responsibility and co-management. The underlying solidarity of many Senegalese small-scale fishery communities favours the emergence of social responsibility. While social responsibility is often already present in local customs and traditions, however,

it cannot play a major role in small-scale fisheries without a legal framework to recognize and assign management rights to duly organized fishing communities. As co-management is increasingly being recommended as an effective means of managing small-scale fisheries, highlighting good practices that determine the success of such initiatives may help guide governments, their technical and financial partners, and community representatives in developing their own policies. There have now been several small-scale fisheries co-management pilot trials carried out in Senegal, so assessing where they succeeded or failed would be useful in helping confirm or qualify the importance of implementing social responsibility in co-management processes.

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Small-scale fisheries woman at the fishing pier of Ngaparou



Rupa Lake and the Annapurna mountain range

©FAO/RUPA LAKE RESTORATION AND FISHERIES COOPERATIVE

Restoring Rupa lake fisheries and rural livelihoods through rights-based inclusive governance

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ABSTRACT

This paper presents a case study of the Rupa Lake watershed, where a bottom-up approach to fisheries management was adopted through the formation of the Rupa Lake Restoration and Fisheries Cooperative. The cooperative introduced a fisheries management system based on participation, engagement and inclusiveness that helped restore the lake and its fisheries. The system was designed to be inclusive and to distribute benefits among communities living both up- and downstream from the lake, thus helping ensure the necessary buy-in and behaviour change across diverse stakeholder groups. To collect data on cooperative's contribution to lake and fisheries restoration, and socio-economic changes in the area, we employed a range of social research methods such as Focus Group Discussion (FGD), Key Informant Surveys (KIS), Direct Observations and review of secondary information. At the core of the discussions we contextualized the human rights-based approach (HRBA) to development and Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries connecting Food Security and Poverty Eradication (SSF Guidelines). Results indicate that households were satisfied with the efforts of the cooperative in promoting lake restoration, increasing fishery production and fishing incomes, and in supporting development activities including education and loans to modernize traditional farming methods in catchment areas. A majority of respondents agreed that inclusive rights-based governance contributed to socio-economic improvements, implying that such an approach to sustainable development for fisheries can be applied elsewhere. The results also confirm that the HRBA and democratic practices adopted by the cooperative succeeded in engaging the people and ensuring the benefits were shared among them. In summary, the keys to success of the cooperative include inclusion and fair representation, empowerment of marginalized communities, transparent governance, and equity in benefit- and burden-sharing. However, some grievances were also reported by certain communities. Thus, potential conflict is likely in the future if proactive management and governance are not properly pursued.

1. INTRODUCTION

1.1 Rights-based approaches

The human rights-based approach (HRBA) to development is normatively based on international human rights standards and operationally directed at promoting and

protecting human rights. The objective of HRBA is to address the root causes of poverty, including discrimination, marginalization, exploitation and abuse, and to grapple with policy, regulatory and institutional frameworks to bring about systemic changes. As proclaimed by the United Nations in its 1948 Universal Declaration of Human Rights (UN, 1986), “All human beings are born free and equal in dignity and rights without any form of discrimination.” Human rights are values and moral principles or norms describing certain standards of human behaviour normally protected as natural and legal rights (Jonsson, 2003; Vandenhole and Gready, 2014; Nickel, 2017). According to Parlevliet (2010), human rights violations occur when state (or non-state) actors abuse, ignore or deny basic human rights in civil, political, cultural, social and economic life, generally leading to conflict, deprivation and poverty. Indeed poverty is one of the forms of injustice connected with the structural inequalities in Nepalese society, such as gender and caste divisions as well as the social system of the “untouchables” (Bennett, 2005). In this connection, inclusive development is a long-standing feature of the HRBA (UNDP, 2014; UN, 2015).

The rights-based concept also applies to the fisheries sector. Wild fish is a communal resource with multiple users and beneficiaries, and thus has the potential to cause conflict (FAO, 2016). The use of the term “rights” in a fisheries context has tended to imply fishing rights as part of rights-based fisheries management. Especially in the context of small-scale fisheries, more recent discussions have evolved to include a human rights perspective and the right to secure and just livelihoods, including social and economic rights as well as rights to related resources (such as land). Linking fishing rights and human rights reflects a move towards an approach more in line with the reality of the diverse livelihoods of small-scale fishing communities and the complexity of poverty. Within this concept of a broader rights approach, the importance of secure access to resources and tenure rights should be stressed. The FAO Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines) promote responsible management of fisheries and ecosystems, with benefits equally shared between small-scale fishers and fishworkers, both men and women. They also recognize the need to build strong organizations, including cooperatives. It is important to protect fishery resources, as they are important not only for fishing communities’ livelihoods (i.e. for income, food and employment), but also for their social and cultural well-being (FAO, 2016).

Studies are beginning to be carried out on human rights-based approaches to small-scale fisheries (Charles, 2011; Willman et al., 2017). However, there is not much published data available on inclusive and caste-based reservation systems in cooperative governance for restoration of lake fisheries. Béné (2003) has described the experience of Bangladesh with usage rights for natural water bodies, which are generally government property and often leased through auction to generate revenue. In these auctions, traditional or ordinary fishers can rarely afford to compete; hence licenses are often obtained by “water lords” – individuals with the resources to purchase licenses and who in turn hire fishers as day labourers. This practice results in traditional fishers being exploited by small groups of elites (Béné, 2003), thus increasing the gap between the rich and the poor, and undermining efforts to improve the livelihood of traditional fishers who depend on these resources.

This case study concerned the restoration of Rupa Lake in the Pokhara Valley, Nepal, and of its fisheries. The governance process included marginalized and impoverished traditional fishers (*Jalari* or *Pode*), women, local elites (*Brahmin* and *Chhetri*), the indigenous community known as *Janjati* (i.e. *Gurung*, *Magar*, *Newar* and *Gharti* ethnic castes), and the “untouchable” *Dalit* (*Sarki*, *Kami*, *Damai*). The *Dalit* in particular, according to Gurung (2005a), represent a socially ostracized, economically deprived and politically excluded Hindu caste in Nepal. The study looked at how inclusive governance can be possible when there is mutual understanding and support between

elite and marginalized groups. Chaudhary *et al.* (2015) have already documented how conflict between populations can be transformed into collaboration in managing lake fisheries through a rights-based approach. But how this process can also be seen through an HRBA perspective and include those living in catchment areas has not previously been described. Hence, building on previous work (Gurung, 2005b, 2007; TEEB, 2013; Chaudhary *et al.*, 2015), this paper outlines how the cooperative has been able to restore the rights of fishing communities. As it is also relevant to assess whether the cooperative still continues to be successful in maintaining collaboration and peaceful relations using HRBA (as mandated), we also analyse how it has charted human rights issues for benefit-sharing in harmony with upstream and downstream communities.

1.2 Social structure of Nepal

Nepal is a multiethnic, multilingual, heterogeneous society, with a powerful caste system that includes the social class of the untouchables (Bhattachan, Sunar and Bhattachan, 2009; Bennett, Dahal and Govindasamy, 2008; DFID, 2006; Gurung, 2005a). Those born into the upper castes are seen as having inherent leadership rights over the rest of the population. Although the country's constitution prohibits this kind of hereditary leadership hierarchy as well as caste-based discrimination, these practices still thrive (Pradhan and Shrestha, 2009; Gurung, 2009; ADB, 2010). As there is often competition in Nepal for control over its water resources such as lakes, rivers, streams and irrigation canals, power relations often play a critical role in decision-making and benefit-sharing processes (Bastakoti, Shivakoti and Lebel, 2010), with discrimination an important factor in how these play out. EU (2009) describes how victims of caste discrimination (especially the *Dalit*) have been customarily denied access to water, schools, health services, land, markets and employment. Other groups are similarly marginalized: Prasai (2016) categorizes six minorities based on their population numbers and on their access to governance processes, with women in particular being deprived politically, socially and financially, as well as being treated as weaker individuals. Moreover, in the past the state religion customarily discriminated against other religious groups in the country (Bennett, Dahal and Govindasamy, 2008; Dhakal, 2013).

These types of discrimination are a major obstacle for development, and have resulted in extreme poverty among the affected population. Indeed, several authors (Sharon and Emily, 2001; Rao, 2010; Mondal, 2014) cite caste-based discrimination as one of the strongest drivers of poverty. If appropriate measures are not taken to eradicate these forms of social discrimination, it is likely that poverty will continue generation after generation. Previously, poverty was attributed to low income, while development was mostly regarded as a function of economic growth. However, after a conceptual paradigm shift in the 1990s, poverty alleviation and development were henceforth associated with multidimensional improvement in people's ability to lead lives that they value (FAO, 2016).

Debates on issues of social exclusion and discrimination against *Dalit*, Muslim, *Madhesi* and several other minor castes have become more fervent since the democratic movement in the 1990s (ADB, 2010). Indeed, social exclusion is seen as one of the major factors fuelling Maoist conflict in Nepal (Upreti, 2006). According to the World Summit for Social Development (UN, 1995), an inclusive society is one in which "every individual, each with rights and responsibilities, has an active role to play". In this society, all members must be treated equally and with respect for all human rights, freedoms, and for the rule of law (UN, 2007; Avis, 2015). A useful tool for social inclusion is the reservation system found in the Nepalese Constitution, by which access to government jobs and higher education opportunities is "reserved" for marginalized minorities and other excluded communities. Thus, rights of reservation are conferred to women, indigenous minorities, and so-called untouchables, such as *Dalit*, *Jalari* and others (Upadhyay, 2011; Prasai, 2016).

1.3 Rights-based cooperatives: composition and governance

The Rupa Lake Restoration and Fisheries Cooperative was formed in 2001 on the initiative of the first author of this paper. The cooperative is legally registered in the Kaski district cooperative office, and came into full operation in 2002 under the co-management of the Pokhara Fisheries Research Station, itself of the Nepal Agricultural Research Council (Gurung, 2005b, 2007). After several rounds of stakeholder meetings, consultations and public hearings, a constitution was created to ensure the effectiveness of the restoration activities (Research Gate, 2018). According to this constitution, the president can be chosen from any ethnic group, but must be elected democratically. The constitution provides for vice-presidents to be nominated from either *Jalari* or *Dalit* communities. A quota is also reserved for one woman as vice-president. Similarly, two executive member posts are nominated from the *Jalari* community, one of whom must be a woman; all other remaining posts are to be elected (Gurung, 2007). For the *Jalari* communities, fishing is not only the source of their livelihood; it is also part of their tradition and culture. Ensuring their participation allows them to share their traditional fishing knowledge with elite communities.

At the beginning there were 36 household members in the cooperative, including the 11-member interim executive committee. These members contributed NPR 5 000 (USD 65) each for the initial establishment of the cooperative. The membership then increased to an impressive 444 in 2008 and to 746 in 2013, with approximately 40 percent women. Chaudhary *et al.* (2015) describes how, with support from the Local Initiative for Biodiversity, Research and Development (LI-BIRD), a Pokhara-based NGO, the cooperative established a mechanism to distribute benefits among upstream and downstream communities. LI-BIRD also provided capacity-building training, *inter alia*, in management, leadership, sustainable practices and biodiversity conservation as a part of ongoing projects in community-based biodiversity management.

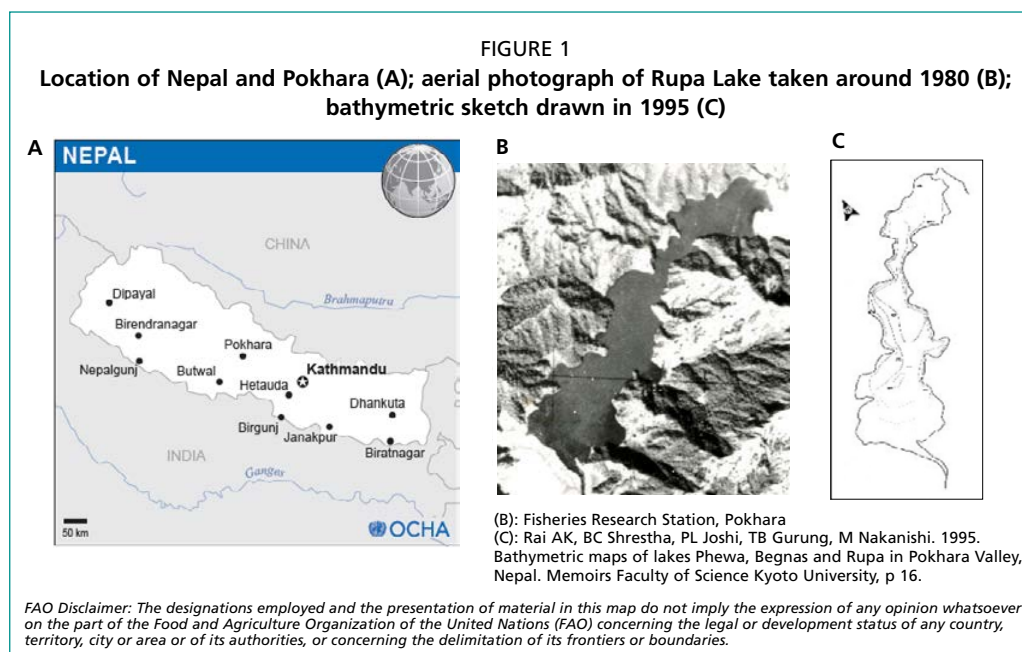
In 2008, the cooperative devised a policy of investing up to 25 percent of its annual net profit to projects in sustainable management of the upper Rupa Lake watershed. In 2012, it invested in the creation of a fish hatchery and six nursery ponds on the north bank of the lake to produce fingerlings for raising native fish. Furthermore, in 2013, the cooperative spent NPR 150 000 (USD 1 685) on watershed health activities, of which NPR 95 000 (USD 1 100) was invested in six Mothers' Groups and 17 Community Forestry Users' Groups (Chaudhary *et al.*, 2015). These efforts demonstrate how deteriorating lake ecosystems and fisheries can be restored and managed sustainably through collective efforts (Gurung, 2007; THT, 2017).

2. METHODOLOGY

2.1 Study site

Rupa Lake is a small, shallow lake situated in the Pokhara Valley in the central Himalayas at an elevation of 600 m (Figure 1). It currently has an area of around 100 ha with an average depth of 4 m; in 1972, it measured around 135 ha with a maximum depth of around 6 m (Ferro and Swar, 1978; Pillai and Swallows, 1980; Rai *et al.*, 1995; Gurung, 2007). The lake began to deteriorate considerably in the 1990s as a result of deforestation, sedimentation load, agricultural runoff and environmental pollution (Rai, 2000; Gurung, 2005b, 2007; THT, 2016). An existing subsistence cage fishery almost collapsed due to anoxic conditions resulting from excessive growth and decomposition of aquatic macrophytes (Rai, 2000; Gurung, 2005b, 2007; Rowland *et al.*, forthcoming). Since restoring the lake using modern equipment would have been a high-cost intervention, a low-cost bottom up approach was devised – establishment of a cooperative of local communities including traditional fishers, improving group governance, human capital and use of scientific knowledge (Gurung, 2005b). The cooperative attracted smallholder fishers and other farmers who had also been involved in a subsistence cage fishery begun by FAO in cooperation with the Government of Nepal (Pillai and Swallows, 1980). The

head office of the cooperative (formerly the Rupakot Village Development Committee) is located in the Pokhara-Lekhanath metropolis of Kaski District, on the southeastern bank of the lake. To some extent the cooperative structure resembles that of other community-based forest conservation programmes which have been highly successful in Nepal (Ojha, Persha and Chhatre, 2009).



2.2 Data collection methods

Surveys were carried out in the months of May and June 2017 to measure the contribution of inclusive rights-based governance to lake fisheries restoration, as well as the socio-economic impacts. Household surveys were administered to cooperative members in the form of a questionnaire. Information on the number of cooperative members, fish catch, markets, income and other socio-economic factors were obtained directly from the cooperative office and from members as well, using the participatory rural appraisal method as described by Mukharjee (1995). A one-day workshop was also organized to hear members' opinions on the success of the cooperative's restoration activities.

To gather data on compliance, violations and usage concerning different people's rights as mentioned in the cooperative's constitution, focus group discussions and key informant interviews were conducted with upstream and downstream communities of all castes, including both women and men; with local business people; and with government officers and cooperative management teams.

Household survey

The household survey was administered to 48 respondents of which 18.75 percent were women, 14.58 percent *Jalari*, 41.66 percent *Janjati*, 4.17 percent *Dalit* and 20.84 percent elites. The survey gathered the views and opinions of these communities on the performance of the cooperative, mainly in terms of governance, management and benefit-sharing.

Focus group discussions

The focus group discussions involved both upstream and downstream communities, including interviews with women, *Dalit* and *Janjati* members. It was important to learn the views of the upstream communities, as they could potentially play a greater role in protecting the lake from sedimentation, thus helping restore the lake and contributing to improved fish production. Similarly, it was important to understand the perspectives

of women, as they might have different views than the traditionally dominant male groups due to the unique problems they face. Such data would also be useful to throw light on a wide range of issues and paradigms: as the *Dalit*, *Janjati*, fisherfolk and the local business community have been traditionally linked and dependent on the lake for their livelihoods, any restrictions on accessing the lake might affect them directly.

Key informant interviews

The lake ecosystem in Nepal is often taken as a resource that is “common for all”, but used without consideration for its longevity – the so-called “the tragedy of commons” described by Hardin (1968). However, in this particular case we applied the concept of Leal (1996) which states that community-run fisheries might avoid this “tragedy” and improve environmental quality through markets. Because examining the perspectives of different stakeholders was essential, we conducted one-on-one interviews with the following respondents:

- Local business representatives (both former and current presidents of the Hotel and Restaurant Association in Lekhnath Municipality)
- Government representative: Ward Chair of Ward #31, Pokhara-Lekhnath Metropolitan City Office
- Incumbent President (Office Bearer) of the cooperative
- President of *Paurakhi Kalimati Sundaridada* Community Forestry Users’ Group, located upstream of Rupa Lake
- Office Bearer (executive committee member) of the cooperative (and also a *Janjati* woman)
- Representative of *Jalari* women fisherfolk
- Office staff (manager) of the cooperative

3. RESULTS AND DISCUSSION

The ethnic composition of members in the cooperative, its executive committee and its staff (Table 1) indicate how well the indigenous, *Dalit* and other marginalized communities have been included in lake restoration governance. After the cooperative took on governance responsibilities, it was important to know the perspectives of the affected marginalized communities; some of the findings were as follows.

3.1 Composition of Rupa cooperative

There are presently 756 members in the cooperative, consisting of men and women from *Brahmin*, *Chhetri* (elite), *Janjati*, *Dalit* and others. The proportions of women, *Janjati*, *Jalari*, *Dalit* and elites were 30.82 percent, 14.68 percent, 1.19 percent, 3.83 percent and 49.48 percent, respectively. An analysis of the composition of the executive committee revealed that *Janjati*, *Jalari* and *Dalit* were included as provisioned (Table 1). However, the total numbers of executive members fluctuated as per requirement.

TABLE 1

Composition of the Rupa cooperative executive committee over the years

| Year | Ethnic groups | | | | Gender | |
|-----------------|---------------|----------------|---------------|--------------|--------|--------|
| | BCT | <i>Janjati</i> | <i>Jalari</i> | <i>Dalit</i> | Male | Female |
| 2001/02–2004/05 | 6 | 3 | 1 | 1 | 9 | 2 |
| 2004/05–2006/07 | 5 | 4 | 1 | 1 | 9 | 2 |
| 2006/07–2009/10 | 8 | 5 | 0 | 0 | 11 | 2 |
| 2009/10–2011/12 | 10 | 4 | 0 | 1 | 11 | 4 |
| 2011/12–2014/15 | 6 | 8 | 0 | 1 | 11 | 4 |
| 2014/15–2017/18 | 8 | 5 | 2 | 0 | 13 | 2 |
| 2017/18–2019/20 | 8 | 5 | 2 | 0 | 12 | 3 |

*Committee members serve two-year terms.

The Rupa cooperative has given due priority to *Jalari* communities when hiring staff, in respect of their traditional rights to fishing in the lake. The representation analysis revealed that *Jalari* were duly considered for job opportunities in the first few years; since then, however, their number has decreased gradually while the number of *Janjati* has increased dramatically (Table 2). The key manager position was held by *Brahmin* and *Chhetri* elites; however, the leadership rotation may change later. The staff composition is summarized in Table 2.

TABLE 2
Composition of Rupa cooperative staff over the years

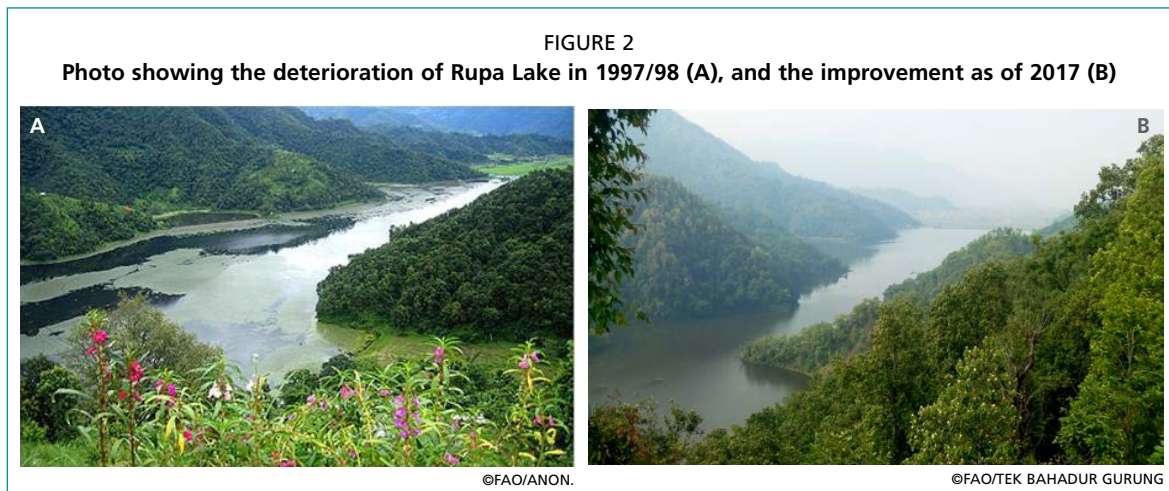
| Year | BCT | Janjati | Jalari | Dalit | Male | Female |
|---------|-----|---------|--------|-------|------|--------|
| 2002/03 | 2 | 3 | 2 | 2 | 9 | 0 |
| 2003/04 | 3 | 5 | 3 | 1 | 11 | 1 |
| 2004/05 | 3 | 5 | 3 | 1 | 11 | 1 |
| 2005/06 | 3 | 6 | 3 | 1 | 12 | 1 |
| 2006/07 | 3 | 5 | 3 | 1 | 11 | 1 |
| 2007/08 | 3 | 7 | 3 | 1 | 13 | 1 |
| 2008/09 | 6 | 8 | 2 | 1 | 16 | 1 |
| 2009/10 | 6 | 10 | 2 | 2 | 19 | 1 |
| 2010/11 | 6 | 10 | 2 | 2 | 19 | 1 |
| 2011/12 | 6 | 10 | 1 | 2 | 18 | 1 |
| 2012/13 | 6 | 10 | 1 | 2 | 18 | 1 |
| 2013/14 | 4 | 10 | 1 | 1 | 15 | 1 |
| 2014/15 | 5 | 10 | 1 | 1 | 14 | 3 |
| 2015/16 | 5 | 12 | 1 | 1 | 16 | 3 |
| 2016/17 | 4 | 13 | 1 | 2 | 16 | 4 |
| 2017/18 | 4 | 13 | 1 | 2 | 16 | 4 |

Note: BCT denotes *Brahmin*, *Chhetri* and other so-called "elite" groups.

3.2 Beneficiary satisfaction (intracommunity in downstream region)

Almost all the respondents of the household survey reported satisfaction with the governance of the cooperative, citing its transparency, regular general assembly meetings, fair decision-making, and timely benefit-sharing. Economic benefits were shared once a year, and all members received an equal amount irrespective of their position. Respondents were also satisfied with the positions reserved for women and for *Jalari*, *Dalit* and *Janjati* groups. They believed that the success of the lake restoration efforts was due in part to the competent work of the cooperative staff, as well as the transparent decision-making of the executive members and cooperative leadership. As a result of these efforts, the condition of the lake has improved significantly (Figure 2A, B), although further improvement is needed for it to be fully restored.

All the respondents stressed that in the future, the most important goals would be removal of sediment deposits from the lake bottom, promotion of lake-based tourism, and development of markets for local and indigenous household products in order to improve their livelihoods. When asked for their opinions on whether rights-based inclusive governance contributed to the success of lake fisheries restoration, 93.75 percent fully agreed, while 4.16 percent moderately agreed, and 2.08 percent thought there was no contribution. Every member of the executive committee responded that decision-making was done through a democratic process. Moreover, every year the cooperative holds an Annual General Meeting (AGM) where all of its members are invited to share their ideas, opinions, suggestions and queries. The committee is obliged to take into due consideration the feedback of all general members.



Although most of the beneficiaries were happy with the transparency and inclusiveness of the cooperative, they still expressed some dissatisfaction over geographic coverage, as the membership criteria exclude certain downstream households because they do not fall within the boundary demarcated by the cooperative. In addition, the needs of indigenous communities and non-members within the region haven't been fully met by the cooperative, as is discussed below.

Perspectives of Jalari and Dalit communities

It was well known that once the cooperative was formed to manage the lake restoration and fisheries, all locals including traditional *Jalari*, *Dalit* and *Janjati* fishers would lose their right to access the lake for capture fishing. In consideration of how this might affect their livelihoods, it was provisioned to provide assistance and benefits to those communities. First, the posts of vice-president and one executive member were reserved for the *Jalari* community. Second, most *Jalari* family members were given jobs in the cooperative (Table 2). Third, all *Jalari* could pay their membership fees in instalments and earn salaries by working in the cooperative.

Despite all these efforts, members of the *Jalari* community still expressed some grievances. Although most of them were employed as regularly paid staff and members of fishing crews, their meagre annual share of benefits barely made up for the income they lost. Some ended up migrating to another lake to fish. Though *Jalari* may hold posts in the executive committee of the cooperative, due to their illiteracy and lack of awareness their participation does not carry much weight, with elites still dominating the discussions and decisions. The following statement also shows the dissatisfaction of *Jalari* community members.

“We are the real indigenous people dependent on the lake and in the past survived on the income from selling fish harvested from the lake. But the cooperative forced us to give up our livelihood. This is a government order and we have no choice other than to completely surrender or accept their proposal to be a member.” (Dalit communities)

“They said that they will provide employment to us and in fact one of my family members (my husband) was employed for fishing. But the income was too low, around NPR 2 000 to 2 500 per month, and his age and poor health forced him to quit the job. Now even after recovering and being able to continue working, he has not been allowed to rejoin.” (Jalari representative)

“Earlier they said that there was one quota in the executive committee and I was elected unopposed since the quota is for fisherfolk and women. But in the third

tenure they misinterpreted the constitution and allowed others to compete in the same post, and obviously I cannot compete with such powerful people who have money and influence. My age and health also do not allow me to aggressively seek votes from others in the election. I lost the election” (Jalari representative)

The *Jalari*, however, did acknowledge that prior to the restoration effort, the shrinking and sedimentation of the lake was rendering fishing almost impossible. They agreed that if the cooperative hadn't taken over lake management and governance, they would no longer have been able to fish in the lake.

Perspectives of women

As with *Jalari* members, one vice-presidential post and one executive committee member position are reserved for women. One additional quota is reserved for women from the *Jalari* community. Similar to *Jalari* representatives in the executive committee, women's contribution to decision-making is not very significant due to illiteracy.

3.3 Upstream–downstream conflict and mitigation measures

The cooperative distributes up to 25 percent of its revenue to upstream communities, schools, clubs, women's groups, community forest user groups and youth groups, as described by Chaudhary *et al.* (2015). However, as these upstream communities have seen the benefits being generated from the lake basin, they have begun to want to become a more integral part of the cooperative. In response to their demand for membership coverage, the cooperative opened a membership call. This subdued the conflict, but the process was time-consuming, and the new members complained about the exorbitantly high membership fee. The following statements were given by the upstream communities during focus group discussions.

“The membership fee is exorbitantly high and has been raised from NPR 5 000 to NPR 30 000, despite the fact that all founding members have already obtained a dividend worth more than what they invested.” (Upstream communities)

“To silence our voice, the cooperative provides us a meagre NPR 2 000 to 3 000 each year despite our large contribution to the lake. In fact, the lake is surviving because we planted trees in our hills, use pesticides at a minimum, and reduce erosion and sedimentation of the lake by constructing check dams etc. in our rivulets. But all this effort has not been well recognized in terms of sharing the benefits.” (Upstream communities)

3.4 Successful inclusive governance

The Rupa cooperative demonstrates how rights-based structural organization can lead to successful lake fisheries restoration (Figure 2A, B). It is evident that the various restoration activities have benefitted all cooperative members, as well as their families and others living both upstream and downstream, in various ways. Moreover, the cooperative also provides school children in upstream communities with scholarships regardless of caste, ethnicity or any other social category. This provision is particularly progressive because, as noted by Sharon and Emily (2001), in many areas benefits are confined to the community managing the lake resource.

The success of the inclusive governance of the cooperative presents an example of affirmative action towards promotion of minorities and women as provisioned in the Nepalese Constitution for proportional representation, reservation and secularism. Also, the legal framework of the Universal Declaration of Human Rights provides an important point of reference in efforts to promote social development and improve governance of fisheries (Ratner, Edward and Allison, 2014). Such provisions as illustrated in the SSF Guidelines (FAO, 2016) aim to alleviate inequality through

bottom-up, inclusive human rights approaches for stable and sustainable socio-economic progress.

The tolerance and understanding demonstrated by all ethnic communities in the cooperative is highly commendable (Tables 1 and 2). Such a participatory and inclusive approach could not have been possible without the understanding and support of the elite groups. For its part, the inclusion of the fishing community allowed fishers to share their technical skills in capturing fish, landing nets, handling fish, boating, etc. Without these skills, the cooperative would not have succeeded as rapidly. Studies in India have shown that the reservation model has been successful in reducing poverty (Prakash, 2012; Queen and Ingale, 2012; Mondal, 2014). The present cooperative approach could be used to save numerous deteriorating lakes, wetlands, rivers and estuaries elsewhere, especially those considered “common property”, and thus ensure the food and nutrition security and livelihoods of their fishing communities. The good practices that allowed the cooperative to succeed are discussed below.

3.5 Good practices

Inclusion and representation: The Rupa Lake cooperative ensured that marginalized communities who relied on the lake for their livelihood, such as the *Dalit* and indigenous peoples, would be included in fisheries restoration governance processes and in decision-making committees. Members from traditional fishing communities were also prioritized for employment in the cooperative.

Empowerment: Members from marginalized fishing communities have been empowered by engaging in lake and fisheries restoration governance and management activities. As a result, now these members are more knowledgeable about natural resource management, the impacts of climate change, and other issues that have serious impacts on their livelihoods. Staff members also feel more confident speaking to others during business transactions such as selling fish.

Transparency: The cooperative has adopted fair and transparent decision-making processes. The members can obtain information about management, loss and profits, and future planning during the AGM and in personal interactions with executive committee members. As the members are allowed to speak for and against different actions taken by the cooperative and their concerns are taken into account during the AGM, the decision-making and governance process can be rated as transparent.

Equity in benefit- and burden-sharing: Benefit-sharing is also highly fair, transparent and equitable: every household is entitled to one equal share of the dividends. The cooperative has included a large portion of the relevant community as general members, executive committee members, or staff. Upstream communities also receive benefits through the “up to 25 percent revenue sharing” mechanism. Equality of access is addressed by adopting various generous mechanisms to bring in members from marginalized communities, such as allowing them to pay their fees in instalments.

Good management and governance: The cooperative has a well-established management system, with appropriate rules, regulations and policies in place. The smooth functioning of the cooperative, without any problems or irregularities, can be credited to its good governance. Decision-making is also fair, and members from different communities are satisfied with their level of participation. Members not represented in the executive committee also have a say during the AGM, where they can raise any issues and questions to be addressed by the office bearers.

Resource leveraging and synergy: Government organizations such as the Pokhara Fisheries Research Station of the Nepal Agricultural Research Council, the District Cooperative Office in Kaski and Lekhnath Municipality, and the Village Development Committee have fully supported this initiative, seeing restoration of the lake as a priority of utmost importance. The cooperative has been able to leverage support and collaborate with various NGOs, INGOs, and private sector groups such as LI-BIRD, the International Union for Conservation of Nature, the World Wide Fund for Nature, the International Centre for Integrated Mountain Development, the Hotel Association Nepal, and the Federation of Nepalese Chamber of Commerce and Industries district chapter.

4. CONCLUSIONS

In general, the cooperative is doing very well in terms of restoring and cultivating human rights in the Rupa Lake surroundings. As noted by Chaudhary *et al.* (2015), it has been able to turn past conflicts between communities into collaboration. However, because certain human rights issues have yet to be duly considered, new challenges keep emerging. Thus, conflict may arise both between the upstream and downstream communities and also within the region. Moreover, efforts to further include women and marginalized members of the community will be an integral part of the overall success of the cooperative.

The expansion of boundaries to include more downstream communities is becoming an important issue. The requests for membership will keep increasing in the days to come as the revenue of the cooperative increases. Given that membership from marginalized communities has decreased in recent years, this might be a concern, as their representation will weaken. Furthermore, the concerns of women must be addressed more judiciously, as their current participation is more or less passive. Effort is needed to empower women further so that the system of rights-based governance can be said to be truly inclusive.

In order to achieve sustainable development and improve local livelihoods, governance mechanisms based on equal rights, non-discrimination and gender equity are essential. It is anticipated that with rights-based inclusive governance, the Rupa Lake cooperative will continue demonstrating to the world that a cooperative approach in line with the Universal Declaration of Human Rights is indeed capable of restoring deteriorated ecosystems.

ACKNOWLEDGEMENTS

We are indebted to the members and the executive committee of the Rupa Lake Restoration and Fisheries Cooperative for all their support in preparing this paper. Funding for the study was provided by the Food and Agriculture Organization of the United Nations. We would like to extend our gratitude to Dr Lena Westlund for her valuable comments and suggestions for improving this paper.

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Small-scale trader showing her products

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Trends in small-scale fisheries in Myanmar: Tenure rights and gender¹

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ABSTRACT

Myanmar's fisheries sector is increasingly celebrated for its potential, and the country's role as a major international source of fishery products (through wild capture as well as aquaculture) is expected to expand further with investment in the years to come. Dramatic changes are reshaping the small-scale fisheries sector, driven by new investment and diverse government policies oriented toward opening up the country. Amid all this, the voices and aspirations of those who are among the most affected by these dynamics – men and women in the small-scale fisheries sector – are mostly invisible. The SSF Guidelines, along with the VGGT, committed states to the cross-cutting principle of gender equality and committed all parties to “support small-scale fishing communities, in particular to indigenous peoples, women and those relying on fishing for subsistence, including, as appropriate, the technical and financial assistance to organize, maintain, exchange and improve traditional knowledge of aquatic living resources and fishing techniques, and upgrade knowledge on aquatic ecosystems” (para. 11.7). This paper traces the process and reflects on the findings of the first step in such a journey, a study currently being undertaken jointly with several small-scale fishing communities and local support organizations in Mon State and Tanintharyi Region in Myanmar. The aim is to test the SSF Guidelines in settings marked by major pressures from various forms of control over key resources for agribusiness, large-scale extraction of oil and minerals, and special economic zones.

1. INTRODUCTION

“Fish is the world’s most traded food commodity, and Myanmar is on the cusp of becoming a major international source.”

(Myanmar Fisheries Partnership, 2016, p. 1)

¹ The authors would like to thank Pietje Vervest (TNI), Clara Mi Young Park (FAO, Regional Office for Asia Pacific), Lena Westlund (FAO Consultant) and Susana Siar (Fishery and Aquaculture Officer, FAO Regional Office for Asia and the Pacific) for their very helpful comments. We are particularly grateful to Pietje Vervest and Clara Mi Young Park for their very helpful support at different stages of fieldwork. Any errors are our own.

Myanmar's fisheries sector is increasingly celebrated for its potential. Currently the ninth largest producer of marine capture fisheries in the world, the country's role as a major international source of fishery products (through wild capture as well as aquaculture) is expected to expand with investment (FAO, 2016a), and as Myanmar "rapidly open[s] up to increased coastal and marine investments" (Pei Ya, 2016). The optimism over investment opportunities and rising economic expectations is typically ascribed to the "opening up" of Myanmar through an ambitious political-economic reform agenda pursued since 2011 (Jones, 2014). As many new actors get involved in Myanmar's fisheries policy, the goal to "improve fisheries management to capture more economic, social and environmental benefits for the long term" is laudable and important (Myanmar Fisheries Partnership, 2016).

Relevant here are the Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (hereinafter SSF Guidelines) of the Food and Agriculture Organization of the United Nations (FAO), which "makes human rights, particularly of vulnerable and marginalized groups, measurements of progress in fisheries governance and development."² The SSF Guidelines are linked to the FAO Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security (hereinafter VGGT), which commit states to the cross-cutting principle of gender equality (3B-4) in relation to tenure and establish that "Where States own or control land, fisheries and forests, the legitimate tenure rights of individuals and communities, including where applicable those with customary tenure systems, should be recognized, respected and protected" (8.2). The SSF Guidelines provide guidance on how to promote sustainable small-scale fisheries including the promotion of gender equality not only in the fisheries sector but also more widely in fishing communities. Gender equality is highlighted in a separate chapter and is a cross-cutting concern throughout both the VGGT and the SSF Guidelines. Both sets of guidelines identify gender equality as an important goal. Yet little attention has been given to date to the actual differential experience and participation of men and women in the fisheries sector in Myanmar.

This paper presents an introductory investigation into gender dynamics in small-scale fisheries across four communities in Mon State and Tanintharyi Region in Myanmar's Southeast, a region dominated by a long coastline and prized for its many offshore islands and abundant marine wildlife. It draws on nearly three decades of work by the Transnational Institute (TNI) in Myanmar. The paper offers an initial exploration on the issue of gender in small-scale fisheries as part of a broader, ongoing action-research effort with local civil society organizations (CSOs). The discussion outlines the gendered production and reproduction of community roles and gendered access to resources and decision-making, and notes potentially new impacts along gender lines as Myanmar's political economy transitions. It shows the pivotal role played by women in small-scale fisheries and local and regional food systems, stressing the strategic importance of the struggle for gender equality in the pursuit of truly sustainable small-scale fishery economies. Moreover, it indicates the relevance of the two sets of guidelines in framing action research to "support responsible fisheries and sustainable social and economic development for the benefit of current and future generations, with an emphasis on small-scale fishers and fishworkers and related activities and including vulnerable and marginalized people, promoting a human rights-based approach" (FAO, 2015).

² For the quote, see FAO. 2016. Background paper for the exploratory workshop "Human rights-based approach to the implementation and monitoring of the SSF guidelines", 24–26 October 2016, Rome, FAO, p. 12. For the SSF Guidelines themselves, see <http://www.fao.org/3/a-i4356en.pdf>.

2. METHODOLOGY

Prior FAO and TNI collaboration on the tenure guidelines has highlighted the interconnections between land rights issues and different forms of resource grabbing and conflicts, calling for more focused attention on the human rights and land rights of fishers' and villagers' responses to those issues. This case study is a first step towards addressing issues of gender in fisheries in Myanmar within the same context, as well as within a larger process among local organizations of exchanging information and building analysis and advocacy. The study aims to contribute to knowledge on gender dynamics and gender relations in four coastal fishing communities in southern Myanmar. It further aims to support implementation of the FAO SSF Guidelines by encouraging these communities to identify through action research their needs, as well as solutions to the challenges they face.

A workshop in Dawei in March 2017 organized by TNI and partner organizations introduced/reintroduced several local networks of fisherfolk to the SSF Guidelines and proposed joint research, leading to further discussion with partners on a possible research agenda. Initial fieldwork was conducted from March to April 2017, followed by a validation exercise in May to gather feedback, reflect on the evidence, and discuss initial findings and possible further action. A combination of research methods was used including focus group discussions (FGDs), in-depth interviews, community dialogues and participant observation, building on prior experience of TNI in Myanmar on land and natural resource issues. Separate FGDs were held in four communities among married women, married men, single women/girls, single men/boys, male fishers and female fishers. Qualitative methods were supplemented with a literature review.

The four fishing communities included in the case study were identified by civil society partners, based on the needs of the fisher communities and the opportunity to build on TNI's work on land and tenure guidelines. Two communities were in Ye, Mon State, and two communities in Myeik, Tanintharyi Region. All four were coastal communities and hence engaged in marine fisheries work, and therefore this paper does not consider gender aspects of inshore fisheries. It should be noted that the names of villages and interviewees are not disclosed for reasons of sensitivity and privacy. Both of these regions are strategic locations within the wider struggle for control of Myanmar's natural resources and overall visions of development. Both areas are experiencing major pressure from various forms of control over key resources for agribusiness, large-scale extraction of oil and minerals, and special economic zones.³

Tanintharyi is the site of massive resource extraction as well as agricultural and development projects, including a multibillion-dollar project in Dawei that involves a deep-sea port, industrial zone, power plants and refineries (Karen News, 2014). All the villages included in the case study are small, with populations of several hundred, accessible by a combination of asphalt, narrow concrete and dirt roads. There was construction on the small bridges and roads in Ye at the time of the study, making road access slow. Both villages in Ye, Mon State are along the Andaman coast. These consist predominantly of communities engaged in small-scale fisheries, betel nut and rubber plantations, and microenterprises such as retail shops and sewing. The religion is predominantly Buddhist, with Christians also represented. Participants were mostly ethnic Mon, with one or two Burmans. In Myeik Township, one of the villages is close to Myeik town, along the river close to the Kyauk Phyar Bridge. Participants

³ See for example the reports by the Tenasserim River and Indigenous People Network (TRIP-NET) and Dawei Development Association (DDA), including the report, "We Will Manage Our Own Natural Resources: Karen Indigenous People in Kamoethway Demonstrate the Importance of Local Solutions and Community-Driven Conservation" in <http://www.burmapartnership.org/2016/03/we-will-manage-our-own-natural-resources-karen-indigenous-people-in-kamoethway-demonstrate-the-importance-of-local-solutions-and-community-driven-conservation/>. For Mon State, see reports of the Human Rights Foundation of Monland (HURFOM) at <http://rehmonnya.org/>.

there are engaged in livelihoods supported by mangroves, small-scale fisheries and microenterprises. The religion is predominantly Christian, with Buddhists also represented. Participants were mostly ethnic Karen, with some Burman. Interviews and FGDs were also conducted with community members from the small islands near Myeik town, many of whom were involved in the seafood factories operating out of the islands.

As a first step, our information gathering was broad and wide-ranging, cursory in some areas but with the long-term aim of deepening analysis and action in the future.

2.1 Limitations

Fieldwork was undertaken over three weeks prior to the onset of Myanmar's water festival when the whole country goes on holiday. This time pressure naturally limited the depth of investigation. But as a first step in a longer iterative process of investigation, action and reflection, the research will deepen over time and thus mitigate this limitation in the long run. The villages were approached for inclusion in the study with the idea that this would be the first phase in a longer-term relationship, involving a participatory and iterative process of discovery, analysis and action to address their problems, issues, needs and concerns. In this light, the questions and issues raised (but left for the next cycle of investigation) are as important as those that were asked and answered in the course of three weeks of fieldwork.

Due to the highly grassroots character of the fieldwork, language was a barrier, as the researchers did not speak Burmese, Karen or Mon, while some participants in the study were fluent in local languages but not English or even Burmese. Civil society partners provided translation during the fieldwork. Where translators were new to the issues of gender and fisheries, an orientation session was conducted with them prior to going into the field. Additionally, the research tools and questionnaires were professionally translated in writing and shared with the local translators to encourage standardized translations for common words. For the validation workshops, translation was a collective effort. Professional translation had to be supplemented with additional translation efforts in the local language. On occasion, multiple-stage translations from Burmese to Mon or Karen and English were required.

Participation in the validation workshops was partly limited by availability of participants and by the location of workshop venue. Women said they could attend workshops if these were organized so they didn't conflict with their responsibilities at home. Some men said that their participation was limited by the need to fish or take care of family affairs. This suggests the need to conduct as many activities as possible in grassroots locations, including workshops and trainings.

2.2 Context

Myanmar's coastline is close to 3 000 km in length, encompassing large estuaries, delta systems, offshore islands, and a diversity of coastal habitats including coral reefs, mangroves, beaches and mudflats.⁴ Mon State and Tanintharyi Region form the "kite's tail" portion of Myanmar's coastline and together account for approximately 1 200 km of the total.

The population of Mon and Tanintharyi is 3 462 794, with approximately 52.2 percent depending on agriculture, fisheries and forestry for their livelihood (Department of Population, 2015). While lumping these livelihoods together glosses over important differences, it also reflects their interconnectedness and that of the natural resources on which they are based (e.g., forest, land, rivers, coastline and sea). For generations, the land- and seascape have underpinned peoples' livelihoods and shaped their social and cultural identities, including local and regional food production

⁴ FAO Web site <http://www.fao.org/fi/oldsite/FCP/en/MMR/profile.htm>.

systems and distribution circuits that are crucial for preventing hunger. More broadly, they provide a degree of autonomy from formalized and volatile food markets, thus enabling rural working peoples to live well with dignity, and in ways of their own choosing.⁵ Local and regional food systems have also historically connected people across ethnic divides, e.g. in Tanintharyi through the exchange of fish paste and sea salt from lowland coastal communities to highland forest communities.

Yet the marine waters and related aquatic resources are an especially prominent aspect of the whole landscape in Mon and Tanintharyi – not only physically, when compared with the narrow stretch of land wedged between the sea and the Thai border, but also because of how important the resources in this area have been for Myanmar's political-economic development (Myoe, 2016).

Myanmar is the largest fishing nation in the Bay of Bengal region (Krakstad, Krafft and Alvheim, 2015). The Department of Fisheries, in tune with the laws and regulations formally governing the sector, divides it into an inshore fleet and an offshore fleet. The inshore fleet, what we here refer to as “small-scale”,⁶ has its fishing grounds within 10 nautical miles from the shore, on vessels less than 30 feet long and with engine power (if any) of less than 25 hp, with 3–5 people on the vessel going out to sea for 1–3 days. Fishing gear used consists of drift nets, gillnets and longlines. The offshore fleet's (formal) fishing grounds are from 10 nautical miles and outward to the rest of the exclusive economic zone (EEZ), on vessels more than 30 feet long and with an engine power of more than 25 hp, with a crew of 10–20 people and on trips spanning one to three months. Fishing gear used consists of bottom trawls, purse seines, surrounding nets, drift nets and longlines (Department of Fisheries, 2016). A fisheries report supported by FAO and the Norwegian Government in 2015 noted that the marine capture fisheries sector contributed around 10 percent to GDP with a large part of the population depending on fisheries for their livelihood (Department of Fisheries, 2016). Similar research in 2013 indicated serious concern including substantial decline in fish biomass and drastic changes in species composition since surveys were conducted in 1979 and 1980 (Krakstad *et al.*, 2013). In response, initiatives were rolled out to mitigate the decline in fish stock and diminishing biodiversity in the coastal areas. Closed seasons were implemented, but with little consultation with communities and little information trickling down to the villages. Closed seasons involved prohibiting fishing and collection of sea resources at certain times of the year, which negatively impacted the lives and livelihoods of small-scale fishers. Since then, Myanmar has paid more attention to fishery resources and their conservation. Management measures were instituted in 2013 that included closed seasons for all fishing gear for all marine waters, reductions in the number of fishing rafts in the Delta region, banning of foreign fishing vessels (all trawlers), and prohibition in respect to construction of local fishing vessels (Krakstad, Krafft and Alvheim, 2015).

Myanmar had enacted a Fisheries Law as early as 1905. But the most significant regulatory changes in the sector came after the State Law and Order Restoration Council (SLORC)⁷ came to power in 1988. One of the first laws put into place was the Fishing Rights of Foreign Vessels Law of 1989, opening up the Andaman Sea to the fleet of Thai trawlers. In practice this was more about securing rents from the

⁵ For more on this see for example HLPE. 2013. *Investing in smallholder agriculture for food security*. A report by the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security. Rome; Douwe van der Ploug. 2013. *Peasants and the art of farming*. Rugby, UK, Practical Action Publishing. In recognition of the importance of local food systems, provision 12.4 of the FAO Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security also obliges states to ensure that investments “promote and secure local food systems”.

⁶ “Small-scale” is not specifically defined in Myanmar's fishery laws.

⁷ The State Law and Order Restoration Council (SLORC) was the precursor to the later State Peace and Development Council (SPDC).

fleet, as Thai vessels had been present since the late 1960s (Butcher, 2004). SLORC also instituted the Myanmar Fisheries Law (1990) and the Freshwater Fisheries Law (1991). Amendments to these laws have been introduced since then, but the overall approach of the central state toward the sector remains largely the same: maximizing rent extraction through a growth-oriented policy that marginalizes or ignores small-scale fishers.

For decades Myanmar's fishing communities have endured confiscation of boats, forced labour and forced relocations, among others.⁸ Today, important new changes in access and control of the country's vast coastal and inland aquatic resources are unfolding via a three-pronged reform agenda that started in 2010 around political reform, economic reform and peace negotiations (TNI, 2017). Different people and households may be affected differently, but everyone in the small-scale fisher communities is affected, regardless of age and sex.

The effects of economic restructuring, mechanization and commercialization since the 1970s on small-scale fisheries around the world,⁹ and on women and gender relations in general, are varied and complex.¹⁰ "Fisheries development involves a blending of [modern and traditional, small-scale and large-scale, or capitalist and pre-capitalist organizational] forms in many varied ways. Traditional ways of doing coexist with modern methods and techniques, while they are themselves being modernized and adapted to new functional exigencies" (Platteau, 1989). But fishers and their communities are not the same everywhere; "small-scale sector" and "small-scale fisheries" does not represent one homogenous whole (Sunde, 2016). Globally, state, finance and environmental actors interact in complex ways to directly affect local communities, while the crisis in fishing stocks and coastal ecosystems is driving implementation of market-based mechanisms as a cure-all, putting more pressure on small-scale fishers (Barbesgaard, 2017).

The region's fisher communities are no strangers to disruptions and dislocations arising from intrusions by state and capital interests. Increasingly eyed by big investors as one of the last economic frontiers,¹¹ historical trends initiated during the SLORC era will likely intensify.¹² Since 2011 a raft of new laws are opening up the country's natural resources to an unprecedented degree.¹³ Combined with new ceasefire agreements with some ethnic armed organizations, the threat of disruption is increasing for both Mon and Tanintharyi. The prospect of achieving massive profits has sparked the imagination of many actors stepping onto the scene. As noted by a manager of the controversial Dawei Special Economic Zone project, "You have to think of Myanmar as Thailand 50 years ago. There's nothing in the country but wilderness and cheap labour";¹⁴ or, as a foreign investor waiting to set up a tourist resort along the Tanintharyi coastline said, "This place is like Phuket 40 years ago – pure nature untouched" (personal communication, October 2016).

⁸ See, for example, reports from the Karen Human Rights Group (www.khrg.org), Earthrights International (www.earthrights.org) and the Human Rights Foundation of Monland (HURFOM).

⁹ See for example Kurien, J. 1978. Entry of big business into fishing: its impact on fish economy. *Economic and Political Weekly*, 13(36): 1557–1565.

¹⁰ See, for example, Samudra Reports and other papers, presentations and reports by the International Collective in Support of Fishworkers through the years, at www.icsf.net.

¹¹ <https://www.forbes.com/sites/connorconnect/2012/11/09/myanmar-the-last-frontier/#24310c495dce>

¹² In 1997, the military junta changed its name to State Peace and Development Council (SPDC).

¹³ This includes the Foreign Direct Investment Law (2012), the Virgin, Fallow and Vacant Land Management Law (2012), the Farmland Law (2012) and the Special Economic Zone Law (2014). For deeper analysis, see TNI and BCN. 2013. *Access Denied: Land Rights and Ethnic Conflict in Burma*. Burma Policy Briefing No. 11. Amsterdam. <https://www.tni.org/files/download/accesdenied-briefing11.pdf>

¹⁴ Quoted in <http://www.nytimes.com/2010/11/27/world/asia/27iht-myanmar.html>.

2.3 Gender in Myanmar

*“Why are we talking about gender? I thought this workshop was about fisheries.”
(Male participant in the validation workshop)*

The political-economic context influences and is influenced by gender relations and gender dynamics in all communities, including fishing communities. Despite some positive changes with regard to women’s rights in Myanmar associated with the opening up of the political arena and easing of the military’s power,¹⁵ negative gender stereotypes and systematic discrimination against women remain entrenched. Community discourse seems to support the idea that gender equality exists in Myanmar, although evidence shows otherwise. The media perpetuates gender stereotypes and regularly portrays women as timid, victimized, objectified or sexualized. Women tend to be seen as weak, in need of protection and unable to make decisions. Stigmas around sex and virginity, and the historic and continuing impact of a male-dominated military and male superiority, are ingrained in society (GEN, 2015). Although the de facto head of state in the country is a woman, no other cabinet or ministerial posts have gone to women; indeed they are under-represented at all levels of decision-making. After the 2015 election, women accounted for only 13.6 percent of national parliamentary seats and only 12.7 percent in state and regional parliaments (GEN, 2015). At the village level, the situation is even more dire, with only 0.25 percent participation from women in decision-making or policy-making bodies (UNDP, 2015). The minority (0.25 percent) female village tract leaders or representatives come from upper social classes and are usually single or older (UNDP, 2015). Women receive less pay for equal work in labour situations, and violence against women is pervasive.¹⁶

Globally about 50 percent of people engaged in all sectors of fisheries and aquaculture are women (FAO, 2016a). In 2014 there were more than 56.6 million fishers and fish farmers in the world. Overall, women accounted for more than 19 percent of all people directly engaged in the fisheries and aquaculture primary sector in 2014 (FAO, 2016a). An estimated 175–233 million people are engaged in secondary activities such as processing, packaging, marketing and distribution, and an estimated 700–874 million people are dependent on fisheries, aquaculture and related livelihoods.¹⁷ This translates into about 10–12 percent of the world’s population. Women occupy many roles in small-scale fisheries (in both production and reproduction¹⁸) including as paid or unpaid workers in pre- and post-harvest activities and seafood processing plants, as family caregivers and stewards of social networks, as workers in non-fisheries sectors to supplement the household income, and as members of fishworker movements and fishers’ organizations.¹⁹

In Myanmar, the policy regime on gender and fisheries is rooted in the National Strategic Plan for the Advancement of Women (NSPAW) 2013–2022 and other instruments. In 2013, the government rolled out the 10-year NSPAW based on 12 priority areas of the Beijing Platform for Action and the Convention on the

¹⁵ For example, see ADB, UNDP, UNFPA and UN Women. 2016. *Gender Equality and Women’s Rights in Myanmar: A Situation Analysis*, particularly Chapter 8, discussing advances and gaps, opportunities, and challenges in promoting women’s rights in Myanmar. See also Concluding Comments from the 64th Session of CEDAW Committee in 2016 at http://tbinternet.ohchr.org/_layouts/treatybodyexternal/SessionDetails1.aspx?SessionID=1019&Lang=en.

¹⁶ For example, see GEN. 2015. *Raising the Curtain: Cultural Norms, Social Practices and Gender Equality in Myanmar*. Yangon, Myanmar, pp. 71–81, particularly Chapter 8 (Economy, Work and Livelihoods) on the gendered division of labour, valuation of men and women’s work, women’s triple burden, unequal wages and access to productive resources.

¹⁷ FAO Engendering Statistics in Fisheries and Aquaculture, at https://genderaquafish.files.wordpress.com/2016/06/14_gee.pdf.

¹⁸ See, for example, reports from the International Collective in Support of Fishworkers at www.icsf.net, and FAO reports on gender in fisheries and aquaculture at <http://www.fao.org/fishery/topic/16605/en>.

¹⁹ International Collective in Support of Fishworkers webpage on Women In Fisheries (<https://wif.icsf.net/>).

Elimination of All Forms of Discrimination against Women (CEDAW).²⁰ The ambitious plan includes practical recommendations for implementation, but women's rights groups, UN agencies and policy research groups have all observed this to be weak or lacking.²¹ Myanmar acceded to CEDAW in 1997 and declared its intention to realize its obligations as a signatory, including undertaking regular state-level reporting. Through the years, civil society groups and women's rights groups have produced shadow reports on its progress. For instance, the Women's League of Burma, in its report entitled "Long Way to Go", highlighted factors that hinder women from achieving full human rights and gender equality in Myanmar.²² Citing the powerful role of the military in society and politics, as per the 2008 Constitution that grants the military complete legal autonomy, the report notes that where conflict continues in some ethnic areas, so do human rights abuses including violence against women, and shows how these abuses are linked to struggles for control of natural resources. The country's inadequate legal system is also said to impede progress towards women's equality.²³

Gender refers to roles, responsibilities and expectations of men and women based on dynamic social, political, religious and economic contexts. In most societies, Myanmar included, women are disadvantaged in predominantly patriarchal social, economic and political systems. As will be seen, in the context of small-scale fisheries, there is a strong tendency for men and women to be seen in terms of one-dimensional roles: either harvesting or managing resources for men, or post-harvest processing functions for women. This suggests the need for nuanced understanding of the different and changing roles, responsibilities, power and agency of men and women, as well as gender relations in small-scale fisheries, in order to create better policy.

Achieving gender equality involves the dismantling of stereotypes that bind people to certain choices, opportunities, roles, lifestyles and behaviours. Dismantling these stereotypes for women and men serves to help them reach their full potential. Gender equality releases men from rigid and debilitating stereotypes that bind them to a role seen as "masculine": that of the breadwinner who provides for the material needs of his family, who is willing to engage in dangerous livelihoods but unwilling to seek emotional, medical or physical support. Likewise, gender equality releases women from rigid and debilitating "feminine" stereotypes of being timid, nurturing and careful, which limits them to caregiving roles at home, leaving them voiceless outside of it, vulnerable to domestic violence and limited in life choices. Increasing the level of men's participation at home increases satisfaction with home life, while increasing the level of women's participation in community leadership increases confidence, opportunities and community benefits.

In general, gender norms can change over time and are influenced by many factors. Women occupy multiple roles in the target fishing communities, but there is a need to understand how values and norms around gender have changed over time as a result of new pressures on natural resources, fishing and farming communities, as well as the gendered consequences of such change on human capital potential, freedoms and expectations. Different generations and life situations (young/old, widowed/married/single, high income/low income, and high resource/low resource) are influenced by gender norms across lifetimes. According to the Tavoy Women's Union, a women's

²⁰ See for example <https://www.irrawaddy.com/news/burma/burma-launches-national-plan-empower-women.html>.

²¹ For example, UN Women, Gender Equality Network, and Women's League of Burma.

²² <http://womenofburma.org/cedaw-shadow-report-long-way-to-go/>

²³ For more on the policy, structural and cultural roots of women's discrimination in Myanmar, see Global Justice Center and Gender Equality Network. 2016. CEDAW Report on Obstacles to Gender Equality in Myanmar, Prepared for the 64th Session of the Committee on the Elimination of Discrimination against Women, July 2016.

rights organization in southern Myanmar, “In Burma, girls are often denied access to education and encouraged to stay home and become wives. They grow up unaware of their basic rights and unable to participate in political decisions. Dawei (Tavoy) is geographically isolated from the rest of Burma (Myanmar), and low economic development has left the region with high levels of poverty.”²⁴ There is a long way to go before gender equality is reached in Myanmar. Yet women’s agency is growing and women’s voices are actively promoted by civil society groups and women’s rights networks, as evidenced by the vibrant women’s rights scene among different ethnic groups in Myanmar.²⁵ At local levels, many groups are working to promote women’s rights, to eliminate gender-based violence, and to promote women’s participation in political and economic life.

3. RESULTS AND DISCUSSION

This case study found entrenched gender roles and gendered impacts for women and men in fishing communities, in such areas as labour participation, community roles and access to resources. Women were found to play a crucial – but often invisible and unacknowledged – role in community life and the local economy including in seafood processing, pre- and post-harvest work, and marketing. There are also differential impacts on men, women, boys and girls resulting from development projects and pressures on natural resources. These include deep impacts on quality of life and livelihoods caused by lower fish stocks as well as conflicts between small- and large-scale fishers and government policies around licensing and other regulations.



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Women’s roles are often seen as supportive on men’s productive roles, such as cleaning the fish catch

²⁴ <https://tavoyanwomensunion.wordpress.com/>

²⁵ See for example the Women’s League of Burma (<http://womenofburma.org/>), an umbrella organization comprised of pre-existing Burma women’s organizations of different ethnic, religious and cultural backgrounds.

3.1 Gendered productive, reproductive and community roles in small-scale fisheries

“Girls cannot go fishing. If they do not have a husband, they have to do other jobs like washing clothes, working for other people or gardening.”
(Female participant in FGD)

“We didn’t know about clear gender division of labour. All we know is fishing.”
(Male participant in validation workshop)

In the study villages, culturally defined gender roles and social expectations for men and women are well entrenched. According to a women’s rights activist based in Dawei, “there is widespread acceptance of gender roles and stereotypes – of how men and women will act, what their roles in the household and community will be. People accept what their mothers and grandmothers tell them about how to act. For example, girls are taught how to act gentle, kind and polite”. Gender roles come down from parents and grandparents and are reinforced through literature, religious beliefs, the educational system, school textbooks, legislation, television shows and movies, as well as children’s games, clothing, tales and rhymes.²⁶

Women bear a triple burden of reproductive, productive and community management responsibilities that are specific, extensive and diverse. Their reproductive work includes child-bearing but also consists of household responsibilities including cooking, cleaning, laundry, child care, health care, disciplining children, clothing family members, collecting fuelwood and water, and feeding guests. It also includes overseeing children’s education and religious instruction. Women accomplish these tasks using the income that their husbands turn over to them, supplemented by earnings from other means. This other work – their productive work – includes daily wage activities, selling produce, managing small shops or market stalls, sewing, petty trade and distribution, repair and maintenance of nets and boats, gathering coastal resources, and producing and selling fish paste or dried shrimp. In addition, they are in charge of “gardening”, often referring to small home gardens but also working with men in betel nut and rubber plantations or in the paddy fields. Women’s community management responsibilities include support they provide to monastery and church activities, local markets, and the organization of community or religious festivals, among others. While men often occupy leadership positions in the community, women focus on organizing and facilitating the community activities.²⁷

Women’s productive work, more specifically, involves supporting men’s earning capacity (such as repair of nets), underpaid work in formal employment settings (domestic helpers or factory workers), or “petty” activities such as managing retail shops or small market stalls. Women usually do not go out on the boats. Instead, they are involved in pre- and post-harvest activities: marketing fish catch, making fish paste, and, along with young adults or children, collecting seaweed, shellfish, mussels and oysters. They share responsibility of repair and maintenance of nets and boats. In one group discussion, a woman noted that “We are dependent on men to continue fishing; we are dependent on their catch.” Because women’s responsibilities are often considered to be in support of men’s productive roles, they usually have little decision-

²⁶ See GEN. 2015. *Raising the Curtain: Cultural Norms, Social Practices and Gender Equality in Myanmar*. Yangon, Myanmar. Section 9.2, pp. 87–92, for a discussion on how these stereotypes and gender roles are entrenched in the educational system in Myanmar and normalized across different institutions.

²⁷ For information on the evolution of women’s leadership roles in the village, from the militarized environment to the preliminary ceasefire and then the return to villages, see Karen Human Rights Group. 2016. *Hidden Strengths, Hidden Struggles: Women’s testimonies from southeast Myanmar*, pp. 22–26, showing the “retreat of women’s role in leadership” from being preferred village leaders to becoming very marginalized in community leadership.

making power outside of the household, while at the same time their reproductive work is time-consuming, labour-intensive, unpaid and unappreciated, resulting in chronic lack of capital and access to loans, poorer hygiene and facilities in areas where women traditionally work (such as fish markets), and low representation in leadership structures.

One fisherwoman described her responsibilities. She is one of the few women in the village who actually goes to sea to help her husband on the boat, because they are not able to afford hired help and their son is too young. Additionally, she takes care of her younger daughter and son at home, works daily wage jobs on boats as hired help to supplement their income, prepares and markets their fish catch into paste, collects fuelwood for household needs, collects water, and does the laundry and housecleaning.

One grandmother interviewee in her 70s, the matriarch of an all-female family, described her numerous skills and activities, which include splitting bamboo to use as ties for thatch roofing. She organizes children and grandchildren to work in the mangroves, imparting her skill and knowledge of mangrove resources. She keeps the family together, rooted and active in their community, after having been forcibly relocated when mangroves were destroyed due to a development project.

The fishing industry is seen in the communities as a “man’s” job. Men are the primary fishers who go out on the boats and engage in dangerous activities at sea. Men are particularly concerned about the constant threats to their safety and livelihood from clashes with large-scale fishers in trawlers who harvest too much fish and break their nets. They are considered leaders in the community and heads of the family, on whom rests the responsibility to provide for their family’s needs, keep them safe and earn an income. Knowledge about traditional capture fishing practices is passed from father to son when possible. Teenage boys described learning spear fishing and diving for oysters from older workers. A 52-year old man talked about learning how to fish using one net from his father, who learned it from his father. Likewise, traditional knowledge about seafood processing, such as making fish paste and processing shellfish, is handed down from mother to daughter when possible.

Amid dwindling natural resources, decreasing fish catch, and resource exploitation, whole families are forced to adopt new or additional roles and find alternative livelihoods or income sources in order to meet their basic needs. Women and children are considered the best placed to find alternative livelihoods to support the family. People cross gender roles out of necessity: for example, the middle-income woman whose husband was killed now supervises the hired labour on their three boats; or the income-poor woman helps her husband to set hook nets because they cannot afford to hire outside help.

It was difficult to get actual income data, but families made it clear that income from fishing was not enough. To make ends meet, men, women and children (girls and boys) often have to work as day labourers (in rubber or palm oil plantations); some set up tailoring or retail shops; while others go abroad as migrant workers. Figures obtained on profits from making and selling fish paste varied slightly (anecdotally, around MMK 2 000 [USD 1] per kilo depending on type of fish paste and market rates). During the discussions it emerged that preparing and selling fish/shrimp paste is a long and laborious process that involves catching the fish; drying, pounding and mixing it with fish salt; drying it again and then storing and shaping it into mounds/squares; and finally, selling it themselves locally, selling it to intermediaries, or bringing it to sell in regional markets.²⁸

²⁸ Fish paste is a large part of the traditional food culture in Myanmar and for this reason, the effects of lowered fish catch by local small-scale fishers, whose produce largely stays domestic, will have a big impact across large parts of Myanmar that rely on fish paste and seafood for their diet.

3.2 Gendered access to resources that affect men, women and whole families

“Investors have been coming to our area to look at the islands and beaches.”
(Multiple participants in FGDs)

“We are afraid of displacement and afraid of the change it will bring.”
(Female participant in FGD)

Villagers noted regular encounters between large- and small-scale fishers at sea resulting in clashes, abuses and destruction of the latter’s nets, boats and other equipment. The presence of large-scale fishers who may or may not have licenses or concessions in the area is a key contributing factor. In general, small-scale fishers who fish closer to shore are typically unable to reach the larger quantities and types of fish or catch larger specimens (Hulst, 2015). This has been a problem for people in the study villages since 1975, when the Myanmar Government first began giving fishing concessions to big Thai companies, and it continues to be a serious problem.²⁹

Meanwhile, the entry of the hotel and tourism industry has brought added pressure resulting in new land-based conflicts and complex legal and community dynamics. One of the study villages affected by a fast-growing tourism industry has seen a steep increase in land prices since one part of the village was declared a tourist zone. Large tracts of village (-owned) land and surrounding areas have been sold to corporations and military- and Navy-linked entities. One woman interviewed reported that after typhoon Nargis in 2009, plots of land were sold to Burman migrants from Ayerwaddy for MMK 25 000 (about USD 17), but that after the tourism zone was announced, prices for some land tracts jumped to as high as MMK 40 million (USD 26 600). Questions arose as to who owned what. People interviewed reported that many villagers who were absent from their land, perhaps some of them previously internally displaced, have returned to find it occupied by someone else. Informal discussions with villagers revealed accounts of land grabs and forced relocations when village land is declared a tourism zone or when land is parcelled out to military and elite-owned companies for tourism development, and of growing confusion about boundaries and ownership.

Villagers’ attitudes differed over the development of tourist attractions and facilities. In one focus group discussion with women, their opinions varied. Some women said new hotel construction would bring jobs, a bigger market and higher prices for their fish/shrimp, fish paste, and other produce, along with improved services and road access, “mak[ing] it easier for us to go to the hospital in town”. Other women were sceptical that these various changes would actually benefit villagers. For example, many households were already suffering due to dwindling stocks in their traditional fishing grounds, and there were doubts that income from tourism would trickle down to them. There was also the realization that “when the prices for food for tourists increase, the prices go up for us too.” Some felt that tourism might also bring a rise in prostitution, gambling and drug use. By contrast, in the group discussion with men, views were solidly against hotel construction and development on the coasts along the village: “Tourism benefits are for the businessman but not us”; “There are expectations of job opportunities within the tourism zone but this is uncertain.” Men worried that their landing sites would be hampered or blocked by the tourist sites or the takeover by tourist companies, and felt that hotels and tourism would not necessarily bring additional market or livelihood opportunities to the local community. Rather, they felt tourism would bring more tourist traffic to the waters where they usually fished.

²⁹ This initial concession ended five years later when Thai fishers were accused of disguising unauthorized trawlers to look like those that had permission to fish in the area. Government authorities awarded new concessions to Thai companies in 1989, and in 1990 the Thai Fisheries Department set up the Thai-Burma Fishery Co Ltd (Kanwanich, 1998).

This seemed to imply that men saw how tourism projects could have a direct negative impact on their control over resources, relevance, authority and sense of identity, while at least some of the women (but not all) saw livelihood opportunities that could potentially balance out the loss of control and access to community resources at a micro level.

These differences in opinion may well be linked to the gendered nature of access to (alternative) information. Indeed, the study revealed that access to education, information and alternative training was highly gendered. Men's participation was encouraged for workshops and training seen as male – workshops on fisheries, land, agriculture and decision-making, as well as participation in political discussions organized by civil society or church groups. Women were asked to participate in religious activities and in income-generating or alternative livelihood trainings, such as sewing and tailoring, garden care, and other “maternal” roles in home care and child care. This suggests a need to find ways to bring women into a wider range of educational activities and training structures including socio-economic and political issues, while also creating opportunities for men to gain greater understanding of the value of women's reproductive work in order to push for more fair distribution of household reproductive and caregiving responsibilities.

3.3 Gendered impacts of economic and political transition

“Fishing is my life. This is what I have done all my life.” (Male participant in FGD)

“We want to stay and keep fishing.” (Interviewee in Ye township)

“There are partnerships between big corporations and the Navy and no one listens to us.” (Male participant in FGD)

Development projects, pressures on natural resources, environmental damage and entry of big tourism projects all have a different impact on men and women, boys and girls. As Myanmar undergoes economic and political transition, fisher families are experiencing acute pressures related to the rapid advance of corporate interests and development projects on their lives and livelihoods. The study found that men are concerned about issues directly related to fish harvesting, including licensing issues, conflicts with large-scale fishers, encounters with the Navy at sea, damage to fishing nets and other equipment, the high cost of maintaining boats and equipment, and lower fish catch; while both men and women are concerned about (and impacted by) the lower income resulting from reduced fish catch and clashes with trawling fish boats. For their part, women expressed concerns about reduced fish catch to process into fish paste, and difficulties negotiating with intermediaries who come to the community to transport their processed goods to market. Villagers also spoke about the pressures on many children to leave school to help families earn an income or to help gather sea resources along the coast. Some young adults, mostly boys, are forced to engage in difficult work such as spearfishing from boats, diving for fish, or looking for oysters. For those with retail shops, girls have to help their mothers and help take care of younger siblings. In more urban areas, young adults work in fish factories, or earn daily wages working in retail shops or sewing.

Age, ethnicity, social status, income level, location, livelihood and religion shaped the experiences of men and women, boys and girls in the villages studied. For example, when asked, four teenage boys had difficulty imagining their futures. Two said all they wanted was to be able to continue to go to school, while the other two said they wanted to be able to earn income to help their families. All four mentioned income opportunities that tourism might bring to the community, but also expressed concern that tourism and increased traffic and income in the community could (and already

had) fuel drug use and the formation of youth gangs. In the same community, the daughter of a relatively better-off fisher (who owned a boat employing three men on board) expressed hope of going to university in Singapore, and in the adjoining community, the daughter of the village leader hoped to go to university in the United States of America.

Both men and women expressed concerns about safety. Men are often subject to hazardous conditions at sea and have concerns about their safety, especially during long periods (i.e. several days) on the boat without access to medical facilities. There was a heavier burden on men to stay out longer at sea due to lower fish catch levels, with greater risks for injury and illness. Consequently, women and children are left alone at home for longer periods. Women are more concerned about safety at night, as their husbands have to stay away longer. There were also concerns about safety in the community or when travelling. Villagers talked about the dangers of staying out late amid rising crime due to the lack of livelihood options. People who had worked in Thailand highlighted issues related to migration such as the risk of arrest and deportation, abuse in the work site, and harassment.

Despite entrenched gender roles, the case study found evidence of redistribution of economic and household activities due to economic reasons, pressures on livelihoods and dwindling natural resources. Many children and young adults left school to earn additional income for their families. Men helped their wives with household responsibilities if they needed to find a job or alternative source of income. One female participant said, “If the husband carries one weight, women also takes some weight. If I can help him, I will and if he can help me, he will.”

Within the assigned gender roles in the fishing community, men and women, boys and girls usually participate in different labour sectors and choose different life paths depending on availability of resources and capital, as well as individual capability. For example, those with betel nut or/and rubber plantations organize themselves differently from those who do not own land. Both women and men work the plantations, which are often some distance from the village. Children can also help in harvesting rubber or betel nut. Men cut the wood. Plantations (sometimes referred to as “gardens”) contribute to increasing household cash income or resources to trade, creating the basis for varying degrees of social differentiation in the community. Some villagers also keep ducks and harvest eggs for sale to intermediaries or locally to villagers.

3.4 Debt and migration

“If there is little fish, there is not enough food, we eat little, and it is difficult for children to continue school because we don’t have money.”

(Female interviewee)

The structural roots of indebtedness of fisher families, along with the impact of policies that open up the seas to rampant overfishing by large fishing companies, make life difficult for small-scale fisher households and communities. Fisher indebtedness is due to such factors as the increasing cost of maintaining nets, boats and equipment; the high cost of fuel; fish scarcity; and price control by middle merchants. The cost of net replacement is approximately MMK 200 000 (USD 130) and often fishers need to borrow that money at exorbitant rates. To pay off the loans or make ends meet, families of fishers engage in daily labour, interrupt their children’s schooling, or migrate to other countries (particularly Thailand and Malaysia) to work in relatively higher-paying but exploitative jobs in seafood factories, construction sites, or as household help. Often, a young son or daughter has to migrate to find work, though there are many cases of whole families migrating, or parents leaving children with their grandparents. The migration picture is mixed: some families engage in seasonal migration while some stay for much longer periods. Villagers also migrate due to lack of opportunities in

the village. Earnings from migrant work are initially used to pay debts back home and the costs of migrating (such as paying a broker to find a job, for lodging and basic necessities in Thailand, and for transportation and documentation). Any excess earnings help pay for basic needs back home. Some families are able to accumulate enough earnings to purchase land, repair their boats, make home improvements or create other assets. There is much evidence of intergenerational migration, and patterns of work and livelihoods in Thailand sometimes form established patterns within families through several generations.

3.5 Gendered planning and decision-making

Participation at all levels of decision-making is an aspiration for both men and women. But women are often marginalized in the community and at home. Women do have a voice in household matters for decisions involving expenses, children's education, health and sanitation, and housing matters, but they lack deeper and more involved participation at the community level. Their perceived power seems to derive from being seen as "in charge" of a lot of things within the household. In many households, women are "powerful" within these confines, while lacking power in decisions at the community level, and in the regional and state economic, social and political arenas. Sharing of household responsibilities does not, however, translate into equal sharing of power and control over resources and decision-making.

Women in the study areas were generally not included in community decision-making processes. Focus group discussions and interviews with leaders and with women themselves revealed a very basic level of participation and decision-making. "When we want to have a celebration in the community or monastery, we present the idea to the community leaders and monk and they agree." "The men decide where and how to build the house because they don't need women to decide it." "In the community meetings, the leader only calls the men and if the husband is not available then his wife can attend. Women are okay with that because it is not our job to attend the meetings. Because when they build the house, the men have to carry the heavy things." One village leader noted "It is not good to work with women because of our culture. This is because women cannot be the head or be first, the man needs to be head. Why? Because in the past women cannot be leaders."

A lack of voice and power renders women's issues "invisible" in community decision-making processes concerning health and safety, domestic violence, political participation and livelihood creation. One village leader stated that there were no issues affecting women in the village, while acknowledging the absence of a clinic where women could have safe deliveries (but also claiming there had not been a single case of pregnancy with complications). He thought there was no need to seek hospital help, given that women could give birth at home. The leader believed women were very safe to go out at night or stay alone at home. In contrast, one woman noted, "When there is a difficult pregnancy, we need to collect money from around the village to help us go to the hospital and pay for fees."

A report by the Tavoyan Women's Union on the Dawei Special Economic Zone noted the very limited access women have to information about developments in the community. "Although there has been only little information provided to local communities about the project, our research indicates that women have had even less access to this information than men. Information was generally provided through public meetings, which women were not expected or encouraged to attend. During the project implementation period, when authorities summoned the locals to announce information about the project, it was usually only men who attended the meetings" (TWU, 2014).

One village leader thought that women did not belong in the leadership structure because, "It just isn't the way it is." As the Gender Equality Network (GEN) notes,

“From an historical point of view, the pervasiveness of the notion of women’s traditionally high status, coupled with strict censorship laws, lack of nationwide sex disaggregated data ... and limitations on civil society organizing, have left little room for public discussion, mobilization and action around issues negatively impacting on women’s lives” (GEN, 2015). GEN also notes that the problem results both from a failure to notice gender inequality and the tendency to justify gender-based differences with cultural and religious arguments (GEN, 2015).

4. CONCLUSIONS

“In a few years, all fishing will be gone in this village. Every year there are less and less fishers. If they don’t close down the big fishers there won’t be any more fish to catch and there won’t be any more small fishers left.”

(Male fisher leader in Ye township)

Small-scale fishing villages in Mon and Tanintharyi, already weakened by years of military rule, authoritarian projects and biased policies, are entering an era where they face major new threats to their existence amid an unprecedented “opening up” of the country. Men and women in these communities are being squeezed between national laws that do not adequately recognize their rights to access and control of the resources upon which they depend for their livelihoods, and the surging interest of powerful actors in capturing these same resources for exclusionary purposes (e.g. extraction, conservation, tourism). In light of this, and the fact that work on gender in small-scale fisheries remains in an introductory phase, the outlook for realizing the SSF Guidelines in Myanmar today may seem bleak.

The SSF Guidelines have an especially key role to play in Myanmar today in light of our findings. Rather than “waiting for the state” to implement them, the SSF Guidelines can be *used* as a “tool for investigation, reflection and action” (Franco and Monsalve, 2017). This includes using them to prompt people to reflect critically on gender roles. Based on work in sub-Saharan Africa with communities facing varied resource grabs in various political-legal contexts, Franco and Monsalve argue that the VGGT and SSF Guidelines are “built for use by anyone as a lens to (re)analyse, (re)assess and (re)interpret the context, conditions and consequences of the resource grabs affecting peoples’ lives” (Franco and Monsalve, 2017). A crucial point of departure is that “the problem is *not* that people do not know when they are being exploited or oppressed, or when their interests and aspirations are being ignored or dismissed. Rather, the people most in need of information and analysis to help change an unjust situation through collective political action often have the least access” (Franco and Monsalve, 2017).

The workshop that launched this case study adopted this understanding of utilizing the SSF Guidelines. Driven by local CSO groups, the workshop facilitated discussions about the different issues faced by villagers in Mon and Tanintharyi. Relating the issues raised back to relevant provisions of the SSF Guidelines encouraged critical thinking and analysis about underlying drivers behind resource grabs and their differentiated impacts.³⁰ Key provisions empowered participants to view the exploitation and oppression they are experiencing as an injustice that should be remedied, such as those provisions addressing protection against eviction and infringement of rights (5.9), large-scale development projects (5.10) and protection in situations of armed conflict (6.18).³¹ At the same time, this use of the SSF Guidelines also made possible analysis of gaps in current law and policy, and helped to frame formulation of advocacy, as well as strategizing about how to respond via “calculated collective action” (Franco

³⁰ Defined here following Borras *et al.* (2012, p. 850) as “essentially control-grabbing: grabbing the power to control land and other associated resources such as water in order to derive benefit from such control of resources”.

³¹ All the bracketed numbers reference key provisions in the SSF Guidelines.

and Monsalve, 2017), drawing on, for example, the restoration of access in cases of displacement from armed conflict (5.12), redistributive reform (5.8) and the need for inclusion of small-scale fishing communities in the design and implementation of conservation and climate change policies (5.15, 9.3).

This use of the SSF Guidelines needs to go hand in hand with better awareness and recognition of women's roles and principles of gender equity and equality, and we hope that this study has contributed here in a modest way as a start. This initial examination has begun to map and document entrenched gender roles in production and reproduction in SSF, gendered impacts in small-scale fisheries participation and access to resources, the marginalization of women from formal decision-making structures, and potentially new conflicts along gender lines as Myanmar's political economy is opened up. It has begun to pull back the curtain on the pivotal role played by women in maintaining local and regional production, consumption and trade circuits. While for reasons already mentioned we were not able to trace in detail the markets and marketing of fish and fish-based products, the study has laid the foundations and relations for further investigation into this aspect of the story. To the extent that women in Myanmar occupy pivotal positions in the local and regional political economy, they necessarily have the potential to play a key role in fostering a truly sustainable small-scale fisheries economy. Promoting gender equality thus becomes strategic for the entire sector. Our work so far confirms the complementarity between the VGGT focusing on tenure issues and the SSF Guidelines focusing on practices concerning small-scale fisheries. Using the SSF Guidelines on gender and small-scale fisheries in Myanmar points to the underlying, pressing issues of tenure insecurity that small-scale fishing communities are facing. More work based on this approach and with an explicit focus on gender that seeks to "break through the wall of silence and overcome obstacles to inclusive and democratic land and natural resource governance" is needed (Franco and Monsalve, 2017).

Good practices

The SSF Guidelines are clear about the importance of ensuring an enabling environment and supporting use of the guidelines (Part 3), including promoting policy coherence with international human rights law and other international norms and instruments, as well as a whole host of other related policies, programmes and initiatives at the national and subnational level. Promoting enabling conditions for a long-term vision based on agreed norms for sustainable small-scale fisheries and the eradication of hunger and poverty using an ecosystem approach (para. 10.4) will be a difficult and ongoing challenge in the Myanmar context. This present study, as a first step with partner communities and local organizations, has contributed (albeit modestly) toward this goal. The step was taken with the free prior informed consent of the participant communities: it followed prior work with relevant local support CSOs, and it anticipates continuing engagement with both sets of actors. The planning and preparation recognized small-scale fishing communities "as holders, providers and receivers of knowledge" (para.11.4), particularly knowledge of their own "culture, traditions and practices around small-scale fishing" (para. 11.6) and "especially the specific knowledge of women fishers and fishworkers" (para. 11.6). The study thus makes an initial, very modest contribution to the good practices of collecting gender-disaggregated data, and illuminates the "importance of small-scale fisheries and its different components including socio-economic aspects" (para. 11.1) and of "investigating and documenting traditional fisheries knowledge and technologies" (para. 11.6). For TNI, the study is part of a series of founding steps that aim eventually to "support small-scale fishing communities, in particular to indigenous peoples, women and those relying on fishing for subsistence, including, as appropriate, the technical and financial assistance to organize, maintain, exchange and improve traditional knowledge of aquatic living resources and fishing techniques, and upgrade

knowledge on aquatic ecosystems” (para. 11.7). All this is seen as part of laying the foundation for more capacity development-type efforts (Section 12) in the future, especially efforts to “enhance the capacity of small-scale fishing communities in order to enable them to participate in decision-making processes” and especially towards the “equitable participation of women in such structures” (para. 12.1).

The idea for the case study was introduced during a large partners’ conference on the SSF Guidelines, and discussed as part of the actors’ own organizing around the use and applications of the VGGT and SSF Guidelines in their networks and communities. The research process drew from existing knowledge and experience of action research on bringing the VGGT to rural communities and how, together with them, to use the VGGT to strengthen tenure of land and fisheries.³² There were transparent discussions about the process and the desired outcomes. Partners themselves chose the areas to be covered and how they wanted to participate. There were participatory validation workshops after writing the first draft, thus enabling an environment where community members could reflect on, change and validate initial research findings. This iterative and reflective process also involved transforming the views of the researchers themselves – who had come from different technical and research backgrounds – concerning aspects of small-scale fisheries and the gender dynamics in communities. There was a debriefing and reflection period after the field work was completed to gather lessons learned from the organizing and data-gathering, and to continue partnerships post-research.

This process thus contributes to opening up more possibilities for creating synergies for the implementation of both the VGGT and SSF Guidelines in Myanmar. However, the case study has raised additional questions that need to be answered, as the world of gender and fisheries covers a wide range of knowledge areas. For this reason, it is best understood as part of an ongoing collaboration with the partners and communities to address the challenge of achieving gender equality.

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³² See <https://www.tni.org/en/publication/building-bottom-up-accountability-in-an-era-of-land-grabbing-in-sub-saharan-africa>.

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Additional Web sites:

International Collective in Support of Fishworkers
www.icsf.net

FAO reports on gender in fisheries and aquaculture
<http://www.fao.org/fishery/topic/16605/en>

The Irrawaddy:
<https://www.irrawaddy.com/news/burma/burma-launches-national-plan-empower-women.html>



Coastal embankment and mangrove plantation to form two-tiered protection to the communities

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Creating an enabling environment to support disaster risk reduction in the context of the SSF Guidelines: a case study from Bangladesh

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ABSTRACT

This paper presents a case study exploring Bangladesh's natural disaster relief and risk mitigation programme – as well as the institutional, policy and legal framework supporting it – in the context of the Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines). The study investigated how interventions from both government and non-government partners coupled with community strategies have helped to reduce disaster risk and improve disaster response in small-scale fishing communities. The empirical data was collected from three coastal zone sites in Bangladesh, where fishing is a principal occupation. The government, Non-governmental Organizations (NGOs) and the communities themselves adopted different strategies to mitigate disaster risk and climate change impacts, which can be seen as good practices. Apart from the good practices at a community level, the study focused on various aspects of the institutional, policy and legal framework and how they align with provisions of the SSF Guidelines and provide support for successful disaster risk reduction (DRR) in Bangladesh. These aspects include a robust policy and legal framework, the presence of a strong network of NGOs, a functional social safety programme prioritizing food security for the most vulnerable, and disaster management organizations at all levels of local government. However, insufficient institutional coordination and collaboration among the partnering stakeholders is clearly evident. To remedy this requires capacity building among government organizations and empowerment of small-scale fishers so they can actively participate in DRR decision-making processes.

1. INTRODUCTION

Small-scale fishers are among the most vulnerable to the impacts of climate change and disasters because they tend to live in the most seaward communities and are thus at risk in terms of personal safety as well as damage to property and livelihoods (Daw *et al.*, 2009; Islam, 2011). Disaster risk can be defined as the likelihood of loss of life, injury, or destruction and damage from a disaster in a given period. It is expressed as the consequences of the complex interactions between a hazard and the characteristics that make people and places vulnerable and exposed (UNISDR, 2015). Though hazards are potentially damaging events or phenomena, they do not necessarily cause a disaster.

Instead, disasters are the product of a complex relationship between the physical (both natural and artificial) environment and society – more specifically, society’s behaviour, function, organization and development (Quarantelli, 1998). As such, hazards are placed within the broader context of the society where vulnerability is explained as a result of both biophysical dynamics and social, political and economic processes (Blaikie *et al.*, 1994). Disasters are often responsible for creating a situation where the normal functioning of a socio-economic system has been severely interrupted by the levels of loss, damage and impact suffered (Birkmann, 2006; Birkmann *et al.*, 2013). As a response, disaster risk reduction (DRR) has attracted much attention in recent years both from researchers and policy-makers. It can be defined as the broad development and application of policies, strategies and practices to minimize vulnerabilities and disaster risks throughout society (Twigg, 2009). The application of DRR policies and strategies can reduce existing and new disaster risks, and manage residual risks thus contributing to the strengthening of resilience and reduction of losses (collectively termed disaster risk management). Disasters can also be mitigated through implementation of proactive measures before an emergency or disaster occurs (UNISDR, 2015).

The coastal fishing communities in Bangladesh are frequently beset by cyclones and storm surges, flooding, riverbank erosion and salinity intrusion, as well as pollution caused by various human-induced factors (e.g. industrial discharge, agricultural waste, oil spillage, coastal development activities (Islam, 2011). Poor socio-economic conditions and governance transform the effects of these hazards into disasters, with corresponding negative impacts on human well-being as well as the environment. In turn, environmental degradation seriously undermines the adaptive capacity of communities in terms of the assets people can draw upon in times of need; their flexibility to change strategy; their ability to organize and act collectively; and how they recognize and respond to change, including their agency in determining what responses are required (Cinner *et al.*, 2018). While predisaster responses by the Government of Bangladesh have succeeded in saving many lives, small-scale fishers remain vulnerable because of context-specific factors (Islam and Jentoft, 2017) and are often subject to injustice, exploitation and political neglect. For example, the majority are indebted to money lenders/traders who often purchase fish catches at unfair prices and force fishers to go fishing in bad weather. They have limited opportunity to participate in decision-making processes concerning fish management or other issues affecting their lives and livelihoods. Neither do they have functional fishers’ organizations such as cooperatives to represent their interests and concerns in political processes (Islam, 2011).

The Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines) is the first internationally agreed instrument dedicated entirely to small-scale fisheries (FAO, 2015). The SSF Guidelines promote a human rights-based approach (HRBA) that seeks to ensure the non-discriminatory participation and empowerment of small-scale fishing communities in transparent and accountable decision-making processes (Willmann *et al.*, 2017). Section 9 of the SSF Guidelines addresses the issue of adverse impacts from climate change and disasters on small-scale fisheries, as well as climate change mitigation and resilience building. The Guidelines advise countries to develop specific policies and plans to address climate change adaptation and mitigation, as well as emergency response and disaster preparedness (including building resilience) through full and effective consultation with vulnerable fishing communities. In doing so, particular support is required for small-scale fishers who live on small islands where climate change may have particular implications for their food security, nutrition, housing, livelihoods and physical safety. Further, vulnerable and marginalized groups in small-scale fishing communities warrant special support from the state.

Strategies for disaster risk management and climate change adaptation require integrated and holistic approaches including cross-sector collaboration, for example with civil society organizations (CSOs). When fishers are affected by human-induced disasters, those responsible should be held accountable. Broader disaster preparedness, response and rehabilitation measures of the state should be targeted at small-scale fisheries, using the concepts of both the relief-development continuum and “building back better”. States should also consider making access to adaptation funds, facilities and/or culturally appropriate technologies available to small-scale fishing communities for climate change adaptation. Finally, when applying the SSF Guidelines in the context of disaster risk and climate change, it is essential to protect fisherfolk by using HRBA, including such principles as the right to information, non-discrimination, food, participation, access to justice and transparency (FAO, 2015).

This paper addresses the following questions: Do the interventions of the Government of Bangladesh and Non-governmental Organizations (NGOs) coupled with indigenous adaptation strategies align with a human rights perspective? To what extent may they help to reduce disaster risk of small-scale coastal fishers? Do these interventions contribute to enhancing their food security and standard of living? To what extent do these interventions create secured rights, provide access to social security and services, and set an example of good practice for implementation of the SSF Guidelines? What would be needed to fill the capacity gaps also identified?

2. METHODOLOGY

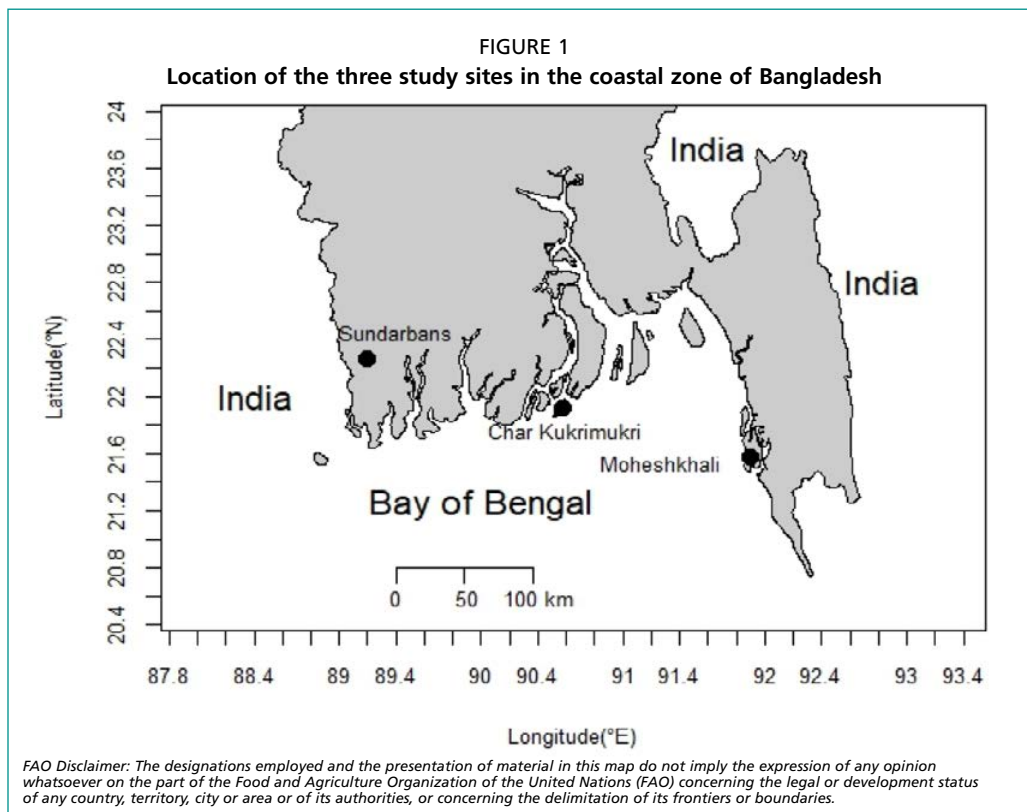
2.1 Desk review

A combination of desk research and fieldwork methods was used for primary data collection. For desk research, the existing policy, legal and institutional frameworks and strategy documents related to disaster risk reduction were analysed. The documents reviewed are listed in Table 1, comprising government law and policy documents, reports from concerned government ministries, and official gazettes.

2.2 Study sites

Fieldwork was conducted from September 2017 to March 2018 in three coastal study sites in Bangladesh: the Sundarbans region (located in the Shyamnagar subdistrict of the Satkhira district), Char Kukri Mukri (located in the Char Fesson subdistrict of the Bhola district) and Moheshkhali (located in the Cox’s Bazar district) (Figure 1). The Sundarbans is the world’s largest mangrove forest, covering three districts (Bagerhat, Khulna and Satkhira) of southwest Bangladesh. This region experienced two consecutive cyclones, namely Sidr (2007) and Aila (2009). Char Kukri Mukri is a low-lying island located at the mouth of the Meghna River estuary, where many past cyclones have struck. Moheshkhali Island is located on the southwestern coast of Bangladesh and was recently hit hard by cyclone Mora (2017). These study sites adequately represent three different settings of the coastal zone of Bangladesh. The sites differ in their vulnerability to different hydrometeorological events, such as cyclones and floods. The fisher communities also differ according to their fishing zone, target fishery species, and level of physical exposure to – and protection against – various hazards.

The fieldwork gathered both basic information on the socio-economic conditions of the communities as well as their assessment of disaster risk reduction at the community level. The primary data was collected through direct observation, individual interviews, focus group discussions and key informant interviews. A total of 360 fishing households were surveyed. In each study area, 120 face-to-face individual interviews with fishers were conducted, supplemented by six focus group discussions and ten in-depth key informant interviews. These key informant interviews were carried out with particularly knowledgeable fishers, community leaders, local government officials and NGO officials with expertise in small-scale fisheries and/or DRR. The semi-



structured questionnaire included both qualitative and quantitative questions, such as: what major disasters the fishers have faced, and what major losses and damage they have incurred; what initiatives or activities have been implemented by the Government of Bangladesh, NGOs or fishers themselves before, during or after disasters; and what activities/initiatives have been implemented by these institutions to avoid future losses and damage. Respondents were also asked whether these strategies or interventions helped to make them more resilient, helped them to replicate useful strategies by themselves after the outside intervention phase-out, and what sort of initiatives they think would be practical for further increasing their adaptive capacities. In addition, they were also asked their views on any good practices on the ground for DRR at the community level.

2.2 Data analysis

Quantitative data were analysed using SPSS software whereas qualitative data were analysed using a content analysis approach. This approach classifies, tabulates and evaluates different key themes to ascertain their meaning. In this study, textual materials were coded into manageable categories of the different variables for analysis.

3. RESULTS AND DISCUSSION

3.1 The institutional, legal and policy framework for emergency response and disaster preparedness in Bangladesh

Bangladesh has a long history of largely successful disaster management, much thanks to an appreciable institutional, legal and policy framework (Table 1). The Ministry of Disaster Management and Relief (MoDMR) is the country's focal ministry for disaster response and management; under this is the Department of Disaster Management (DDM). The DDM is tasked with implementing an effective humanitarian assistance programme for developing capacities of the poor and the underprivileged, including reducing disaster risk, coordinating emergency response with various governmental and non-governmental organizations, and implementing the National Disaster Management

TABLE 1
Legal, policy and institutional frameworks of Bangladesh in relation to disaster risk and climate change impacts and possible linkages with the SSF Guidelines and human rights-based approach (HRBA)

| Legal and policy framework | Provisions/aims and possible linkages with the SSF Guidelines for disaster risk reduction (DRR) in Bangladesh | Possible linkages with HRBA |
|---|--|--|
| Disaster Management Act 2012 | <ul style="list-style-type: none"> • Legal basis to mitigate the potential adverse effects of hazard events, and to adapt to adverse effects of climate change • Penalty for human-induced disasters • Fund for disaster risk and climate impacts management • Emergency humanitarian assistance to the most vulnerable people • Strengthening of institutional capacity of government and NGOs | <ul style="list-style-type: none"> • Provision of emergency assistance to vulnerable and marginalized population • Capacity building of duty bearers |
| National Plan for Disaster Management (NPDM) | <ul style="list-style-type: none"> • Guidelines for disaster management committees at all levels to prepare their roles and implement their specific plans | <ul style="list-style-type: none"> • Provision of active, free and meaningful participation in decision-making |
| Standing Orders on Disaster (SOD) | <ul style="list-style-type: none"> • Responsibilities of the Department of Fisheries to support small-scale fishers in the immediate relief phase, and in rehabilitation, reconstruction and recovery • Coordination of all relief activities (both governmental and non-governmental) at the local level to ensure social justice | <ul style="list-style-type: none"> • Ensuring social justice in distribution of benefits |
| National Plan for Disaster Management 2010–15 | <ul style="list-style-type: none"> • Risk reduction especially for the poor and disadvantaged from the effects of natural and human-induced hazards | <ul style="list-style-type: none"> • Special protection for the poor and disadvantaged |
| Bangladesh Climate Change Strategy and Action Plan (BCCSAP) | <ul style="list-style-type: none"> • Strategy for food security, safe housing, employment and access to basic services including housing for the poorest and vulnerable people • Capacity building of governmental agencies, civil society and private sectors, and mainstreaming them as part of development actions | <ul style="list-style-type: none"> • Ensuring the right to adequate food and to an adequate standard of living including housing, water, sanitation, and energy sources |
| Comprehensive Disaster Management Programme (CDMP) | <ul style="list-style-type: none"> • National framework for CRM and DRR to understand climate change risks and impacts with sectoral and cross-sectoral perspective and implications • Holistic, multihazard approach to reducing the nation's vulnerability to human-induced and natural hazards | <ul style="list-style-type: none"> • Protection from human-induced and natural hazards |
| National Disaster Management Policy (NDMP) 2015 | <ul style="list-style-type: none"> • Fund for disaster risk management • Ecosystem-based approach to disaster risk management • Disaster risk assessment and management in fisheries sector through community participation | <ul style="list-style-type: none"> • Community participation in decision-making |
| Seventh Five Year Plan 2016–2021 | <ul style="list-style-type: none"> • Mainstreaming risk reduction and climate change adaptation principles within all development programmes, plans and policies • National training capacity to sustain and progressively expand training efforts | <ul style="list-style-type: none"> • Priority given to vulnerable communities when providing training |
| Institutional framework | Activities related to SSF Guidelines | Possible linkages with HRBA |
| Ministry of Disaster Management and Relief (MoDMR) | <ul style="list-style-type: none"> • Paradigm shift in disaster management from conventional response and relief to a more comprehensive risk reduction culture • Promotion of food security as an important factor in ensuring the resilience of communities when faced with hazards • Safety net programmes for the poor and vulnerable | <ul style="list-style-type: none"> • Ensuring food security; approving safety net for poor and vulnerable population |
| Department of Disaster Management (DDM) | <ul style="list-style-type: none"> • Assistance programmes to enhance the capacity of the poor and disadvantaged as well as strengthening and coordinating programmes undertaken by the government and NGOs related to DRR | <ul style="list-style-type: none"> • Enhancing the capacity of the poor and disadvantaged |
| District, Upazila and Union Disaster Management Committee | <ul style="list-style-type: none"> • Activities to evacuate and rescue vulnerable people to safe places through coordination between the government and NGO and volunteer organizations | <ul style="list-style-type: none"> • Capacity building of duty bearers |
| Cyclone Preparedness Programme (CPP) | <ul style="list-style-type: none"> • Community-based disaster management system through warning, relief and rehabilitation | <ul style="list-style-type: none"> • Active, free and meaningful participation in decision-making |

Policy (NDMP) 2015 and related plans from the national to the subnational level. For emergency response, the Government of Bangladesh has established an Emergency Operations Centre that springs into action upon receiving word of a disaster. Then for disaster relief and rehabilitation, the Government has a detailed system for quick and long-term need assessment at the grassroots level where local committees play a vital role in providing information. Furthermore, the Cyclone Preparedness Programme, which was established through a partnership between the Government and the Red Crescent Society, has been working on an early warning system as well as search and rescue, evacuation, sheltering, first aid, and relief distribution and rehabilitation activities since 1973. Besides the MoDMR, there are other ministries that implement DRR projects, such as the Ministry of Agriculture, Ministry of Environment and Forests, Ministry of Housing and Public Works, Ministry of Water Resources, and the Ministry of Local Government, Rural Development and Co-operatives. All told, the Government invested BDT 132.07 billion on DRR during its Sixth Five Year Plan 2011–2015 (Programming Division, Planning Division and NARRI Consortium, 2016).

Bangladesh has developed a relatively robust regulatory framework for disaster management that includes legislative, policy, planning and best practice frameworks under which the activities of DRR and emergency response are managed and implemented. In 1985, the Government introduced the Standing Orders on Disaster (SOD), then updated them in 2010 (Ministry of Food and Disaster Management, 2010). The SOD outlines the detailed roles and responsibilities regarding DRR and emergency response management for public agencies at all levels. The Disaster Management Act 2012 is the principal legal document that provides the institutional framework for disaster management. This act formed the National Disaster Management Council that provides overall direction for disaster management, including disaster risk reduction, disaster mitigation, preparedness, response and recovery. The Disaster Management Act also establishes mandatory obligations and responsibilities on ministries, committees and other relevant entities. The NDMP was formulated to define the national approach to DRR and emergency management and to lay out the strategic framework and national principles of disaster management. The country has also developed best practice models, which are used to assist ministries, NGOs, disaster management committees and CSOs in implementing disaster risk management programmes. The National Plan for Disaster Management (NPDM) 2010–2015 broadly outlines the systemic and institutional mechanisms to manage risk and the consequences of disasters through prevention, emergency response and post-disaster recovery. The NPDM has identified seven strategic goals which are drawn from the South Asian Association for Regional Cooperation (SAARC) Disaster Management Framework. DRR is also made a high priority in the Seventh Five Year Plan 2016–2021, which integrates the four priority areas of the Sendai Framework for Disaster Risk Reduction 2015–2030 into its goals and activities. Bangladesh is a signatory of other international instruments on DRR such as the Sendai Framework, the 2030 Agenda for Sustainable Development, and the Paris Agreement on Climate Change.

The SOD spells out directions to the Department of Fisheries for minimizing disaster risks of small-scale fishers and industrial fishers. According to the Marine Fisheries Ordinance of 1983, small-scale coastal fishers can fish in coastal waters up to 40 m depth at the highest tide, while industrial fishers must fish beyond 40 m depth. For small-scale fisheries, these orders include taking appropriate legal and administrative steps to ensure that all fishing boats engaged in fishing in the Bay of Bengal possess a radio receiving set and life jackets for every person on board. The Department of Fisheries is responsible for arranging preparedness training and orientation of field-level officers, staff and the fishing community concerning cyclones, environmental loss and damage, and rehabilitation. After a disaster, the department immediately carries

out an inventory of fish resource losses and prepares long-term relief and rehabilitation programmes for the public and private fishery sector. It also implements programmes extending loans and grants to affected fishers and fish farmers. Every year before the start of cyclone/flood season the field officers of the Department of Fisheries inform the fishers of the steps necessary to ensure the safety and security of fishing boats and fishing gear in areas prone to cyclones and flooding (Ministry of Food and Disaster Management, 2010).

To assess the viability of the enabling environment for the implementation of the SSF Guidelines in Bangladesh, it is important to understand the socio-economic profile of small-scale fishers. Socio-economic conditions in fisher households could influence their ability to withstand the negative impacts of disasters or prevent hazards from becoming disasters. As the availability of capital (for example, financial, social and human) in times of need is a key determinant of adaptive capacity (Cinner *et al.*, 2018), the socio-economic profile of the communities can be used as an indicator of community resilience.

3.2 Socio-economic profiles of small-scale coastal fishers in the study sites

The average age of the interviewees was around 40, which is a good indicator of their knowledge and experience. The rate of illiteracy ranged from about 38 to 59 percent. More than 80 percent of fishers live in their own houses. Land ownership among fishers is considerably lower than the national average, but most have access to government-owned land (*khas*). The majority of households build their homes using natural materials (Table 2). Ownership of land has a positive correlation with building stronger housing structures, as people living on *khas* (where there is the possibility of eviction) aren't willing to invest to improve their homes.

The socio-economic conditions of small-scale fishers are quite similar to the national average, from which some critical facts may be drawn. Better socio-economic conditions can create an enabling environment for DRR and enhance the success of implementation of various initiatives at the community level. Access to better education may be helpful to increase awareness and community response (e.g. awareness of warning signals) during disasters.

3.3 Socio-economic factors associated with HRBA

In terms of the situation for human rights in the fishing communities, the majority of the respondents reported having three meals a day and access to sanitation and safe drinking water. More importantly, they hope to give their children a “good life” by focusing on education and improving food quality for their children. These factors together can promote social development for DRR as envisaged in the concept of resilience (Beymer-Farris, Bassett and Bryceson, 2012; Folke *et al.*, 2005). In Moheshkhali, most of the fishers (77 percent) have access to electricity. In the Sundarbans, about one-fourth of fishers have an electricity supply, while in Char Kukri Mukri there is no provision of electricity at all; some households use solar panels as an alternative. Mangrove forest products serve as cooking fuel for many households. The majority of families collect drinking water from different surface water sources. On a positive note, more than 90 percent have a sanitary toilet in their house. The majority of their food is bought on the market, but most fishers expressed dissatisfaction in the quality of food for their children. More than 60 percent of children go to school. Fishing households have easy access to cyclone centres, as the average distance varies from 1.47 to 1.79 km. The communities in the present study have at least one cyclone shelter (built by MoDMR) within 2 km of their home (Table 3); in the early 1980s, shelters were at least 5 km away. Still, cyclone shelters more than 1.5 km distant may be too far for evacuation during an emergency situation (Amin, 2007). There are currently 3 851 multipurpose cyclone shelters, with another 220 under construction along the

entire coastal region of Bangladesh (MoDMR, 2018). This development could be considered as a good practice to reduce human fatalities during a disaster.

TABLE 2
Summary of demographics and socio-economic conditions in the three study sites (N = 360)

| Criteria/ characteristics and brief description | The Sundarbans | | Char Kukri Mukri | | Moheshkhali | |
|---|---|---------------|------------------|---------------|---------------|---------------|
| | Mean (±SD) | Frequency (%) | Mean (±SD) | Frequency (%) | Mean (±SD) | Frequency (%) |
| Age | National average: 25.6 years | | | | | |
| Age of fishers (years) | 42.93 (13.70) | - | 42.17 (12.34) | - | 39.31 (10.43) | - |
| Education | National literacy rate: 72.3% (BBS, 2016) | | | | | |
| Overall literacy rate in study sites | | 54.59 | | 28.55 | | 50.52 |
| Illiterate | - | 37.5 | - | 59 | - | 42 |
| Can sign only | - | 6.67 | - | 10 | - | 9 |
| Primary (five years of schooling) | - | 28.33 | - | 26 | - | 39 |
| Secondary (ten years of schooling) | - | 6.67 | - | 4 | - | 11 |
| High School Certificate (12 years of schooling) | - | 2.5 | - | 1 | - | 4 |
| More than 12 years of schooling | - | 0.83 | - | 0 | - | 1 |
| Land ownership/use | National average land ownership per person: 14.8 decimal (FAO, 2013) | | | | | |
| Own land (decimal) | 0.72 (0.453) | - | 0.81 (0.394) | - | 0.89 (0.31) | - |
| Use government land (<i>khas</i>) | 0.22 (0.414) | - | 0.15 (0.359) | - | 0.02 (0.14) | - |
| Housing status | National average: (95.85%) | | | | | |
| Living in own house | - | 80.83 | - | 90 | - | 95 |
| Roofing materials | | | | | | |
| Natural materials (e.g. nypa palm) | - | 53.3 | - | 26 | - | 27 |
| Iron sheets (tin shade) | - | 37.5 | - | 72 | - | 68 |
| Concrete (<i>Pucca</i>) | - | 0.83 | - | 0 | - | 2 |
| Other (e.g. polythene) | - | 8.3 | - | 2 | - | 3 |
| Wall materials | | | | | | |
| Earthen (clay/mud) | - | 24.17 | - | 5 | - | 22 |
| Natural materials (e.g. nypa palm with bamboo pole) | - | 5 | - | 16 | - | 13 |
| Wood | - | 30.83 | - | 26 | - | 37 |
| Iron sheet (tin) | - | 32.5 | - | 52 | - | 21 |
| Cement blocks/concrete/bricks (<i>Pucca</i>) | - | 7.5 | - | 0 | - | 5 |
| Other (e.g. polythene) | - | 0 | - | 1 | - | 2 |
| Flooring materials | | | | | | |
| Earthen (clay/mud) | - | 75 | - | 72 | - | 83 |
| Wood and bamboo | - | 24.17 | - | 23 | - | 12 |
| Cement (<i>Pucca</i>) | - | 0.83 | - | 0 | - | 5 |

TABLE 3
Socio-economic conditions of the communities associated with the human rights-based approach (HRBA)

| Characteristics and brief description (N = 360) | The Sundarbans | | Char Kukri Mukri | | Moheshkhali | |
|---|----------------|---------------|------------------|---------------|----------------|---------------|
| | Mean (±SD) | Frequency (%) | Mean (±SD) | Frequency (%) | Mean (±SD) | Frequency (%) |
| Access to electricity | | | | | | |
| Yes | - | 27.5 | - | 0 | - | 77 |
| No, but use solar panel | - | 72.5 | - | 7 | - | 12 |
| Source of fuel for cooking (multiple options) | | | | | | |
| Fuelwood (buy) | - | 40.83 | - | 67 | - | 59 |
| Fuelwood (own collection) | - | 85.83 | - | 62 | - | 75 |
| Charcoal | - | 7.5 | - | 34 | - | 45 |
| Husk | - | 15.83 | - | 84 | - | 59 |
| Cow dung, dry leaf, stems of cereals | - | 63.33 | - | 66 | - | 29 |
| Kerosene | - | 11.67 | - | 41 | - | 26 |
| Other (e.g. LP gas cylinder) | - | 0 | - | 0 | - | 8 |
| Source of drinking water (multiple options) | | | | | | |
| Surface water (river runoff) | - | 4 | - | 26 | - | 1 |
| Tube well (underground water) | - | 34 | - | 24 | - | 87 |
| Pond (reservoir pond) | - | 82 | - | 56 | - | 0 |
| Rainwater (stored) | - | 58 | - | 36 | - | 53 |
| Supply water | - | 12 | - | 0 | - | 53 |
| Toilet facilities | | | | | | |
| Have/use private latrine | - | 98.33 | - | 95 | - | 90 |
| Food security and well-being | | | | | | |
| <i>How many meals does your household eat on a "regular day"?</i> | | | | | | |
| One | - | 0 | - | 0 | - | 3 |
| Two | - | 19.17 | - | 17 | - | 27 |
| Three | - | 80.83 | - | 83 | - | 70 |
| <i>How much of the food consumed by your household is bought?</i> | | | | | | |
| Everything | - | 27.5 | - | 65 | - | 56 |
| More than half | - | 60.83 | - | 20 | - | 21 |
| Approximately half | - | 8.33 | - | 13 | - | 23 |
| Less than half | - | 3.33 | - | 2 | - | 0 |
| Hardly anything | - | 0 | - | 0 | - | 0 |
| Nothing | - | 0 | - | 0 | - | 0 |
| <i>Do you think your children get good food?</i> | | | | | | |
| Yes | - | 29.17 | - | 26 | - | 27 |
| No | - | 70.83 | - | 74 | - | 73 |
| <i>Do your children go to school?</i> | | | | | | |
| Yes | - | 66.67 | - | 73 | - | 76 |
| No | - | 33.33 | - | 27 | - | 24 |
| Distance of cyclone centre from home (km) | 1.79 (1.68) | | 1.47 (1.14) | | 1.70 (1.45) | |

3.4 Good practices related to the SSF Guidelines and HRBA

This section summarizes the settings of study sites and fisheries systems, the losses and damages experienced by the fishers, and the initiatives or activities taken before, during or after disasters. It also explores the usefulness of strategies or interventions and details good practices on the ground for DRR at the community level.

3.4.1 The Sundarbans

The study sites in the Sundarbans consist of four villages situated in the Shyamnagar subdistrict of the Satkhira district along the Sundarbans mangrove forest. Here, the communities' livelihoods mostly involve the forests and the river, for example fishing as well as collecting fuelwood, nypa palm, honey and wax; shrimp farming is also a dominant economic activity. The inhabitants have faced some major environmental disasters in recent years: cyclone Sidr in 2007, Aila in 2009, and the unusual flood of 2011. The area was hardest hit by cyclone Aila. Thousands of people were forced to move onto the coastal embankment, the only place above water, for a prolonged period. Many fishers lost their livelihoods, as their productive assets (e.g. boats, nets) and houses were damaged or destroyed. Besides the immediate destruction, the cyclone caused long-term residual impacts, such as salinization of soil and water sources and coastal erosion from rising tidal water.

After cyclones Sidr and Aila, the Government of Bangladesh was actively involved in the recovery process through the local government administration, which convened a meeting of government organizations, NGOs and community representatives to coordinate possible rehabilitation strategies. In the immediate aftermath of the cyclone, the government provided short-term relief in terms of food, cash, drinking water, medicine, clothing and other household materials, followed by reconstruction efforts such as building coastal embankments and other physical infrastructure (roads, houses) as well as mangrove afforestation programmes. A significant portion of government assistance was distributed under existing social safety net programmes such as the Vulnerable Group Feeding (VGF) programme. The government also rolled out a Cash for Work programme to rebuild physical infrastructure. This programme generated postcyclone employment, thus supporting the livelihood strategies of vulnerable households as well as stimulating the local economy. In addition, the small-scale fishers of the region benefited from the Emergency Cyclone Recovery and Restoration Project. With support from the World Bank, this was initiated after cyclone Sidr struck the southern districts of Bangladesh in 2007 to facilitate restoration and recovery and build long-term disaster preparedness. The project focused on restoration of agriculture, improvement and construction of new multipurpose disaster shelters, and rehabilitation of coastal embankments. It provided small-scale coastal fishers with improved boats, nets and safety equipment, as well as technical assistance and training in aquaculture practices. The project also worked on strengthening the DRR capacity of the government and preparing future operations for long-term risk reduction. Both monitoring and evaluation and management components were included to support the government in coordinating all the project-related activities and providing emergency support for future disasters. The fishing communities of the Sundarbans study sites reported an increase in their income through these various interventions.

In addition to government initiatives, international development partners and NGOs were involved in both short- and long-term rehabilitation activities. NGOs worked in microcredit, disaster management, health and sanitation and building physical infrastructure (including repairing roads). Small-scale fishing communities also received fishing gear as well as training in aquaculture and alternative occupations, including homestead gardening, rice-cum-shrimp culture, and cultivation of salt-tolerant rice varieties. Afforestation was begun along the coastal embankment adjoining the settlement to add further protection. After the rehabilitation, with assistance from the government and/or NGOs, the majority of the houses were rebuilt on supports above the water level, as a good practice. In the village, communities also constructed high-elevation structures (locally known as *kella*) for people and their livestock to take primary shelter in during cyclones or floods. Well-to-do households converted their thatched houses into concrete structures. Some fishers also began using their land for aquaculture of tilapia, shrimp, etc. During the early 1980s, cyclone shelters

were at least 5 km away from residences, whereas now communities have at least one cyclone centre within two kilometres distance of their homes, which they consider a good practice (Table 3). With the efforts of the Cyclone Preparedness Programme, the communities consider themselves more aware of disaster preparation steps and of their duties during a disaster. They are also more receptive to government and NGO risk reduction strategies.

3.4.2 Char Kukri Mukri

Char Kukri Mukri is a small island (*char*) formed through sediment deposition at the mouth of the Ganges-Brahmaputra-Meghna River system in the Bay of Bengal. About 90 percent of the island's inhabitants are dependent on fisheries, particularly on hilsa (*Tenualosa ilisha*) fishing. Women and children usually use low-cost drag and pull nets for shrimp fry collection to supplement their family income. Well-to-do fishers have their own boats and fishing gear (mainly gillnets) for hilsa fishing in the estuary and inshore waters. Other fishermen work as crew and are either paid a share of the catch or wages as part of a fishing team. The fishing zone is a part of the hilsa sanctuaries and, except for fishing ban periods, is open access. During hilsa breeding season in October and November, fishers are restricted from catching hilsa for 22 days. In addition, each year from 1 November to 30 June there is an eight-month restriction on catching juvenile hilsa (i.e. having a length less than 9 inches). To compensate for the income loss, the government introduced a compensation scheme to provide 40 kg of rice to selected households under the VGF programme.

Small-scale fishers in Char Kukri Mukri are frequently exposed to cyclones originating in the Bay of Bengal or flood waters receding through the Meghna River estuary. They also face recurrent and severe disaster risks such as coastal erosion, tidal surges and saline water intrusion. Over the last ten years several cyclones – Sidr (2007), Mohasen (2013) and Mora (2017) – left trails of destruction on the island. Prolonged inundation by saline waters often rendered arable land unsuitable for agriculture, reducing crop, vegetable and fruit output significantly. These environmental changes had profound negative impacts on local food security, health, and overall economic prospects.

After a devastating cyclone in 1970, the Government of Bangladesh initiated a programme of afforestation around the island through the Forest Department to provide critical protection from disasters. Originally supplemented by development partners and NGOs, this afforestation was further replicated by the communities themselves. After cyclone Mohasen in 2013, the government decided to build coastal embankments around the *char*. These embankments in combination with the dense coastal forest plantation are a good practice for protecting against cyclones. They also protect the island from coastal erosion and prevent salt water intrusion; indeed, agricultural production has increased considerably as a result. The government invested in building other physical infrastructure such as roads as well as the installation of tube wells, which helped improve the availability of safe drinking water. The coastal embankment building process also included the creation of eight large freshwater reservoirs for use by the island's inhabitants. The reservoirs allow them to farm fish and cultivate vegetables and fruit. All told, these interventions have improved the well-being of the *char* communities.

Several NGOs have implemented projects concerning microcredit, disaster management, health and sanitation, and building physical infrastructure. In addition, along with the Government of Bangladesh they have adopted programmes to increase disaster preparedness. Most of the interviewees said that they receive early warnings of cyclones through either radio or from the local CCP volunteers. Local people participate in disaster management committees at the local level as well. Most interviewees stated that they move to a cyclone centre after receiving word of the evacuation order from the government. Furthermore, on the island there are some high-elevation *kella* which,

although in need of improvement and maintenance, nevertheless can still serve as shelter for livestock during a disaster.

The local fishing communities follow different strategies to mitigate disaster risk. As thatched houses are vulnerable to strong winds, almost all of these have been replaced with tin roof or brick houses within the last ten years. Most of the island's inhabitants have also raised the foundation of their homes (as was done in the Sundarbans) and built stronger sheds for their livestock and domestic birds. Using seedlings distributed by the Forest Department and NGOs, the inhabitants have cultivated an extensive forest plantation to stabilize their homestead land and increase sedimentation. In addition, with support from the Government of Bangladesh and development partners, some women have established mangrove nurseries to further this afforestation. Another benefit of building physical infrastructure is that it has enhanced the mobility of fisher communities and created secondary job opportunities (e.g. labour for building embankments). Fisherwomen also receive training from NGOs (as in the Sundarbans) for supplementary occupations such as sewing, nursery planting, fish farming, poultry farming and livestock rearing.

Due to saltwater intrusion, most of the arable land remains periodically unproductive. Though the situation has improved over time, increased soil salinity is still a challenge. To overcome this problem, salt-tolerant rice varieties have been introduced with help from certain NGOs. The inhabitants of the island have also adopted new techniques for crop cultivation and fish farming to cope with the adverse changes, which has increased overall agricultural productivity and thus enhanced food security and income. Overall, the majority of the fishers feel that they are now more self-reliant and resilient, and more capable of confronting the hazards of nature, than they were ten years ago.

3.4.3 *Moheshkhali*

Moheshkhali Island is an upazila (subdistrict) that is separated from both Cox's Bazar district and the Bangladesh mainland by the Moheshkhali Channel. An offshoot of the Bay of Bengal, this channel is the main fishing area of the traditional fishers. As an open access fishery, there is no legal ownership granted by the state for coastal fishers. Instead the fishers have a system, known as *Faar*, of locally enforceable hereditary entitlements that grants fishing rights in the fishing zone. Even with this system in place, however, they still encounter problems of encroachment from industrial fishers. Although the Marine Fisheries Ordinance of 1983 prohibits industrial fishers from fishing in waters less than 40 m deep, they often fish much closer to shore (at 30 and even 20 m depth). Coastal fishers complain of their nets being ruined by industrial trawlers, and conflicts between the two groups have been escalating.

Most small-scale fishing is offshore and thus entails huge costs for fishing gear and boats, which the majority of fishers cannot afford. Instead, fishers mainly work as clients of the local fish entrepreneur, known as the *Bobodder* (boat owner). The *Bobodder* usually owns fishing gear and boats and hires other fishers as crew or as skipper. The majority of the boat crews are contracted for eight months of fishing per year. They normally go on three fishing trips per month, with each trip usually lasting 6–7 days depending on the situation. As most of the fishers are poor, they often have to get advance loans from the boat owner. Male fishers are engaged full time in fishing, so women usually take up alternative occupations to support their families. Fishers also engage in homestead gardening for family consumption, while some well-to-do fishers have invested in shrimp farming and agriculture and other non-farm businesses. In addition, fishers may send family members abroad to earn remittances. Most of the fishers send their children to school. Those who are registered as fishers and in possession of a *jete card* (an identification card for fishing as a permanent occupation, provided by the Department of Fisheries) usually receive compensation (40 kg rice) when there is a hilsa fishing ban.

One of Bangladesh's worst cyclones, Gorky (1991), hit the southwestern coast where Moheshkhali Island is situated, causing a total of approximately 140 000 human fatalities nationwide and devastating the island itself. Afterwards the government (as it did in Char Kukri Mukri after the 1970 cyclone there) launched a coastal afforestation project along the coast. The forest plantations that have been since cultivated not only provide protection from wind and rising tidal water, but are also a resource that can be sold for cash in the future. The government also initiated awareness raising programmes on disaster risk for the fishers, as well as training programmes (in conjunction with NGOs) on safety at sea. As is the

case in the Sundarbans and Char Kukri Mukri, almost all communities in Moheshkhali have at least one cyclone centre within two kilometres distance of their home (Table 3).

In the more recent case of cyclone Mora (2017), all fishers of the island received an early warning in their local dialect, and the majority were able to move to safety. However, this cyclone exposed the precarious conditions of small-scale fishers in terms of both their safety and their livelihood. According to a government estimate, 53 fishers from Moheshkhali were killed by the cyclone while they were out fishing. The fishers who were interviewed complained that boat owners often force fishers to continue even when the weather is unfit for fishing. As the waged fishers usually do not get their money when they don't fish, they are often forced to disregard cautionary weather signals and continue fishing in rough weather. Moreover, the fishing boats in most cases do not have a radio for communication, and therefore fishers may not receive cautionary weather warnings if they are already out at sea. Government agencies often inspect fishing boats to ensure they have the proper safety equipment. Nevertheless, the fishers interviewed reported a lack of life-saving equipment such as life jackets, and at least half of the interviewees reported experiencing accidents at sea. In the case of cyclone Mora, the families of deceased fishers did receive support from the government (normally a one-time support of BDT 50 000), and the local officials indicated that the government planned to rehabilitate the households of the fishers who had lost their lives.

The experiences in the three study sites reflect how different activities of the government, CSOs and the communities themselves are aligned with HRBA and thus constitute good practices for implementing the SSF Guidelines. The priority of these interventions both in the short and long term is to ensure food security (e.g. the VGF programme, training for homestead gardening) and improve nutritional security. There are also some specific programmes (such as VGF) that are tailored to the vulnerable and marginalized population. The overall efforts of the communities, the government and development partners are to reduce poverty. Although small-scale fishers are considered to be poorer and more vulnerable than other professional groups in rural society, in the study sites they have almost the same standard of living as other mainstream rural communities in terms of housing, water, sanitation and sources of energy – and thus they are not “left behind”. The fact that the majority of NGO beneficiaries are women shows there is a focus on gender empowerment and equality, which relates strongly to the fundamental principles of human rights. Finally, in terms



Multi-purposed cyclone centers used for emergency shelter during cyclones and extreme weather condition

of protecting the safety and well-being of fishers, the government has implemented initiatives (such as early warning systems) to protect small-scale fishers from the impacts of disasters and climate change.

However, as for the majority of developing countries, there are also limitations in implementing HRBA. There are concerns about fair distribution of benefits due to corruption and nepotism. Although small-scale fishers do have some degree of participation in decision-making, there is still a long way to go toward achieving active, free and meaningful participation. As they are poorer members of society, considerable work needs to be done to ensure their rights, including the right to decent work; procedural rights such as those relating to participation, non-discrimination and accountability, and power sharing; and the right to equal access to social security and services such as savings, credit and insurance. The next section assesses how outcomes from the case study analysis reveal further connections towards creating an enabling environment for disaster risk management for small-scale fishers in Bangladesh.

3.5 Conditions creating an enabling environment for SSF Guidelines implementation

Bangladesh has broadened its disaster management emphasis from one of response and relief to one of risk reduction, through a capacity building framework that focuses especially on the poor and disadvantaged (Table 4). This is an example of what the SSF Guidelines aim for when advocating HRBA to remove inequity and focus development efforts on vulnerable and marginalized populations (Willmann *et al.*, 2017). The country's disaster risk management strategies are particularly promising for creating an enabling environment for SSF Guidelines implementation.

Bangladesh has developed appreciable policy, legal and institutional frameworks for dealing with disaster risks and climate change impacts, in line with paragraph 9.1 of the SSF Guidelines. The country has recognized combating climate change as a major challenge, and thus it has mainstreamed climate change and DRR in its development processes. For example, after the Disaster Management Act 2012 was enacted, the Development Project Proforma process was amended to make climate and disaster risk analysis mandatory before approving new development projects (Ministry of Planning, 2016). Moreover, the government has recently adopted a Seventh Five Year Plan (2016–2021) on climate change and DRR, which emphasizes building resilience of the poor and marginalized population by reducing their exposure and vulnerability to geo-hydrometeorological hazards, environmental shocks, human-induced disasters, emerging hazards and climate-related extreme events (Ministry of Planning, 2016).

The government emphasizes the provision of priority services to more vulnerable communities, although it does not explicitly refer to small-scale fishing communities or the SSF Guidelines. Nevertheless, this is a good practice in line with paragraph 9.2 of the Guidelines. For example, climate-vulnerable communities of Char Kukri Mukri receive special attention from the government, CSOs and development partners. Two-tiered structural cyclone mitigation measures implemented on the island, such as building coastal embankments and furthering coastal afforestation, have provided physical protection from disaster risks such as erosion, saline water intrusion and rising tidal water. In all three study sites, it was observed that different support programmes by the government, NGOs and communities themselves helped to mitigate climate change-induced disaster events by improving food security, nutrition, housing and livelihoods (paragraph 9.2). The SSF Guidelines call for the implementation of special support programmes for the poor and marginalized, which can be seen in certain provisions of the Disaster Management Act 2012 as well as the core mandate of the DDM. These provisions call for creating risk reduction programmes, especially those concerning humanitarian assistance, as well as developing capacities of the poor and the underprivileged in order to promote food security. In the study sites, the government

TABLE 4
Enabling factors for implementation of the SSF Guidelines, and current disaster risk reduction (DRR) practices in the three study sites

| Factor | Explanation of the enabling condition | Relevant paragraphs of SSF Guidelines | Criteria and score on existing practice* | | |
|---|--|---------------------------------------|--|------------------|-------------|
| | | | The Sundarbans | Char Kukri Mukri | Moheshkhali |
| Community resilience | Communities at risk are receptive to interventions and innovative in their disaster management strategies. There is community involvement in coastal afforestation efforts to reduce coastal erosion and environmental degradation and habitat loss. | 9.7 & 9.3 | Moderate | High | Moderate |
| Community-based decision-making process | There is a proactive early warning system involving community-based decision-making processes. | 10.6 & 12.3 | Low | Low | Low |
| Building back better | There is facilitation for creating a protective forest plantation on and/or around the flood control drainage structure or dam, and also investment in the long-term capacity of the communities. | 9.7 | Moderate | High | Very low |
| Women's participation in good practices | Women participate in disaster management planning at the household level. NGOs provide training for women on disaster management, homestead gardening and awareness. | 11.10, 3.1.4 & 5.15 | Moderate | Moderate | Moderate |
| Government commitment | Bangladesh has set a vision for DRR and has an efficient, globally acclaimed emergency response management system in place. | 10.1 | Low | Low | Low |
| Vibrant development partner/NGO sector | A vibrant NGO sector has helped to build an effective partnership for DRR, gender equality and women's empowerment. | 10.6, 8.2 & 2.3 | Moderate | Moderate | Moderate |
| Appreciable legal and institutional framework | There is an appreciable policy, legal and institutional framework that identifies the actors and their roles related to DRR and emergency response in Bangladesh. | 9.1 | High | High | High |
| Disaster management committee | Bangladesh has set up disaster management committees at all levels for holistic management with cross-sectoral collaboration. | 9.2 | High | Moderate | High |
| Wider social safety net programme | Bangladesh has implemented programmes such as VGF, Test Relief and Kabikha (food-for-work), particularly for the poor and vulnerable, as well as a cash-for-work programme for the rehabilitation of physical infrastructure. | 9.2 | Moderate | Low | Very low |

* Criteria and scores are based on the authors' qualitative evaluations of field observations: Very low (negligible practice; score: 0–20); Low (existing practice, but needs much improvement; score: 21–40); Moderate (moderate practice, nevertheless still needs improvement; score: 41–60); High (satisfactory practice, but further improvement needed in implementation; score: 61–80); Very high (highly satisfactory practice, may readily be followed by others; score: 81–100).

has launched different food security programmes such as food-for-work and the VGF for poor and marginalized groups affected by cyclones. Training programmes have also been implemented in the Sundarbans and Char Kukri Mukri for support in pursuing alternative occupations. Furthermore, after enacting the SOD, the government established a disaster management committee from the national level to the local government level (including district, subdistrict and union levels) to play a significant role in disaster preparedness. This institutional arrangement provides the basis for “full and effective consultation with fishing communities including indigenous peoples, men and women, paying particular attention to vulnerable and marginalized groups” (paragraph 9.2).

The SSF Guidelines call for integrated and holistic approaches, including cross-sectoral collaboration, to address disaster risks and climate change in small-scale fisheries (paragraph 9.3). In principle, Bangladesh has taken a comprehensive approach towards disaster management. The Disaster Management Act 2012 and National Disaster Management Policy 2015 emphasize the importance of building strategic, scientific and implementation partnerships with public, non-governmental, academic and community institutions in order to develop collaborative disaster risk reduction strategies. As observed in the present case study, not only the government but NGOs, development partners and the communities themselves have actively participated in addressing crises arising from natural disasters and climate change. Some disaster management strategies of Bangladesh have also been very useful in addressing other issues, as stipulated in paragraph 9.3 of the SSF Guidelines. Mangrove afforestation and coastal afforestation have been very effective against coastal erosion and habitat degradation. In addition, after cyclone Aila, a range of livelihood support such as providing cash, boats and nets contributed to reducing vulnerability in the region (Sadik *et al.*, 2017). Though the majority of the government interventions have only focused on the short-term survival of disaster-affected communities, there are still some interventions that have led to long-term resilience building.

The SSF Guidelines (in paragraph 9.7) call for applying the concepts of the relief to development continuum and “building back better” for restoring livelihoods throughout the emergency sequence, including in the immediate relief phase. In addition, rehabilitation, reconstruction and recovery processes should include actions to reduce vulnerabilities to future threats. This is what Bangladesh attempted to do during and after cyclones Aila and Sidr. During the immediate relief phase, the government provided relief in the form of food, medicine and shelter. Then in the subsequent phases of rehabilitation, reconstruction and recovery, the government invested in building physical infrastructure such as restoration of access roads and embankments, and building more cyclone centres. Apart from the government, NGOs and the fishing communities themselves have been implementing different initiatives – some traditional, others innovative. NGOs provide microcredit for buying food grains and restoring physical infrastructure, provide training on health and sanitation, and provide cash capital and training for starting alternative occupations so as to strengthen the long-term resilience of the communities. Some NGOs are also involved in environmental restoration through mass forest plantation efforts. All these efforts reflect an overall policy guided by the concept of “building back better”.

Community members have followed different adaptation strategies (e.g. alternative occupations, adopting innovative technologies for agriculture) to make them more self-reliant and capable of confronting disasters. The communities have also been receptive to any government or NGO interventions that help enhance their capacity to adapt to possible impacts of climate change. The policy, legal and institutional frameworks adopted by the government provide a legal basis for decision-making at the local level. The awareness related to DRR has increased, and hence the majority of the fisherfolk obey when they receive a government evacuation order. People now think of the long-term resilience of their households and communities. They plant trees for environmental and economic security, and also invest in education for their children. Though the government and NGOs do not necessarily follow HRBA deliberately in delivering services to disaster-stricken communities, all these responses are in line with meeting basic rights and needs such as rights to food, health and education. Thus the government efforts implement human rights in several areas including social protection, occupational safety, and disaster risk management measures.

As asserted in the Global Assessment Report of UNISDR (2015), Bangladesh’s success in reducing cyclone-related mortality stems not only from building cyclone shelters but also from a slow but steady improvement in the provision of basic

education, health and sanitation, as well as a reduction in the number of people living below the poverty line (UNISDR, 2015). Small-scale coastal fishers are traditionally poor, and vulnerable to extreme events. Indeed, hazards or climate change cause more loss and damage to fishers than other professional groups (Islam, 2011; Islam and Chuenpagdee, 2017; Shamsuddoha *et al.*, 2013). The socio-economic conditions of the small-scale fishers in the study sites mostly mirror the national average data. This could be seen as being indicative of their overall resilience, even after repeated exposure to hazards (Tables 1 & 2); nevertheless, they still require support from the government. Bangladesh has established a Natural Disaster Risk Reduction Fund for DRR and climate change adaptation (GoB, 2012). Giving small-scale fishers access to this fund will create an enabling condition for implementation of paragraph 9.6 of the SSF Guidelines, i.e. transparent access to adaptation funds. Finally, in cases of human-induced disasters, the Disaster Management Act 2012 has provisions for claiming compensation for any loss or damage caused either willingly or due to negligence (paragraph 9.5). There are a number of provisions in the act, including establishment of a Disaster Management Fund, Volunteer Platform, and Research and Training Institute, which correspond to different recommendations of the SSF Guidelines.

3.6 Implementation challenges and recommendations

Disaster management in Bangladesh is often hindered by insufficient institutional coordination and collaboration among the partnering stakeholders. In the case of cyclone Aila, Islam and Chuenpagdee (2017) note that the main problem was lack of coordination among various agencies working in the affected areas of the Sundarbans. As a result, the recovery process was interrupted several times by delays in embankment repairs. Hence, it is important to foster institutional coordination and collaboration (SSF Guidelines paragraph 10.1). Capacity development should include a focus on disaster risk management and climate change adaptation in small-scale fisher communities (paragraph 12.3). As small-scale fishers are more vulnerable to disaster than many other professional groups, they warrant further political consideration. The existing disaster governance system, however, only takes them into account as part of a broader community, without consideration of their specific issues. Therefore the capacity of small-scale fishing communities should be enhanced to enable them to participate in decision-making processes (paragraph 12.3). Furthermore, as Bangladesh's fisheries management is characterized by a conventional top-down approach, the implementation of the SSF Guidelines will require the inclusion of fishers' organizations and NGOs when shaping, implementing and facilitating efforts to resolve issues (including DRR) related to small-scale fisheries.

It is important to build synergy between state and non-state actors (fishers' organizations, CSOs) to achieve the policy coherence and institutional coordination and collaboration needed to implement the Guidelines. However, political will is also necessary to tailor the roles and responsibilities of institutions to the specific context, and regulations must serve their function with a specific focus on small-scale fisheries (compare with paragraph 10.1). The country's national fisheries policy was adopted in 1998, but without adequately addressing small-scale coastal fisheries and disaster risk. If Bangladesh adopts a new fisheries policy, this will create an opportunity to incorporate the SSF Guidelines by making the policy coherent with a long-term vision for small-scale fisheries and human rights, paying particular attention to vulnerable and marginalized groups who are more susceptible to climate change impacts (paragraph 10.4). This includes consideration for gender-specific vulnerabilities in order to mainstream gender issues into disaster risk management (paragraph 11.10).

Another important issue related to SSF Guidelines implementation is consideration of community empowerment and power relations, which fall short in the current disaster risk management approach. As observed in Moheshkhali, fishers experience

pressure from powerful boat owners to take risks, such as going out and staying out in rough weather. This is partly an issue of power, but also one of poverty. Fishers are not in a position to resist this pressure, which in effect leads to frequent loss of life. Fishers' organizations could help cushion the impact of shocks and stress on fishers, and thus reduce their vulnerability (Islam, 2011). Unfortunately, these organizations in Bangladesh are mostly dysfunctional, and therefore the government should promote their revitalization, as well as that of CSOs, for implementation of the SSF Guidelines (paragraph 10.6). The SSF Guidelines is a new development instrument, and largely unknown to policy-makers and fishery stakeholders, including the fishing communities themselves. Thus steps are required to create awareness of the Guidelines (paragraph 13.3). Creating awareness among officials on the relevance of HRBA in the context of natural disasters and climate change is also important, as these officials are ultimately in charge of implementing government decisions on disaster management at the field level.

4. CONCLUSIONS

Small-scale fisheries in Bangladesh play an important role in supplying animal protein, ensuring food security, and providing employment for the local population. They are, however, very vulnerable to natural disasters and climate change, both at sea and in their communities on land – precisely the type of population that the SSF Guidelines aim to protect. The Government of Bangladesh has yet to take any decision regarding implementation of the Guidelines, nor carry out any intervention where they are explicitly mentioned. Nevertheless, the Government has implemented several initiatives that have in effect created an enabling environment for fulfilling some notable targets of the SSF Guidelines regarding disaster risks and climate change. These may be interpreted as good practices, and from a human rights perspective as well, given their broad scope. Desk review and fieldwork in the study sites (as presented in Table 4) reveal a number of these good practices in relation to DRR and climate change, including the following:

- Inclusion of DRR and climate change as part of all development policies in Bangladesh;
- Promotion of food security as an important factor in ensuring community resilience when facing hazards;
- Investment in infrastructure and the local economy for long-term resilience (i.e. “building back better” initiatives);
- Early warning system involving community-based decision-making processes;
- Wider social safety net programmes (e.g. Vulnerable Group Feeding programme) to support the poor and disadvantaged who are at risk;
- Active and well organized NGO network at the grassroots level;
- Development of a robust policy, legal and institutional framework for a comprehensive approach towards disaster management;
- Two-tiered structural cyclone mitigation measures (e.g. coastal embankments and coastal afforestation);
- Construction of multipurpose cyclone shelters along the entire coastal region of Bangladesh.

However, there are several challenges ahead for the implementation of the SSF Guidelines. In Bangladesh, current ideologies, perceptions and policies targeting disaster risks and climate change do not refer sufficiently to small-scale fisheries and human rights. Thus political will is necessary for these conditions to be changed on the ground. There are also gaps in coordination and collaboration among different institutions that hamper the ability of government services to build long-term resilience in the communities. To overcome these constraints, there needs to be increased

awareness in government organizations on what the SSF Guidelines say about human rights in the context of natural hazards and climate change. Furthermore, it is equally important to build the capacity of communities to participate more effectively in decision-making processes regarding disaster risk reduction.

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Small-scale fishing vessels at mooring
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Influencing regional Caribbean small-scale fisheries policy through protocol

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ABSTRACT

Small-scale fisheries are a prominent feature of the 17 small island developing States that form the Caribbean Regional Fisheries Mechanism (CRFM). A binding treaty, the Caribbean Community Common Fisheries Policy (CCCFP), was approved in 2014 for implementation in the CRFM region. That same year, the Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines) were endorsed by the 31st Session of the FAO Committee on Fisheries for global implementation. Drafting the CCCFP concluded in 2011, however, well before the SSF Guidelines were adopted in 2014, and thus the principles of the SSF Guidelines were not explicitly incorporated into the CCCFP. This paper presents a case study analysing the good participatory practices used to formulate a protocol to incorporate the SSF Guidelines into the CCCFP. The participatory process was led by a partnership of Caribbean fisheries stakeholders, which prominently featured the regional fisherfolk network. Several methods were used within a conceptual framework for policy influence, to which was added a participatory approach and capacity development. The influence exerted on the CRFM's policy advisers and policy-makers constituted a good practice. The Ministerial Council of the CRFM agreed to adopt the protocol in May 2018 and it entered into force immediately. The protocol should enhance food security, improve the socio-economic situation of fishworkers, and achieve sustainable use of fisheries resources through the promotion of a human rights-based approach that includes gender. The ministers urged national fisheries authorities and other stakeholders to actively implement the protocol. They

called upon regional and international development partners and donors, including Non-governmental Organizations (NGOs), to support and assist implementation. The collaborative policy influencing process for creating the protocol is a practice that could be adapted and replicated to implement the SSF Guidelines in other regions.

1. INTRODUCTION

Small-scale fisheries for inshore and offshore marine resources contribute significantly to national food security, livelihoods, foreign exchange earnings, social relations, culture and well-being in the Caribbean (Fanning, Mahon and McConney, 2011). These fisheries are prominent features of the 17 small island developing States that make up the Caribbean Regional Fisheries Mechanism (CRFM).¹ This is the regional fisheries body of the countries of the Caribbean Community (CARICOM). The mission of the CRFM is: “To promote and facilitate the responsible utilization of the region’s fisheries, and other aquatic resources, for the economic and social benefits of the current and future population of the region” (CRFM, 2002). The CRFM is composed of the Ministerial Council, Caribbean Fisheries Forum and CRFM Secretariat.

1.1 Fisheries policy instruments

Two decades ago the 1995 FAO Code of Conduct for Responsible Fisheries (CCRF) started being implemented to guide national fisheries management planning in CRFM countries. CCRF principles were used as guidelines in the development of the Caribbean Community Common Fisheries Policy (CCCFP) and also appear in the text of the document. This policy is a binding treaty negotiated within the CRFM beginning in 2003 and approved for implementation in 2014. The CRFM Secretariat leads initiatives to encourage Member States to implement the CCCFP. The Policy has the potential to support and strengthen the pursuit of the CRFM’s mission; this potential is enhanced by its links to several other regional and global fisheries instruments as set out in its preamble.

Building upon and complementing the CCRF are the Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines). These were endorsed in 2014 by the 31st Session of the Food and Agriculture Organization (FAO) Committee on Fisheries (COFI). The SSF Guidelines comprehensively address key issues for securing sustainable small-scale fisheries globally. However, their adoption in 2014 came well after the drafting of the CCCFP, which concluded in 2011. Hence the principles of the SSF Guidelines were not explicitly incorporated into the CCCFP, although the two have converged so that they have generally, but not entirely, similar aims and content.

While gender and human rights are not mentioned in the CCCFP, it is designed to be adaptive by permitting protocols to address matters not covered in the original text. It appeared that the CCCFP would benefit from a protocol that incorporates human rights-based approaches (HRBA) and gender mainstreaming as well as other aspects of the SSF Guidelines. However, the process for creating protocols had not yet been specified. Formulating the first protocol was intended as an example of good practice in policy influence to guide future protocols.

This case study was designed to analyse good practices in the process of formulating a protocol to incorporate the SSF Guidelines into the CCCFP. The aim was to demonstrate good practices in participation, aligned with the principles

¹ Anguilla, Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Haiti, Jamaica, Montserrat, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago, Turks and Caicos Islands.

and elements of the SSF Guidelines. Thus attention was paid to communication, collaboration, transparency, capacity development, gender equality, policy coherence and the like. The participatory process was led by a partnership of Caribbean fisheries stakeholders, with the Caribbean Network of Fisherfolk Organisations (CNFO) featuring prominently. The boundary partners for achieving policy influence, especially the CRFM Secretariat, helped to develop the case study proposal. The case study situation and stakeholders are described in the next section, followed by the methods of action research.

1.2 Situation analysis

The CRFM undertook a project from 2004 to 2006 to strengthen national fisherfolk organizations in its Member States and help them establish a networked transboundary entity, the CNFO, which was formed in 2007. Two organizations collaborated regionally with the CRFM in the design, establishment and initial operation of the CNFO: an NGO, the Caribbean Natural Resources Institute (CANARI); and an academic institution, the Centre for Resource Management and Environmental Studies (CERMES) of the University of the West Indies (UWI). The mission of the CNFO is: “To improve the quality of life for fisherfolk and develop a sustainable and profitable industry through networking, representation and capacity building.” The CNFO is an observer to the Caribbean Fisheries Forum, along with CANARI and UWI. Its formation and growth have been reasonably well documented, especially in terms of policy influence and governance (McIntosh *et al.*, 2010).

The CRFM Secretariat and its project partners drew Caribbean fisherfolk leaders from the CNFO into the process for the development of the international SSF Guidelines. Curiously, the CNFO and fisherfolk in general were minimally engaged in the formulation of the regional CCCFP. Moreover, since 2014, they have had a less prominent role in the process of implementing it compared to their leadership in promoting the SSF Guidelines (McConney *et al.*, 2016). Both fisheries instruments have received limited support from Caribbean fisheries authorities. However, the SSF Guidelines have received more attention from fisherfolk than the CCCFP, largely due to an engaging civil society consultative process. Formal and informal groups (fisheries cooperatives and associations respectively), including CNFO members, have also paid more attention to the SSF Guidelines in their current implementation phase than have the national fisheries authorities. In addition, fisherfolk have promoted the links between the SSF Guidelines and the CCCFP more than fisheries authorities (CRFM, 2014). Non-state actors were thus attempting to influence regional fisheries policy before the conceptualization of this case study. However, a key element missing from fisheries governance was the incorporation of the SSF Guidelines into the CCCFP.

When the CNFO called for such synergy between the global and regional instruments at CRFM events, there was no opposition to the recommendation, but nor was there any follow-up action taken (CRFM, 2014). Therefore fisherfolk leaders began to see themselves as the champions and change agents for such integration, with support from their usual partner organizations. In 2016 the partnership’s collaboration and engagement with the SSF Guidelines implementation process deepened as key actors participated in FAO events (and others) that focused on the human rights-based approach (HRBA) (FAO, 2017a) and gender (FAO, 2017b). Early in 2016 CERMES formed the Gender In Fisheries Team (GIFT) aimed at implementing Chapter 8 of the SSF Guidelines on gender mainstreaming. The partners were represented in GIFT along with a variety of interested individuals, NGOs and academics (GIFT, 2017). GIFT led the early stages of preparing the protocol case study proposal, but it was soon broadened from a gender focus to include all aspects of the SSF Guidelines. Reasons for this expansion of scope included the fact that gender is addressed throughout the SSF Guidelines, not only in the chapter bearing that title (FAO, 2017b); and that the

case study would be strengthened by comprehensive treatment. The partnership also acknowledged the synergies between an operational SSF Guidelines protocol to the CCCFP and the several fisheries projects and programmes in the region that would be strengthened by having an appropriate policy.

2. METHODOLOGY

The case study employed several methods loosely guided by a conceptual framework for policy influence to which was added a participatory approach, capacity development and leadership. A purely academic or research orientation was considered to be less appropriate than an applied approach that retained key conceptual elements, but focused on practical processes, outputs and learning.

2.1 Approach to policy influence and communication

For this case a policy influence approach was used to guide analysis and learning. Policy influence, a type of advocacy, is a planned series of actions or interventions intended to stimulate changes in policy and policy actors through persuasion (Tsui, Hearn and Young, 2014). Changing policy can be complex, involving multiple processes and stakeholders concurrently or sequentially at different levels of governance, and linked to each other by diverse types of relationships. Policy influence engages this complex world of policy change (Tsui, Hearn and Young, 2014). Funnell and Rogers (2001) provide seven parameters of policy influence that resonate with this study's approach to understanding and influencing regional small-scale fisheries policy in the CRFM social-ecological system (Table 1). Against these parameters are set out corresponding considerations relevant to the case study methodology.

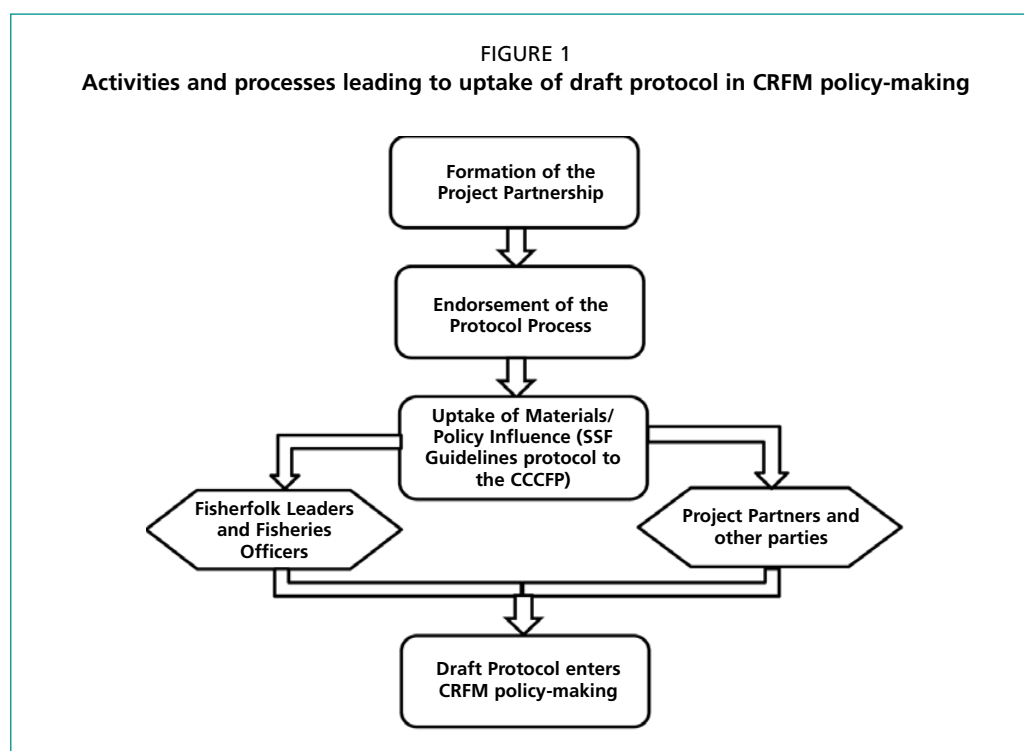
TABLE 1
Seven parameters of an approach to policy influence in complex systems

| Policy influence parameters | Application of the parameters to understanding policy influence in this case study |
|---|---|
| Objectives (Is your impact goal simple and fixed, or does it vary over time?) | Two simple and fixed goals are easy to identify and are stable over time, but achieving them can be quite challenging and complex: 1. Raise awareness of the SSF Guidelines and the CCCFP among fisheries stakeholders, and especially among fisherfolk. 2. Guide the implementation of the CCCFP via the SSF Guidelines protocol. |
| Governance (the number of stakeholders involved in decision-making) | Identifying critical stakeholders for influencing and sustaining policy change is not easy. The numbers and identities of likely stakeholders at regional, national and local levels of fisheries governance vary, and 17 countries must be taken into consideration. The complexity of fisheries governance in the Caribbean must be considered as well as the uncertainty in identifying key decision-makers. |
| Consistency (Does your intervention need to be adaptive?) | Intervention requires participatory processes for partnering with known institutions and engaging stakeholders throughout the implementation of the case study. Adaptation is likely to be necessary in order to achieve consistent policy influence. |
| Necessity (Are there many different ways of achieving the same impact?) | Formulating a protocol for incorporating the SSF Guidelines into the CCCFP is the main way of achieving the desired impact of regional implementation. A less formal approach of using the SSF Guidelines opportunistically would not provide the basis for guiding fisheries management planning. There are lessons learned from incorporating the Code of Conduct for Responsible Fisheries. |
| Sufficiency (One or multiple activities required for impact?) | Multiple activities: participating in fisheries governance events, fisherfolk meetings, development and delivery of communication materials (project announcements, press releases, policy briefs, news articles), online and in-person surveys, protocol content prioritization through a participatory process, and others. |
| Predictability (of the change pathway) | It is hard to predict the level of interest and awareness of stakeholders in order to gauge the types of activities (events, meetings, communication materials) necessary for stakeholder awareness and to influence desired change. |
| Unintended outcomes (the propensity for them) | There is a high propensity for unintended outcomes, due to many uncertainties and sources of policy influence in most countries. The time it takes for the participatory process to generate desired/intended outcomes is unknown. It took ten years to develop the fairly simple CCCFP and several years to develop a declaration on IUU fishing. In addition, the SSF Guidelines is just one among several FAO global fisheries instruments that countries are currently being encouraged to implement. |

Source: Based on Funnell and Rogers, 2011.

The overall goal is to enhance, secure and support sustainable small-scale fisheries as set out in the legal mandate of the CRFM. The protocol to incorporate the SSF Guidelines is a means to that end. Although policy influence interventions can generate desirable impacts, these are not guaranteed. The entries in Table 1 suggest a high degree of complexity and uncertainty that demands a mix of methods to achieve the objectives. This mix is examined below.

First, policy influence, or advocacy more broadly, needs to be informed by and then executed through effective communication. Assessing and then developing the capacity to communicate is a necessary early step. Second, exchanges between stakeholders within decision-making arenas should increase policy influence. Multidirectional and interactive communication is necessary. Third, policy influence needs to be focused on key actors and prioritized topics rather than applied with a broad brush. The prioritization should be participatory to ensure the legitimacy of the process and resulting content. Fourth, the types of participatory processes and how they are undertaken are critical. The sequence of these activities is shown in Figure 1. In the next few sections, we describe the above methods and the activities of the case study partners comprising the CNFO, CANARI, the CRFM Secretariat and UWI-CERMES between February and September 2017.



This partnership was tasked with engaging stakeholders from fisherfolk organizations, key agencies (fisherfolk leaders, fishers, and fisheries officers and/or directors, with an emphasis on having female fisherfolk represented) and intergovernmental organizations such as the CRFM Ministerial Council. Stakeholders, in particular fisherfolk within the partnership, prepared for the extended participatory and policy influence process by strengthening their capacity in these areas. In this regard, the CNFO executive was provided with guidance on policy influence, which was done through sharing documents that described, in brief, the importance of policy and strategies for effective influence.

2.2 Preparation and community capacity building

CERMES confirmed the CNFO's interest in co-leading the protocol process with their support. A case study inception meeting was held on 29 March, preceding the CRFM's 15th Meeting of the Caribbean Fisheries Forum on 30–31 March 2017 in Kingston, Jamaica. CERMES and CANARI representatives attended the meeting along with the entire executive and staff of the CNFO. The inception report was submitted to FAO and returned with feedback during the inception meeting; this timely response helped fully engage the CNFO as partners in the project. Partner roles, timeline for activities, budget utilization and deliverables were decided at the meeting. The CNFO's communication capacity was a topic of discussion despite the body having been involved in policy influence since its formation in 2007. It was noted at the meeting that a previous advocacy strategy existed (Roopchand, 2013) and that a new CNFO Communication Strategy and Plan (Haynes, forthcoming) was in the final stages of preparation. The latter could guide the CNFO advocacy agenda and approach to the protocol and policy influence generally. Nonetheless, it was determined that the CNFO still needed to refresh or further develop its communication capacity.

In order to help strengthen CNFO communication capacity, the protocol project provided access to a set of over 20 two- to four-page guidance notes from CIPPEC (Centre for the Implementation of Public Policies Promoting Equity and Growth) which covered policy influence design, implementation, monitoring and evaluation. Copies of the SSF Guidelines were distributed for use in fisherfolk consultations in the home countries of the CNFO executive members gathered in the meeting. These fisherfolk leaders had previously participated in training and action learning workshops on the SSF Guidelines and were therefore already familiar with them. One member of CNFO staff was widely well respected as being particularly knowledgeable about the Guidelines, as he had participated in the FAO global process to formulate the Guidelines (including the COFI at which they were adopted). The expectation was that he would serve as an internal resource person along with advisers from the other partner organizations. The method for strengthening the existing communication capacity was thus a mix of publications and human resources made available to the CNFO leaders.

2.3 Policy influence and communication in practice

The partners' one-day pre-Forum workshop on 29 March was also used as an opportunity to craft input to the Forum agenda in support of the SSF Guidelines protocol to the CCCFP. The intention was to begin policy influence starting with the senior fisheries officers (policy advisers) in the Forum in March, and proceeding to the ministers (policy-makers) in the Ministerial Council in May. The latter were in a position to give the protocol process the political endorsement required to ensure that it remained on the regional fisheries policy agenda until completed. CERMES secured a place for the protocol on the Forum agenda, and the CNFO agreed to support the formal intervention and action advice so that it could be entered into the meeting record.

To increase awareness of and engagement in the project, and to further build capacity for policy influence while promoting the SSF Guidelines, a set of communication materials were produced. The CNFO, with some assistance from the remainder of the project partnership, identified fisherfolk leaders and fisheries officers to whom these materials would be sent. These materials, which were produced and disseminated in May, included the following:

- Press release: This was sent to Caribbean print and radio media outlets. It included a short description of the project, highlighting the importance of having an SSF Guidelines protocol to the CCCFP (moving policy into practice).
- One-page project announcement: This was shared among the partnership for distribution to fisherfolk in CNFO and CRFM countries. The announcement

briefly described the SSF Guidelines, highlighting how fisherfolk would benefit from having a protocol to the CCCFP.

- One-page information flyer: This was distributed to key stakeholders explaining the purpose, importance and benefits of having an SSF Guidelines protocol to the CCCFP.

In May and June, five two-page policy briefs were produced explaining the key content of a protocol for incorporating the SSF Guidelines into the CCCFP (CERMES, 2017a to 2017e). These were included in a series of UWI-CERMES Policy Perspectives. The first three briefs covered the three parts of the SSF Guidelines instrument: introduction, responsible fisheries and sustainable development, and ensuring an enabling environment and supporting implementation. Each brief examined the corresponding sections in the SSF Guidelines and briefly explained the practical benefits of incorporating the Guidelines into the CCCFP. The last two policy briefs focused on the two main areas of the SSF Guidelines not covered in the CCCFP: HRBA and gender. The HRBA policy brief focused on explaining the concept and highlighting how the SSF Guidelines can strengthen the CCCFP, while the gender brief explored why the CCCFP needed a protocol that included gender mainstreaming, equity and equality.

In July, a short article was prepared for the CRFM newsletter (CRFM, 2017a). It summarized the project purpose, objectives and policy influence to date, and was aimed at audiences of mainly fisheries officers and other government officials across the 17 countries of the CRFM.

All of the above were made available on the CERMES Web site and linked to by the other project partners. Other communications were ad hoc and consisted of opportunities for sharing information on the project at events such as the MARE People and the Sea conference in Amsterdam and at various regional fisheries events. These aimed to both inform and validate the processes used.

2.4 Survey of priorities for protocol content

Although the decision was taken to broaden the scope of the protocol from a gender focus to encompass all of the SSF Guidelines, the partnership thought it necessary to hear from all fisheries stakeholders, especially fisherfolk, their views on which chapters of the SSF Guidelines were priorities for policy attention and why. The intention was also to raise awareness and increase information exchange on both the SSF Guidelines and the CCCFP in the process. Originally, there were two main methods devised for this, as explained below.

The more elaborate method was for CNFO fisherfolk leaders to hold meetings on the protocol, using the various communication materials such as handouts (where appropriate), so they could hear the views of participants as a group without necessarily seeking consensus. A guidance document outlining a two-hour meeting agenda with a sequence of discussion items using (but not dependent upon) the handouts was shared among the partners and fisherfolk leaders to encourage implementation. The intention was to learn participants' priorities, and their arguments for them, in order to inform debate in the policy process and implementation.

The operationally simpler method was a short survey form asking respondents to prioritize the chapter topics on a 1–5 Likert scale, with space to briefly explain their choices if they wished. The survey consisted of nine response items. Participants were asked to rate the first six on a scale ranging from very low priority to very high priority. The first five items were the core thematic areas of Part 2 of the SSF Guidelines while the sixth item was the label for the whole of Part 3. The remaining three items asked for personal contextual and contact information, plus comments for feedback. The items are listed below:

1. Governance of tenure and resource management
2. Social development, employment and decent work
3. Value chains, post-harvest and trade
4. Gender equality
5. Disaster risks and climate change
6. Ensuring an enabling environment and supporting implementation
7. Participant background information
8. Participant personal information
9. Comments

The survey form could be (a) self-administered online, (b) self-administered on paper, or (c) administered by an interviewer in individual or group exercises. Computer and reading literacy were requirements for all but the interviewer-administered questionnaire method. The resulting information was likely to be less rich unless the interviewer or respondent used the questionnaire more as a semi-structured interview guide of open-ended questions in addition to completing the scale rating.

The reasons for not holding the meetings are discussed later, but they hinge mainly upon the low capacity of fisherfolk organizations to engage their members in fisheries policy. This left the survey as the main method. Although fisheries officers and other stakeholders also responded to the survey, the main purpose was to get fisherfolk input in the prioritization of topics for the regional protocol to the CCCFP, based on national priorities for small-scale fisheries in their countries, and also to give them an opportunity to influence fisheries policy across the CRFM region. Consequently, the design did not require that respondents have prior knowledge of either the SSF Guidelines or the CCCFP, although this would be desirable. The survey outlined the chapters of the SSF Guidelines, but provided information on their content by way of examples to help respondents understand what they were prioritizing. Most surveys were completed individually online via SurveyMonkey or Google Forms. Some project partners also held or participated in form-filling group interviews in a few CNFO countries (Saint Vincent and the Grenadines, Barbados, Belize, Suriname, Montserrat and Anguilla). At each of these meetings fisherfolk were briefed on the SSF Guidelines, the protocol and the purpose of the survey. Each question was introduced to the particular group and discussed until it was clearly understood by all. Then participants provided individual responses to the ratings, with optional explanations for their answers. The form was designed to be filled out in 5–10 minutes, but group discussion typically extended the period to 1–2 hours.

The surveyed population was chosen mainly from lists of fisherfolk leaders and fisheries officers available from previous events or from organizational memberships. There was no sample frame and no means of selecting a random sample. The group of respondents represented a convenience sample, but attention was paid to soliciting responses from both men and women in the two broad categories of respondents.

The survey closed in mid-September, with Excel used for the data table, analysis and to display charts of descriptive statistics. A statistical summary of responses (using slides) was shared via the CNFO with fisherfolk organizations, and results were sent to those respondents who had requested them on their survey form along with contact information. There was little feedback given by the respondents, although this wasn't vigorously solicited by the project. The survey results were then used to inform the drafting of the protocol.

2.5 Design criteria and process for the draft protocol

The draft SSF Guidelines protocol to the CCCFP was informed by reviewing existing protocols from the CARICOM Web site and by liaising with legal personnel from CARICOM and the CRFM who had experience in protocol drafting and the

preparation of other legal documents. The main design criteria agreed among the project partners were that the draft protocol had to be brief, and had to include clear implementation recommendations for incorporating prioritized or all chapters of the SSF Guidelines into the CCCFP. It was agreed that the draft protocol would be written in plain language for broad communication, and only if necessary would the final version be written in legal language (but still as easily understandable as possible).

The finalization of the draft protocol involved scrutiny by the Executive Committee of the Caribbean Fisheries Forum (5 March 2018), followed by consultation with the full Forum for their policy input (16–17 April 2018), and ending at the Ministerial Council for decision-making (18 May 2018). Thus, the protocol should enter into force after mid-2018. The case study project closed after the Forum meeting with the final draft protocol embedded in the policy decision-making system and having attracted strong stakeholder support.

To achieve this, a three-page protocol drafted by the project partners, and approved for informal consultation by the CRFM Secretariat, was distributed by email to fisheries stakeholders including those who had previously been sent the survey. The email, as discussed later, asked recipients to indicate whether:

- a) they would support CRFM approval of the draft protocol as is;
- b) they would suggest changes to the draft protocol (and if so, what changes they would suggest).

The results of this consultation to validate and get feedback on the draft protocol were analysed and used to make small revisions prior to the commencement of the formal approval process. The improved version was presented to the Executive Committee of the Caribbean Fisheries Forum on 5 March 2018. With a few further changes made, the final draft was presented to the full Forum for endorsement and transmission to the Ministerial Council.

2.6 Survey of priorities for protocol implementation

During the final stages of draft protocol endorsement by the Forum, the partnership sought stakeholder views on their priorities for implementation of the protocol, and hence of the SSF Guidelines. A short survey was administered asking stakeholders to first rate the importance of the four main areas of the Global Assistance Programme for implementing the SSF Guidelines: awareness building, strengthening the science-policy interface, empowering stakeholders, and supporting processes for implementation. The survey then asked for the first priority, and also the most important, regional- and national-level actions to implement once the protocol entered into force. The respondents were the same as those who had been used for the previous priorities survey, whether they had responded or not.

In addition, the case study webpage created on the CERMES Web site was maintained to continue building awareness and engagement. Communication materials including CCCFP and SSF Guidelines information briefs, the text of the protocol, and priorities survey results remain available on the webpage. The project partnership will monitor fisheries stakeholders for indications that the SSF Guidelines are becoming more widely known and accepted.

3. RESULTS AND DISCUSSION

As shown in Figure 1 the case study was implemented as a series of linked concurrent and sequential activities. In the latter the findings from the previous steps were taken into account. In order to make the sequential considerations clear, results are presented and discussed in each subsection before going on to the next one. We report on the impacts and lessons learned from attempted good practices and innovations within

the contexts and conditions of the case. Current challenges faced and the feasibility of replication and scaling up are also discussed.

3.1 Partnership for this case study

CERMES, CANARI and the CRFM Secretariat (working closely with the CNFO) had already collaborated informally for a decade; their partnership was semi-formally established by written agreement under a previous SSF Guidelines project. This case study did not explicitly call for this kind of partnership. However, maintaining the project partnership for this case study brought academic, NGO, intergovernmental organization and fishing industry organization perspectives to bear on the initiative, and the multidimensional division of responsibility proved useful. Thus it can be considered a good practice.

CERMES led the case study and provided the framework. CANARI offered practical linkages to another capacity development project that was concluding with the same fisherfolk leaders, which included increasing awareness of and engagement with the SSF Guidelines. The CRFM Secretariat provided guidance on, and facilitated engagement with, the formal governance processes of the regional fisheries body, while encouraging pursuit of the protocol. The CNFO was an essential conduit to fisherfolk around the CRFM region and lent legitimacy to the protocol process in their eyes. The simultaneous representation of all of the organizations in GIFT meant that gender was considered. Indeed, the research team consisted of women and men. The prior participation of all of the organizations in several FAO events for the development and implementation of the SSF Guidelines gave them common ground for shared interest in the case. While this partnership is not necessary for every SSF Guidelines initiative, it offers a good practice institutional arrangement for larger and more complex initiatives, and should therefore be sustained.

3.2 Framing an approach to the case

Although the partners had previously engaged in applied research on fisherfolk roles in policy influence (McIntosh *et al.*, 2010), collaborative planning with fisherfolk (McConney and Phillips, 2011) and fisherfolk engagement with the SSF Guidelines (McConney *et al.*, 2017) using analytical frameworks, these seemed less important in this case. The partners determined the practical process for the case and then sought to back-fit a framework that they had not previously used. The choice of framework for examining the approach (Funnell and Rogers, 2011) was informed more by practitioner than academic literature on policy impact, monitoring and evaluation (Start and Hovland, 2004; Tsui, Hearn and Young, 2014); see Table 1.

Back-fitting served mainly to validate what was already decided upon as a practical approach. It did not inform the case study. A decision was taken to minimize the academic aspects of the case in order to better engage the fisherfolk leaders in an applied, rather than knowledge-oriented, initiative. A better practice would have been to thoroughly review the situation first and then select one framework or an integrated set of frameworks for design, implementation, monitoring and evaluation. The FAO (2016) Good Practice Template was taken, in either the prior- or post-use approach, to be the main tool for checking and guiding documentation of the experience and determining whether the practice was good or promising. The partners felt sufficiently familiar with the context and conditions of the case to proceed with implementation without much analytical guidance. It would be advisable, if this case is replicated, to strengthen the academic or analytical component without allowing it to constrain fisherfolk engagement. Tsui *et al.* (2014) provide guidance on suitable approaches for this.

3.3 Communication capacity building

The partners' conclusion (see Section 2.2) that the fisherfolk leaders required capacity building for communication and policy influence came after a decade of doing both of these activities with documentation on overall strategies and plans being developed with the fisherfolk (e.g. Roopchand, 2013; Haynes, forthcoming). The set of CIPPEC policy briefs and notes referred to in the methods section were shared online, but never utilized by the fisherfolk leaders despite them agreeing that they would be useful in principle. The resource materials were intended to address the deficiencies in communication and policy influence, but the mechanism for doing so was inappropriate. While the fisherfolk leaders are literate and capable of understanding the policy briefs and notes, there remains a strong preference for highly personal, interactive oral communication of information. In addition, the many other matters requiring the attention of fisherfolk leaders leave little time for learning that is not linked to direct action with immediate benefits.

After observing the reluctance of fisherfolk leaders to access the resource material, CERMES offered to provide individual training to the fisherfolk leaders who needed a refresher. The offer was not taken up by anyone, most likely as it would have been online. Although the SSF Guidelines protocol process was imminent, and the academic component of the case was downplayed, another reason for inadequate uptake was the perception that the resource material was difficult to absorb and contained more information than required to implement the process. These observations were drawn from informal interviews with CNFO staff. A better practice would have been to help build capacity through individual mentorship and coaching, but case study resources and the time available were insufficient to accomplish this.

3.4 Influencing policy in formal regional fisheries governance: first round

At the preparatory meeting of the project partners on 29 March 2017, the inception work plan for policy influence received strong support from the CNFO executive (six men led by one woman Chair). There was consensus and enthusiasm on the need for the partnership to formally pursue the SSF Guidelines protocol to the CCCFP. The CNFO agreed to assume a lead role with CERMES at the 15th Meeting of the Caribbean Fisheries Forum to promote the protocol and participatory process. CERMES, the CNFO and CANARI are all Observers to the Forum. CERMES got the protocol onto the Forum meeting agenda as a part of its UWI organizational report. A summary of the case study was shared, and action recommendations that had been collaboratively crafted were endorsed. Both the CNFO and CERMES in their observers' reports to the Forum called for endorsement of and engagement with the SSF Guidelines protocol process. These requests appeared in the cover page of the agenda item, which invited the Forum to:

- **Note** the University of the West Indies Report on Fisheries and Related Activities, March 2016 – February 2017;
- **Endorse and engage** with the project partnership and initiative for Providing a SSF Guidelines and Gender Mainstreaming Protocol for the Caribbean Community Common Fisheries Policy.

This encouraged the partnership to take the next step of working with the CRFM Secretariat to get this recommendation to the 19 May 2017 meeting of ministers responsible for fisheries. Unlike the Forum, no observers are allowed in the Ministerial Council, and the outcomes from its proceedings are not made public. At the Ministerial Council meeting the decision recorded was as follows:

- **Noted also** the initiative being spearheaded by UWI to develop a SSF Guidelines and Gender Mainstreaming Protocol under the Caribbean Community Common Fisheries Policy;

- *Noted further and endorsed the decision of the Forum to engage with the project partnership and initiative for Providing a SSF Guidelines and Gender Mainstreaming Protocol for the Caribbean Community Common Fisheries Policy.*

The outcome of this formal policy influence was to have endorsement of the SSF Guidelines and its participatory process entered into the records of the CRFM governance institutions. Although this was achieved with the assistance of the CRFM Secretariat, it was still a successful trial of policy influence, as its smooth passage was not necessarily a given. Prior to the Ministerial Council meeting, fisheries officers were emailed information about the protocol process with which to brief their ministers. However, it does not appear that any ministers were influenced through this communication pathway, even though the resources were made available on the CERMES Web site with links to it from the other partners.

The formal policy influence was a good practice in its execution and it achieved the desired outcomes. Endorsement of the protocol process by the CRFM Forum and Ministerial Council could be attributed to the partnership's ability to capitalize on meaningful opportunities to engage and exercise influence through a network of relationships that penetrated the policy domain, despite the fisherfolk being only observers to one policy arena and being excluded from the other. This collaboration would be worth replicating under similar circumstances.

3.5 Participatory prioritization through fisherfolk meetings

After being formally endorsed, the project partnership began to engage mainly fisherfolk in the protocol process. Communication materials were distributed: a) via email to fisherfolk leaders and fisheries officers, using the CNFO's database and event participation lists; and b) during meetings and events, to any fisheries stakeholders who were present. Fisherfolk awareness of the SSF Guidelines was improved across CNFO Member States, but the extent of this improvement is unclear, and the generally low engagement on the part of fisherfolk – who tend to focus on the practical and most immediate livelihood challenges, rather than longer term and abstract policy influence – leaves much still to be done.

Despite the apparent low uptake of communication materials by ordinary fisherfolk and of the communication resources by the CNFO executive members, it was expected that the fisherfolk leaders would hold the topic prioritization meetings described in the methods. This did not happen, and after a series of delays over several months, CERMES conducted an email poll to discover why. Without exception, the fisherfolk leaders agreed that the protocol was essential, but they offered several reasons for not having held meetings with the fisherfolk in their countries. These ranged from not being sure about the process, to lack of funds and time, to the low interest in fisheries policy among fisherfolk. Trying to build capacity while simultaneously attempting to exert policy influence may have been too high an expectation of the CNFO. The leaders were willing but not able to assume a lead role in the participatory process. Because this inability was neither clearly stated by them, nor recognized by the other partners, the participatory process did not go as planned. Adaptation to find an alternative method (addressed in the next section) was too long in coming.

More specifically, in terms of the reasons for not conducting fisherfolk meetings in the participatory process, it came to light that: a) the CNFO leaders have difficulty engaging fisherfolk, who are mainly concerned about their livelihoods in the short term; b) filling out forms of any kind or note-taking during meetings is seen as an arduous task, so there is a preference for oral interviews and reporting; and c) it was difficult for leaders to find a balance between being fully engaged in leading the participatory process through meetings, and dealing with a number of other pressing issues. Compared to the local and national fisherfolk leaders of the CNFO, it is

easier for external agencies and actors to call meetings on matters that are not high priority. From a fisherfolk perspective, it is better to hold in-depth meetings when there is a crisis, or when an external agent calls for meetings that are of shared interest. Corroborating this last point, CERMES got reasonable fisherfolk engagement when researchers arranged meetings in collaboration with CNFO leaders using an alternative interview method, discussed below.

3.6 Participatory prioritization through a survey process

A few meetings were held in a small group setting to obtain individual survey responses. This was a compromise between the type of meetings intended in the previous section and a simple individual survey on prioritization of fisherfolk issues. In these meetings, each survey question was discussed to make sure it was properly understood by all the participants. Participants were also able to share their opinions after each question; consensus was not sought. Then the individual survey forms were filled out by each participant.

A total of 68 prioritization surveys were completed by respondents from 13 countries and territories in the Caribbean, representing just over 75 percent of the 17 CRFM members (Table 2).

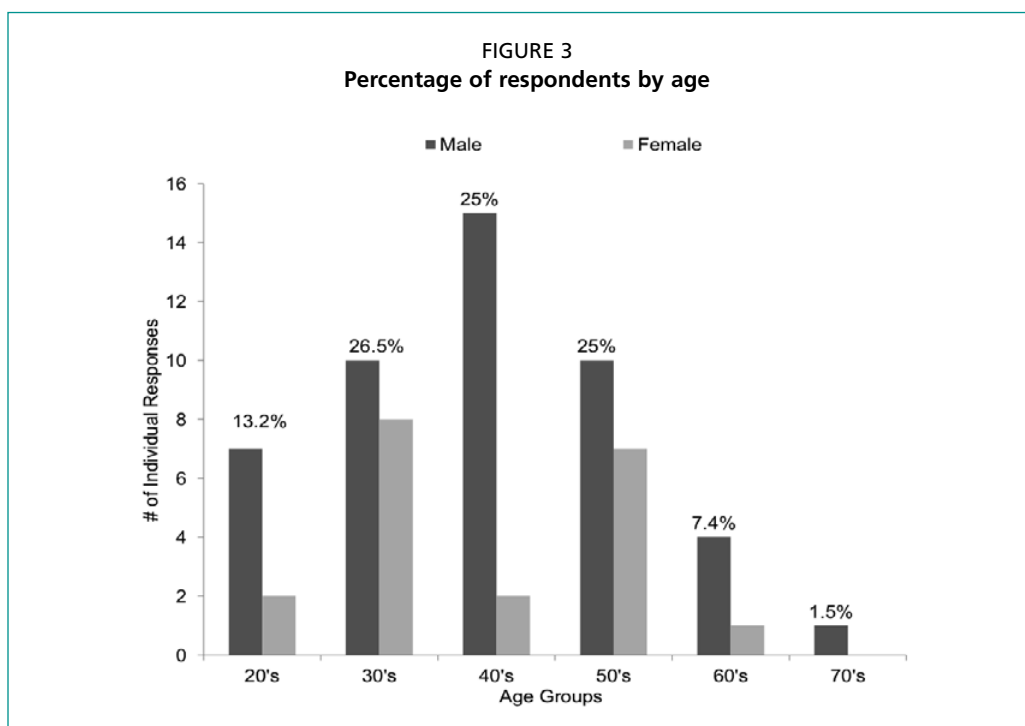
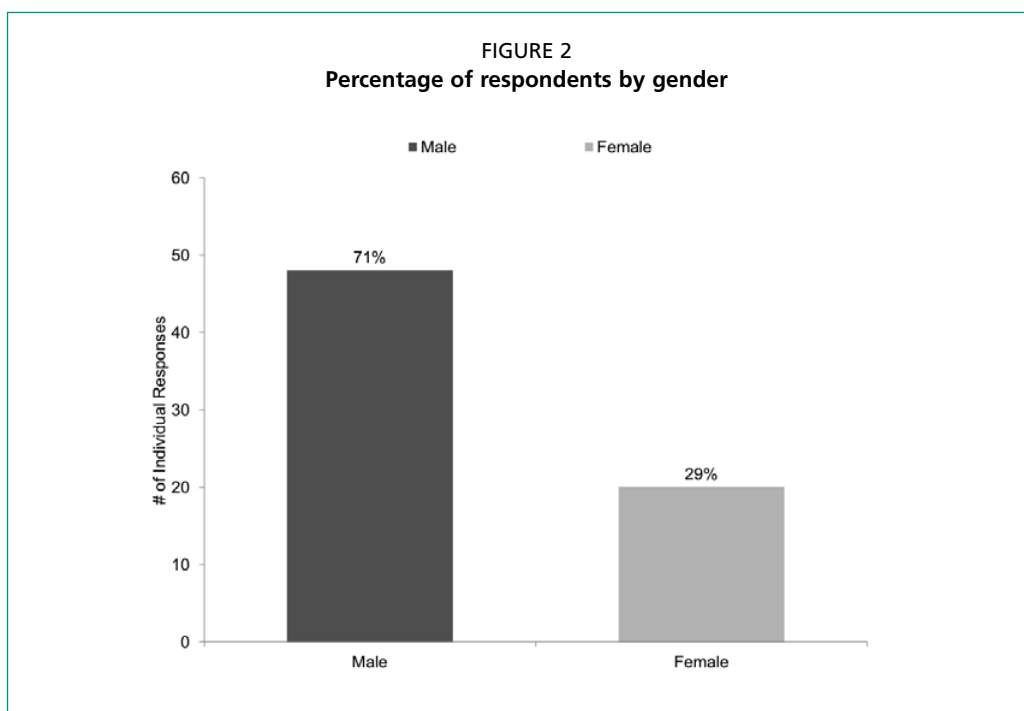
TABLE 2
Summary of survey respondents by country

| Country | Respondents |
|----------------------------------|-------------|
| Anguilla | 3 |
| Barbados | 13 |
| Belize | 6 |
| Dominica | 1 |
| Grenada | 2 |
| Guyana | 2 |
| Jamaica | 3 |
| Montserrat | 4 |
| Puerto Rico | 1 |
| Saint Lucia | 5 |
| Saint Kitts and Nevis | 1 |
| Saint Vincent and the Grenadines | 8 |
| Suriname | 15 |
| Trinidad and Tobago | 4 |
| Total | 68 |

Although the majority of CRFM members were represented, the response rate per country was low. Suriname, Barbados, Saint Vincent and the Grenadines and Belize were among the countries with the most respondents.

There are more men than women working in the fishing industry (particularly the harvest sector), and leadership roles in fisherfolk organizations are mainly occupied by men (with notable all-female exceptions). A random or representative sample would have been mostly male. Our sample was not random; it was a purposive sample to include both men and women, and mainly fisherfolk but also some fisheries officers. About 71 percent of the respondents were male and 29 percent were female (Figure 2).

Overall, the majority of respondents were in their 30s (Figure 3). Most of the male respondents were in their 40s, while most of the females were fairly evenly split between being in their 30s or 50s (Figure 3).



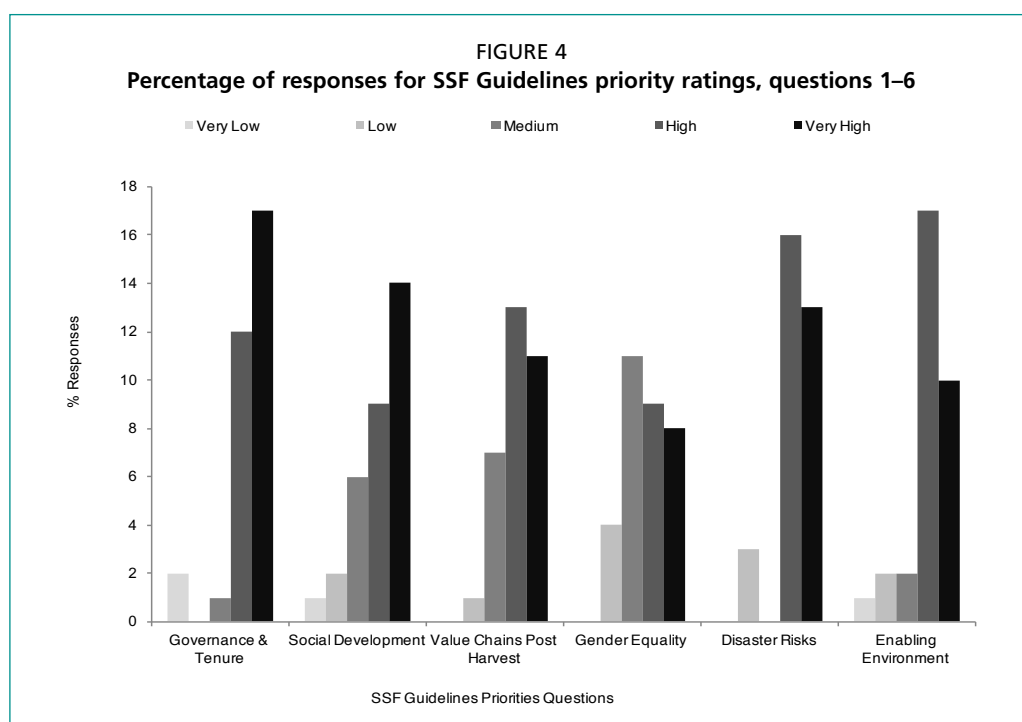
Both fisherfolk leaders and fisheries officers we represented. In the countries that had the most respondents (Suriname, Barbados, and Saint Vincent and the Grenadines), the majority of these were fisherfolk leaders and other fishers. Respondents were affiliated with various regional and national government offices, a few NGOs, and several fisherfolk organizations (Table 3).

TABLE 3
Summary of respondents by organization/affiliation

| Country | Organizations |
|----------------------------------|--|
| Anguilla | Department of Fisheries and Marine Resources, fisherfolk, Anguilla Fisherfolk Association |
| Barbados | Sand Pit Fisherfolk Association, BARNUFO - Barbados National Union of Fisherfolk Organizations, Bridgetown Fisherfolk, Western Fisherfolk, Ministry of Agriculture, fisher, boat owner |
| Belize | Belize Fisheries Department, CNFO, National Fishermen Producers Cooperative Society Ltd |
| Dominica | National Association of Fisherfolk Cooperative |
| Grenada | Fisheries Division, Grenville FAD Fishers Organisation |
| Guyana | Global Seafood Distributors, national fisherfolk organization |
| Jamaica | Jamaica Fishermen Cooperative Union, Fisheries Division |
| Montserrat | Fisher, Boaters and Fishing Association, Fisheries Unit |
| Puerto Rico | Consevacia ConCiencia |
| Saint Lucia | Fisheries Department, CRFM, St. Lucia National Association of Fishermen’s Cooperatives, Choiseul Fisherman’s Cooperative Society |
| Saint Kitts and Nevis | Government |
| Saint Vincent and the Grenadines | The National Fisherfolk Organization, CALFICO - Calliaqua Fisherfolk Cooperative, Goodwill Fishermen’s Cooperative Society Limited, Barrouallie Fisheries Development Cooperative |
| Suriname | Cooperatie Galibi, Boskamp, Visserscollectief, Cooperatie Ontwikkeling Visserij Sector Nickerie |
| Trinidad and Tobago | Trinidad and Tobago United Fisherfolk |

The majority of respondents provided an explanation for why they chose their ratings for questions 1–6. A summary of the ratings and responses is presented in Figure 4.

The majority of respondents rated *governance of tenure and resource management* and *disaster risks and climate change* as very high priority. *Social development, employment and decent work* and *value chains, post-harvest and trade* were rated by most respondents as either very high or high priority. *Ensuring an enabling environment and supporting implementation* were rated by most respondents as high priority. *Gender equality*, however, was rated by most respondents as either medium or high priority.



Each of the topics in the SSF Guidelines was cumulatively rated as high or very high priority. Therefore, all chapters could be considered for inclusion in the CCCFP. Because gender was ranked lowest of the priorities, and is missing from the CCCFP, it is the topic that requires most attention in the protocol to the CCCFP in order to bring it in line with current global perspectives.

To continue to bring awareness to, and engagement in, the participatory process, the CNFO created a webpage for sharing results. Respondents who provided contact information were told they could view the findings of the survey and also provide any feedback that they wished. Yet a couple of weeks after the survey concluded in mid-September, no feedback had been received.

The comments that accompanied the ratings provided some insight into the prioritization and an understanding of the viewpoints, which were useful in informing the SSF Guidelines protocol to the CCCFP. The views expressed are summarized below, with reference to Figure 4.

Governance of tenure and resource management (very high priority): 1) current efforts regarding this topic may be poor and, in some cases, non-existent; 2) much improvement is needed in order to maintain livelihoods and to sustain and protect fisheries; and 3) specific efforts are in place to help address the topic, namely rights-based approaches and ecosystem-based approaches such as EAF (stated by only a few respondents).

Social development, employment and decent work (very high or high priority): 1) more support is needed to make fishing a more lucrative industry with social benefits; 2) financial support is limited, making it difficult to sustain livelihoods; and 3) improved social conditions favour increased productivity.

Value chains, post-harvest and trade (very high or high priority): 1) food safety and the reduction of fish loss and wastage needs to be improved; 2) current value chains and market access are unfair; and 3) fishers need better market access in order to become more competitive.

Gender equality (high or medium priority): 1) although fishing is a male-dominated field, opportunities exist for women to have an equal role in the industry; 2) having gender equality as a priority is important so that women do not become/feel marginalized or restricted to certain sectors (e.g. post-harvesting), and are also empowered to become more involved throughout the fisheries sector.

Disaster risks and climate change (very high priority): 1) a more serious approach to climate change is needed; 2) fishers and fishing communities are very vulnerable to the impacts of climate change, so there is a need for fisherfolk to be better equipped with the necessary information and technology; and 3) mitigating impacts and focusing on resilience is of paramount importance.

Ensuring an enabling environment and supporting implementation (high priority): the view expressed was that capacity building, collaboration and information sharing among stakeholders are needed and are critical to policy implementation.

Despite various attempts at engaging respondents to complete the survey online, on paper and via group sessions, the response rate was both low and slow, for some of the reasons previously given for the group meetings method. However, when the CERMES researchers assisted group interviews, the levels of interest were high and exchanges of information were animated. While it would take only 15 minutes to answer the survey thoroughly, fisherfolk (such as in Barbados) chose to discuss the

topics for over an hour more after having completed the survey. The survey process was a promising practice. More adaptation and learning is necessary to devise a set of methods that serve the research objectives as well as the preferences of the respondents.

3.7 Designing and drafting the protocol

The protocol drafting process was completed despite the limited time available to the case study following the delay in getting sufficient survey results. Having determined from the survey that all chapters of the SSF Guidelines needed to be included in the protocol, the partners sought suitable examples of protocols from within the CARICOM system of governance from which to choose the best format, as described in the methods. The choices were limited, and advice from legally trained personnel was of little additional assistance, with the exception of those in the CRFM Secretariat. The draft protocol written in plain language for agreement among the project partners and validation by the fisheries stakeholders can be found in Annex A. The title reflects the SSF Guidelines but also links to the CCCFP in its wording. The preamble contextualizes the legitimacy of the protocol's content as well as that of its stakeholder participation process. Both types of legitimacy are important (Jentoft, 2000). The remaining sections cover the objective, implementation and entry into force. As with the title, the objective is purposefully broader than the SSF Guidelines, but it specifically refers to them as a means to an end. It also emphasizes the incorporation of gender and HRBA into the CCCFP as well as the work of the Competent Agency, which is the CRFM. The implementation clauses recall the contents of the SSF Guidelines and their voluntary nature. Entry into force is proposed to be achieved through essentially the same process as for the CCCFP, and does not require signatures or ratification.

The validation of, and support for, the draft protocol among fisheries stakeholders is still a work in progress. Out of the 123 protocol validation emails sent to fisheries officers and fisherfolk leaders near the end of November 2017, 14 replies were received within the first two weeks given for response. Twelve of the respondents were in support of the draft protocol in its current form, while two respondents suggested changes to the protocol. The suggested changes were that small-scale fishers should be represented in all participatory processes (specific to clause 3.2 in the first draft protocol annexed to this paper) and that illegal, unreported and unregulated (IUU) fishing should be mentioned in the preamble. Responses and recommendations were collected until mid-January 2018 after which a further draft was produced, following minor edits, for submission in the formal CRFM governance process.

3.8 Influencing policy in formal regional fisheries governance: second round

The Executive Committee of the Forum, consisting of chief fisheries officers, had few substantive comments after scrutinizing the mid-January re-drafting on 5 March 2018. The Executive Director of the CRFM Secretariat, which serves the Forum, was strongly supportive of the protocol. The major concern among some countries was that the protocol did not impose national obligations, and that it hence maintained the voluntary status of the SSF Guidelines at all levels of governance. The changes captured in the report of the Executive Committee (CRFM, 2018) stated that the body:

- *Reviewed the Draft Protocol on Securing Sustainable Small-Scale Fisheries for Caribbean Community Fisherfolk and Societies;*
- *Discussed and agreed that a definition for the Competent Agency should be added, Article 3.4 should be retained for clarity, and Article 3.6 should be modified to read “urge” instead of “encourage”;*
- *Recommended that the Draft Protocol with the changes proposed be submitted to the Forum, and requested that the Forum review and submit the document to the next Meeting of the Ministerial Council for approval.*

On 16 April 2018 the full Forum accepted the recommendation above of its Executive Committee. The final step was the Ministerial Council approval on 18 May 2018 that brought the Protocol on Securing Sustainable Small-Scale Fisheries for Caribbean Community Fisherfolk and Societies immediately into force. The unofficial record of the Council meeting stated that the Ministers:

- **Adopted** the Protocol on Securing Sustainable Small-Scale Fisheries as the First Protocol under the Caribbean Community Common Fisheries Policy;
- **Agreed** that the Protocol on Securing Sustainable Small-Scale Fisheries shall enter into force immediately;
- **Urged** national fisheries authorities and other stakeholders in Member States to actively implement the Protocol on Securing Sustainable Small-Scale Fisheries within their jurisdiction; and
- **Called upon** regional and international development partners and donors, including NGOs, to support and assist Member States in their efforts to implement the Protocol to improve fisheries and aquaculture governance and management in the region.

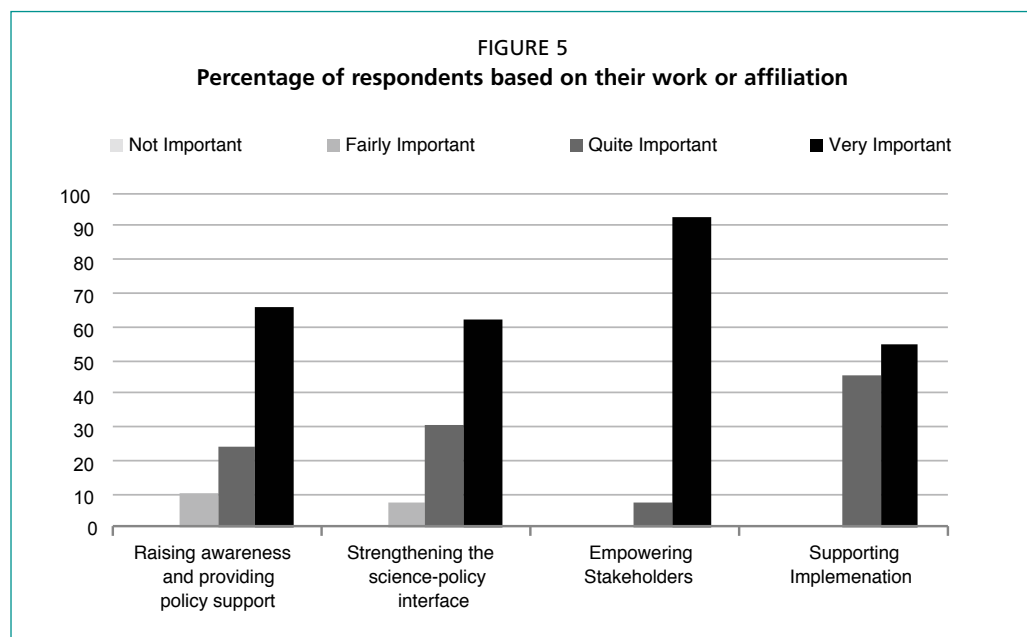
In anticipation of this positive outcome, and in order to inform it, the results of the survey on protocol implementation were shared. The main findings are set out below.

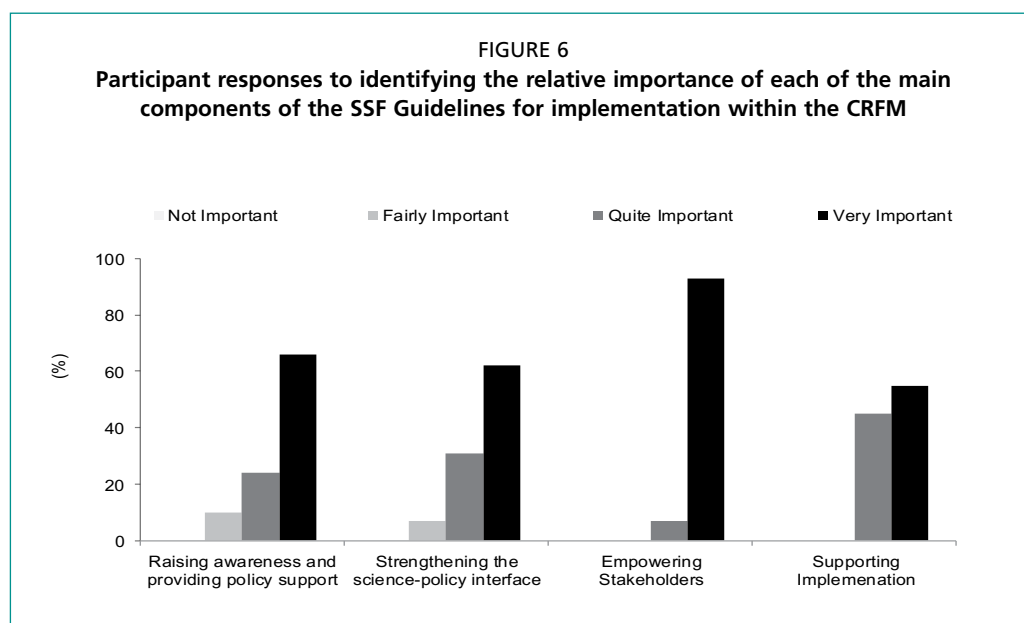
3.9 Results of survey on protocol implementation

The short survey administered electronically and by paper during the final stages of the participatory process, when the final draft protocol was before the Forum, sought to capture stakeholder priorities for implementation. Respondents from 15 of the 17 CRFM Participating Parties were asked to rank the importance of the four main components of the SSF Guidelines Global Assistance Programme. The respondents comprised mainly individuals from government and intergovernmental agencies (the majority, 62 percent), fisherfolk (28 percent) and NGOs (7 percent) (Figure 5).

Respondents found each of the four components to be important for implementation of the SSF Guidelines within the CFRM. However, the majority (93 percent) felt that empowering stakeholders through capacity building and institutional strengthening was the most important priority for implementation (Figure 6).

In addition, building awareness and capacity were cited as high priority actions required to implement the SSF Guidelines, both regionally and nationally. Specific





to regional implementation there is a need for improved knowledge among, and active participation by, government and fisherfolk stakeholders across the region. Upon evaluating and adopting the protocol, further support should be provided at the national level through integration of the protocol into national regulations in all CRFM countries. These priority actions help to link the main components. For example, raising awareness can improve stakeholder buy-in and address the science-policy interface while empowering stakeholders and increasing overall support for implementing the SSF Guidelines within CRFM Member States.

In order to further strengthen stakeholder support, the project partnership is preparing for SSF Guidelines implementation by continuing to raise awareness of the Guidelines and the regional protocol in various projects as well as beginning work on indicators linked to the SSF Guidelines. The CNFO pledged to make the SSF Guidelines central to their activities over the next six months at least, and in so doing stimulate bottom-up policy influence by fisherfolk leaders and organization members in the countries. This will be strongly supported by the other partners.

4. CONCLUSIONS

The SSF Guidelines, when effectively implemented, are seen as a way to address the multiple threats to fisheries worldwide (Jentoft, 2014). Overexploitation of marine resources (especially fisheries), pollution and habitat degradation have been negatively impacting the region for decades; this is now being exacerbated by climate change and variability (Whalley, 2011). The CCCFP was put in place in order to foster collaboration and cooperation in the utilization and management of fisheries. The CRFM can incorporate the SSF Guidelines into the CCCFP to strengthen the institutional policy framework for small-scale fisheries conservation and development region-wide.

The CCCFP and the SSF Guidelines contain articles that are similar. However, the scope of the CCCFP does not cover as many fisheries instruments and issues as the SSF Guidelines. For example, human rights-based approaches (HRBA) and gender are currently receiving much attention in small-scale fisheries globally. The CCCFP may be broadly construed as indirectly addressing human rights issues, but gender is not included. Incorporating the SSF Guidelines into the CCCFP via a protocol (urged in Article 7 and detailed in Article 20) is a way of bringing HRBA and gender mainstreaming into the CCCFP along with other aspects of the SSF Guidelines. The

CCCFP is designed to be adaptive by permitting protocols to address matters not contained in the main text. The SSF Guidelines adds important details that are in keeping with the CCCFP objective of maintaining sustainable fisheries.

The seven parameters on unintended outcomes of Funnell and Rogers (2011) were evident in this study. Some of the limitations going into the project became problematic constraints as the project progressed. The major limitations and constraints included:

- General lack of familiarity with the SSF Guidelines in the CRFM region;
- Similar lack of awareness of the CCCFP, but mainly among fisherfolk;
- The CNFO's limited capacity and experience to co-lead fisheries policy influence;
- Pervasive stakeholder belief that fisheries policy was not action-oriented.

The participatory process was intended to fully engage as many fisherfolk as possible (within the project period) to make a concerted attempt to influence policy. The goal was to create a fisherfolk-driven protocol to the CCCFP, rather than one informed only by non-fisherfolk actors. The CNFO leaders proved not to have the capacity and leadership skills needed to fully engage fisherfolk in the protocol process. It became evident that more experience in policy influence was needed within the partnership in order to produce a more successful outcome. Fisherfolk leaders recognize their deficiencies and difficulties in succession planning. For example, the recent e-book on leadership guidance (Blackman and Almerigi, 2017) and accompanying slide set (outputs from another FAO-funded project on the SSF Guidelines) were crafted to meet the stated training needs of the CNFO. This training initiative requires further funding and additional fisherfolk resource persons in order to be sustainable. The CRFM Secretariat is encouraging the national fisheries authorities to invest in fisherfolk leadership and organizational development as a means of socio-economic progress, whether or not co-management is the aim. Opportunities to pursue blue economy pathways in the Caribbean will require such capacity (Patil *et al.*, 2016).

While more capable leadership is necessary, it is not sufficient. CNFO leaders made it clear that most fisherfolk were not willing to spend even a short period of time contemplating policy unless external actors such as the university and some NGOs intervened on their behalf as well, as these were perceived to have more power. There was evidence of this from the group interviews, and this suggests that the factors affecting fisherfolk engagement in policy processes need to be studied further. The project partnership is aware, from previous experience (McConney *et al.*, 2016, 2017), of the fine line between genuine collaboration and well-intentioned co-optation. The former is required to enhance necessary self-organization, while power asymmetries can stifle the growth of self-organization. Fisherfolk need more awareness of their ability to successfully influence policy, as they have done before (McIntosh *et al.*, 2010). The CNFO can build experience, learn and adapt so that their advocacy and policy influence initiatives become more effective and efficient. This could dispel the perception that policy influence is inherently resource-intensive and costly, with a low rate of return on effort.

4.1 Good practices

Despite these challenges related to fisherfolk policy influence, the partnership was collectively able to repeatedly and successfully engage stakeholders. Persistent, consistent communication of the protocol process, while maintaining transparency among the partnership and stakeholders, proved to be a good practice. The benefit of such good practice resulted in continued endorsement of the protocol process and eventually the protocol itself. Having a partnership involving academic, NGO, intergovernmental and fishing industry bodies, which allowed for a broad sharing of perspectives and responsibilities, was also a good practice. Another good practice going forward would be to ensure that the partnership is fully aware of all the factors for

collective capacity needed to influence policy. Hosting capacity building workshops for fisherfolk prior to initiating the participatory process may have proven most helpful, if it had been feasible.

Mobilizing the partnership, endorsing the protocol process, and the (albeit limited) building of capacity for policy influence were instrumental in getting the project up and running. Activities such as planning the pre-Forum meeting, encouraging members within the partnership to distribute communication materials, and creating continued engagement opportunities were critical to the project. These actions helped increase fisherfolk support for actively implementing the SSF Guidelines. Mutual respect and trust among the project partners was also critical, and the CNFO was not marginalized. The process adapted to capacities and preferences to the extent possible.

It is believed that this collaborative planning and participatory process for drafting the protocol is a very promising practice. Although actual engagement has not been at the high level originally envisaged, the process may be replicated with improvement as the CRFM Secretariat seeks to develop the set of instruments required to put the CCCFP into effect. It was a pioneering governance process, and it has set the stage for follow-up activities and scaling up. As the first protocol under the CCCFP, it enables strong support for policy implementation, and provides an excellent opportunity for improving fisheries governance and management throughout the region.

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Annex A

PROTOCOL ON SECURING SUSTAINABLE SMALL-SCALE FISHERIES FOR CARIBBEAN COMMUNITY FISHERFOLK AND SOCIETIES

The Ministerial Council of the Caribbean Regional Fisheries Mechanism:

Conscious that small-scale fisheries account for approximately half of the global fish catch and contribute immeasurably to food and nutrition security, poverty eradication and sustainable development;

Recognizing that small-scale fisheries also provide services deeply entrenched in the values, cultures, economies, livelihoods and future aspirations of Caribbean coastal communities to sustain their well-being;

Committed to the Caribbean Regional Fisheries Mechanism (CRFM) mission to “Promote and facilitate the responsible utilization of the region’s fisheries and other aquatic resources for the economic and social benefits of the current and future population of the region”;

Mindful of the global endorsement of the Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines) by the 31st Session of the Committee on Fisheries (COFI) of the Food and Agriculture Organization (FAO) of the United Nations in June 2014;

Recalling the useful integration of the guiding principles of the 1995 FAO Code of Conduct for Responsible Fisheries into the Caribbean Community Common Fisheries Policy (CCCFP);

Appreciating the relevance of the 2010 Castries (St. Lucia) Declaration on Illegal, Unreported, and Unregulated (IUU) Fishing to equity, bearing in mind the centrality of human rights and social justice enshrined in the vision of the Caribbean Community;

Noting the participatory process of consultation undertaken with CRFM fisheries stakeholders that showed they support implementation of the SSF Guidelines;

Aware of the advantages of promoting human rights-based approaches to small-scale fisheries and sustainable development, including gender equality and equity, in the CCCFP by implementing the SSF Guidelines;

Convinced that the SSF Guidelines will contribute to achieving the mission of the CRFM and enhancing the development of small-scale fisheries through implementation of the CCCFP;

Have agreed as follows:

Article 1: Use of Terms

“Competent Agency” means the Caribbean Regional Fisheries Mechanism.

“SSF Guidelines” means the Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication including any amendments.

“Participating Party” means a Member State or an Associate Member State of the Caribbean Regional Fisheries Mechanism.

“Policy” means the Caribbean Community Common Fisheries Policy and the definitions in Article 1 of the Policy apply to this Protocol.

“Protocol” means this instrument, urged under Article 7 and made under Article 20 of the Policy, to incorporate the SSF Guidelines.

Article 2: Objective of the Protocol

- 2.1 The objective of this Protocol is to secure sustainable small-scale fisheries for Caribbean Community fisherfolk and societies.
- 2.2 To support this objective the Participating Parties agree to incorporate the SSF Guidelines into the Policy, and into programmes, plans and other initiatives of their fisheries authorities and the Competent Agency, with special attention to gender equality, equity and human rights-based approaches.

Article 3: Implementation of the Protocol

- 3.1 The SSF Guidelines and hence the implementation of them through this protocol are voluntary in nature. The SSF Guidelines should be interpreted and applied in accordance with the legal systems and institutions of Participating Parties and the Competent Agency.
- 3.2 Regional implementation of the SSF Guidelines should be guided by meaningful and substantive participatory, consultative, multilevel, intersectoral and objective-oriented modern governance and management processes that accommodate and incorporate the voices and perspectives of all stakeholders, including men and women, and young people and the elderly, utilizing an ecosystem approach to fisheries.
- 3.3 Subject areas of the SSF Guidelines addressed under this Protocol include:
 - i. Governance of tenure and resource management;
 - ii. Social development, employment and decent work;
 - iii. Value chains, post-harvest and trade;
 - iv. Gender equality;
 - v. Disaster risks and climate change;
 - vi. Policy coherence, institutional coordination and collaboration;
 - vii. Information, research and communication;
 - viii. Capacity development; and
 - ix. Implementation support and monitoring.
- 3.4 Nothing in this Protocol or in the SSF Guidelines should be read as limiting or undermining any rights or obligations to which a Participating Party may be subject under international law.
- 3.5 The SSF Guidelines may be used to guide change, and inspire new or supplementary legislative and regulatory provisions, including regional or national fisheries policies and management plans, and pathways towards achieving sustainable development and similar global goals.
- 3.6 Participating Parties are urged to establish, strengthen, support and engage fisherfolk organizations as necessary to effectively implement this protocol and the SSF Guidelines; this being especially through adaptive fisheries management plans that are actively kept under review.

Article 4: Entry Into Force

- 4.1 This Protocol shall enter into force on a date to be agreed by the Ministerial Council of the Caribbean Regional Fisheries Mechanism.



A Vezo fisherman catching octopus in the Velondriake locally managed marine area following a period of temporary fishery closure

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Fisheries learning exchanges as a good practice in small-scale fisheries in Madagascar and Mozambique

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ABSTRACT

Sharing good practices and experiences among stakeholders can help develop good practices in fisheries management. Facilitated knowledge exchanges among small-scale fisheries stakeholders can support the implementation of FAO's Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication. Fisheries learning exchanges (FLEs) are one form of knowledge exchange that has become increasingly popular. FLEs are peer-to-peer gatherings in which fisheries stakeholders from different communities freely exchange information and experiences surrounding fisheries challenges and solutions. These are usually organized by fishers, Non-governmental Organizations and governments and are credited as an integral tool for the diffusion and adoption of fisheries management strategies. Despite their numerous perceived benefits, little research has been conducted on FLEs. This paper presents a case study of an FLE between Mozambique and Madagascar to explore how FLEs can aid in the sharing of experiences and good practices among small-scale fisheries stakeholders and the further application of those good practices. Nineteen key informant interviews were conducted with FLE participants as the main source of data. Subsequent

analysis found that hands-on or informal activities and a diverse participant group were two factors that promoted knowledge sharing and learning among participants. Key recommendations for FLE organizers include: maximizing hands-on and informal activities, fully understanding the cultural norms at play when inviting participants, dedicating adequate time and personnel to make travel arrangements for participants, and providing financial and logistical support for participants to implement what they have learned after the FLE. The results from this case study should prove useful for other parties seeking to facilitate knowledge sharing through FLEs.

1. INTRODUCTION

1.1 Knowledge exchange in resource management

Knowledge forms the basis of resource management by shaping decisions and influencing implementation of management practices (Fazey *et al.*, 2012). The accumulation of knowledge alone, however, does not lead to more effective, inclusive management practices. It is rather how knowledge is exchanged, with whom it is exchanged, and how it is used that determines the effectiveness of these practices and how inclusive they are (Cohen, 2011; Cooke *et al.*, 2014; Fazey *et al.*, 2012; Heyman and Stronza, 2011; Knight *et al.*, 2006; Schneider *et al.*, 2009). Knowledge exchange can be defined as “a process of generating, sharing and/or using knowledge through various methods appropriate to the context, purpose and participants involved” (Fazey *et al.*, 2012).

There exist a number of strategies to facilitate knowledge exchange. The World Bank outlines some specific instruments for knowledge exchange including conferences, expert visits, workshops and study tours (Kumar *et al.*, 2015). Study tours, also known as learning exchanges, are used when the goal of the knowledge exchange is for stakeholders from different communities to gather and share experiences. Learning exchanges have become particularly popular within the field of fisheries management (Jenkins *et al.*, 2017); these have been recently termed “fisheries learning exchanges” (FLEs) by some researchers and practitioners (Jenkins *et al.*, 2017; Thompson *et al.*, 2017a, 2017b).

1.2 Fisheries learning exchanges as a form of knowledge exchange

FLEs are considered to be highly effective, and are credited as integral in the diffusion and adoption of fisheries management strategies (Cooke *et al.*, 2014; Ferse *et al.*, 2010; Garrett, MacMullen and Symes, 2012; Heyman and Stronza, 2011; Pietri *et al.*, 2009; Ramirez-Sanchez and Pinkerton, 2009). An FLE can be defined as a gathering in which fisheries stakeholders exchange information, experiences and/or lessons learned for the improvement of resource management in the communities involved (Jenkins *et al.*, 2017). Exchanging knowledge within fisheries is important because fishers’ knowledge differs based on their respective experiences (Johannes, Freeman and Hamilton, 2000; Turner, Polunin and Stead, 2014). Bringing fishers together with resource managers and other fishers can create a shared understanding, which leads to more participatory and successful management processes (Garrett, MacMullen and Symes, 2012).

Despite the numerous perceived benefits, little research has been conducted concerning the processes required to facilitate effective exchange of knowledge at an FLE (Fazey *et al.*, 2012; Stacey *et al.*, 2015). Research on the FLE process is important because an FLE’s success can depend on various factors, such as how information is presented and who participates (Fazey *et al.*, 2012). Additionally, there can be challenges associated with carrying out an exchange. Exchanges can be costly, time-intensive, and demanding to plan (Fletcher *et al.*, 2009; Kumar *et al.*, 2015).

This case study aims to fill this research gap by exploring how a specific FLE aided in the sharing of experiences and good practices among small-scale fisheries

stakeholders. Specifically, we consider the effectiveness of this FLE in transferring knowledge between two small-scale octopus fishing communities in Mozambique and Madagascar.

1.3 Fisheries learning exchanges: a tool to support implementation of SSF Guidelines

FAO's Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines) are the first internationally agreed instrument that focuses on small-scale fisheries. Published by FAO, the SSF Guidelines were developed based on extensive consultations with stakeholders and "... support the visibility, recognition and enhancement of ... small-scale fisheries" (FAO, 2015). Using FLEs can serve as a good practice for governments, fisheries administrations, international organizations and small-scale fishers in their efforts to foster information sharing regarding the SSF Guidelines while supporting their implementation. The SSF Guidelines explicitly mention the sharing of knowledge and information in this regard. Article 11.8 of the Guidelines calls for all parties to:

Promote the availability, flow and exchange of information ... through the establishment or use of appropriate existing platforms and networks at community, national, subregional and regional level, including both horizontal and vertical two-way information flows.

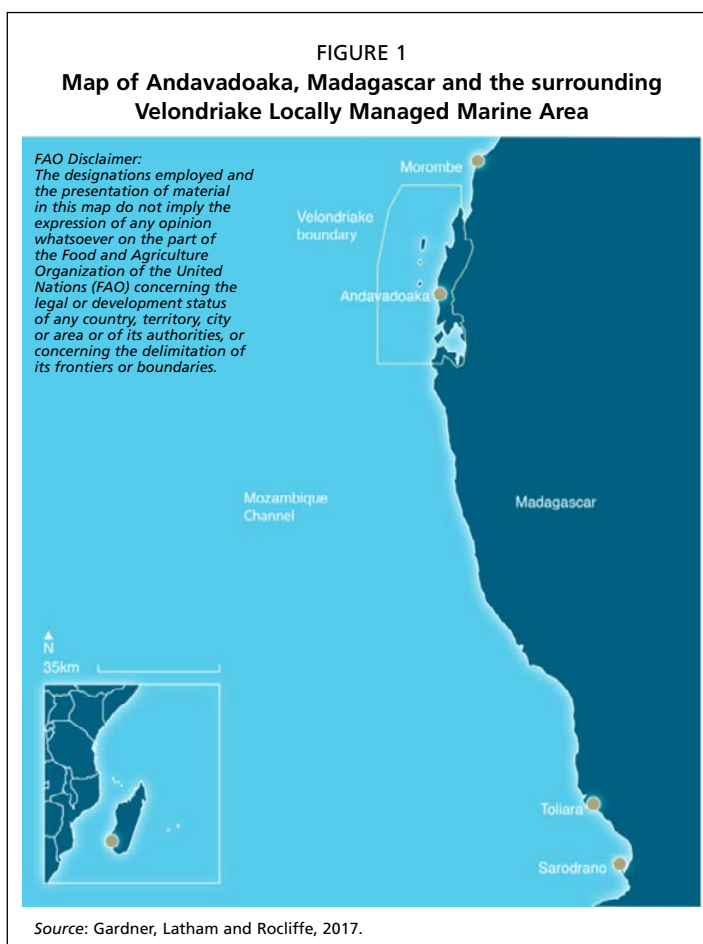
Section 13 of the SSF Guidelines describes how parties can encourage their implementation. Article 13.2 identifies "knowledge sharing and exchange of experiences" as tools for development partners and regional organizations to support voluntary efforts by states to implement the Guidelines.

1.4 Case study FLE

The case study FLE focused on the village of Andavadoaka in southwest Madagascar (Figure 1), and took place in February 2015 over a 14-day period.

Since 2004, the small-scale fishing communities of Andavadoaka have been implementing periodic fishery closures for the reef octopus *Octopus cyanea*, a regionally important species that is both consumed locally and sold for export to southern Europe (Humber *et al.*, 2006; Moreno, 2011).

The closures, defined areas that typically comprise 25 percent of a community's overall octopus fishing grounds, are typically in place for 2–3 months at various times of year. When well managed, there is evidence to suggest that they can improve fisher catches and income. Oliver *et al.* (2015) analysed eight years of data from 36 sites and found that octopus landings increased by more than 700 percent in the month



following the lifting of a closure, boosting the catch per fisher per day by almost 90 percent over the same period.

The closures form the foundation of the Velondriake Locally Managed Marine Area (LMMA), a 640 km² protected area in which destructive practices such as poison fishing and the use of beach seine nets have been banned and seven marine reserves permanently off limits to all fishing have been established, in addition to the closure areas (Gardner *et al.*, 2017). Velondriake is managed at the local level, with an elected association of village representatives (the Velondriake Association) responsible for all rule-setting and enforcement (Andriamalala and Gardner, 2010). Support and technical backstopping is provided by the United Kingdom NGO Blue Ventures.

The apparent successes of both Velondriake LMMA and closures that preceded it have led to other communities following suit. As of November 2017, more than 190 LMMAs, many of them encompassing temporary octopus closures, have been established. Together, these areas now cover 14.5 percent of Madagascar's continental shelf (14 023 km²), and are the dominant form of marine resource management in the country. Similarly, more than 200 octopus fishery closures have been implemented in Madagascar to date, and regimes have spread to United Republic of Tanzania, Mayotte, Mexico and Mauritius.

FLEs have been a vital tool in this expansion. To date (November 2017), an estimated 550 fishing community representatives have visited Andavadoaka to learn about octopus closures and the establishment of LMMAs, to discuss management issues, and to witness the reopening of a closure.

The case study FLE saw a delegation of two coastal villages from northern Mozambique (Quirindi and Quiwia) visit Velondriake to learn about the closures. The main goal of the FLE was for the Mozambican delegation to learn about and witness the details of the octopus closures, including Andavadoaka's challenges and successes with establishing them. The Mozambican delegation consisted of two octopus fishers, an oyster collector and a village president, together with representatives from three NGO partners: the Zoological Society of London (United Kingdom), Bioclimate, and Associação do Meio Ambiente (Mozambique) (Table 1).

TABLE 1
FLE participant group, professions, and organizations or villages represented

| Country | Participants | Organization/village represented |
|-----------------------|---------------------------|---|
| Mozambique (visitors) | 3 fisherfolk (2 F, 1 M) | Quiwia and Quirindi |
| | 1 village chief (M) | Quirindi |
| | 3 facilitators (1 F, 2 M) | The Zoological Society of London, Bioclimate, Associação do Meio Ambiente |
| Madagascar (hosts) | 12 fisherfolk (4 F, 8 M) | Velondriake LMMA Association |
| | 5 facilitators (2 F, 3 M) | Blue Ventures |

Note: F" = Female, "M" = Male.

In all, 24 people participated in the exchange: 17 hosts and 7 visitors. The agenda for the FLE involved a variety of activities aimed at helping the visitors understand how the closure works and how the value chain operates (Table 2).

2. METHODOLOGY

Nineteen interviews with the FLE organizers and participants served as the primary data source for this case study. The organizers were the facilitators listed in Table 1 plus an additional representative from both Bioclimate and Blue Ventures who did not attend the FLE. The participants and village chief are listed in Table 1. The interviews lasted about 30 minutes and were semi-structured. To ensure confidentiality, no identifying information about the interviewees was included in this paper.

TABLE 2

Basic details and programme of activities for this case study's fisheries learning exchange

Title: "An international community exchange across the Mozambique Channel"

Dates: 15–28 February 2015

Activities:

- Presentation on octopus fishery management by the Velondriake Association
- Visit to the University of Toliara, where researchers assist in the monitoring of the octopus reserves, and to the provincial museum on marine biology
- Meeting with the Fisheries Ministry
- Visit to COPEFRITO, a private seafood processing company, that works closely with the Velondriake Association
- Visit to neighbouring fishing villages and fish markets to hear from fishers and traders about the challenges they face
- Tour of Andavadoaka, including the local school, port, solar power plant, and hospital
- Fishing for octopus and explanation of the traditional fishing rules
- Question and answer session with the President of the Velondriake Association
- Visit to seaweed aquaculture site to meet fishers turned seaweed farmers
- One-on-one with hosting community members and among participants

The presence of Blue Ventures in Madagascar allowed us to interview the fishers who attended the FLE. The NGO's staff on the ground in Andavadoaka conducted interviews of the Malagasy participants in September and October 2017. They interviewed 15 of the 17 participants who made up the Malagasy delegation, including Malagasy fisherfolk (four women and seven men) and Blue Ventures staff organizers (one woman and three men). These interviews were conducted in English when possible, or in the Vezo dialect and then translated to English.

This study's principal investigator (Thompson) interviewed the three facilitators (one woman and two men) from the Mozambican delegation. Thompson also interviewed an organizer (male) of the Mozambican delegation who did not attend the FLE but assisted in its planning. Interviews with the Mozambican delegation were conducted in English via Skype in September and October 2017. Access to the Mozambican fishers was much more difficult than in Madagascar because the Mozambican organizers do not have a continued presence in the communities that participated in the FLE, and therefore were unable to conduct interviews with the fishers for this study. This absence on the ground inevitably limits the degree to which outcomes and lessons learned from the exchange can be followed in detail. Two of the interviewees from the Mozambican delegation, however, continued working with the Mozambican communities directly after the FLE and were able to talk about subsequent developments after returning from Madagascar (even though they were not based in the communities when interviewed).

Interviewees were asked to describe their experience in the FLE. The questions examined the FLE objectives, planning phases, activities, participants, challenges, results, impacts and lessons learned. Reports and planning documents written by the organizers and a documentary about the FLE were also used as supplemental information.

We transcribed all interviews or paraphrased interviewee responses when transcription was not possible. Data were coded into themes that aligned with the interview topics using the qualitative data analysis software MaxQDA. Interviewees' responses were organized by their role in the FLE (host, visitor and facilitator).

The two-year gap between when the FLE occurred and when the interviews were conducted allowed us to examine effects on behaviour change over the longer term. Closures, and especially LMMAs, can take years to implement, so an immediate postexchange survey would capture only the intention to take action, rather than concrete evidence that it had been accomplished.

3. RESULTS AND DISCUSSION

This case study sought to evaluate the FLE as a tool for small-scale fisheries stakeholders to share knowledge and transfer good practices from one community to another. The interviews produced data on a range of results. Overall, hosts in Madagascar and the visiting Mozambican delegation had positive reports of their experiences in the FLE. The delegation from Mozambique returned home motivated to implement what they had learned about closures and LMMAs. As a direct result of the FLE, the village of Quiwia implemented its first octopus closure in 2016, which has since been used as a model for other villages in the region. Today, fishers from other villages in Mozambique visit Quiwia through FLEs to learn about the closure model (Dewar, 2015; Huet, 2015a, 2015b; Latham and Rocliffe, 2016). These FLEs are primarily conducted through support by the Zoological Society of London.

We focus our analysis of the interview data on those aspects of the FLE that aided in the sharing of knowledge among participants. The two major good practices in this regard were: conducting hands-on or informal activities, and having a diverse participant group. We also discuss the challenges associated with running the FLE.

3.1 Hands-on or informal activities

All interviewees mentioned the value of observational activities during the FLE. These types of activities include gleaning octopus together, having open discussions, visiting alternative income projects such as the seaweed farm, and visiting the processing facility (compared to more formal or structured activities such as presentations). Interviewees describe the observational activities as useful because they were hands-on and allowed participants to casually interact and learn by demonstration, which is useful when participants do not speak the same language. For example, going octopus gleaning together was particularly successful. One organizer described the benefit of fishers seeing things first-hand: “There is nothing like seeing things with your own eyes as opposed to constantly being told from people who come from the outside ... So I think it was an extremely valuable experience.”

When translation was available, the informal one-on-one conversations between fishers also proved to be very powerful. When asked about the most impactful activity during the FLE, a Malagasy fisher mentioned simply having the opportunity to casually talk with a Mozambican fisher on the way to an activity. As one interviewee said, “There’s nothing quite like octopus fishermen meeting other octopus fishermen.”

Some Malagasy interviewees mentioned the tour of the village to see the hospital, school, and solar panels as an activity that was not useful because it detracted away from the core objective of the FLE. Organizers from the Mozambican delegation, however, did view that activity as useful to the Mozambican fishers because the fishers were able to see the types of development possible for communities that implement a closure. Long presentations were also deemed not useful to the participants because they required long periods of translation.

The importance of two-way communication and hands-on participation for participants’ learning identified in this study also holds true in studies on other FLEs (Fletcher *et al.*, 2009; Heyman and Stronza, 2011; Stacey *et al.*, 2015; Thompson *et al.*, 2017a, 2017b). Learning is also more likely to occur when people have personal, first-hand experiences, such as when participants go fishing together (Fazey *et al.*, 2006; Kolb, 1984). Engaging in these familiar activities in informal settings together created opportunities for participants and local fishers to share personal experiences, which might not have occurred in more formal settings.

3.2 Diverse participant group

This FLE brought together various professions, such as fishers, traders, community and fisheries association leaders, and seaweed farmers working in two different countries to

share knowledge. This diversity of the participant group had a positive impact on the FLE process, as described by a facilitator from Madagascar:

Local fishers, local government reps, and support organization reps formed groups from both sides. This helped to offer a range of perspectives in discussions and practical settings, from methods of gleaning for octopus to enforcement and practicalities of octopus reserves and wider management strategies, including working towards overall community engagement.

The FLE served as a platform for the Malagasy and Mozambican organization representatives to hear directly from fishers in an informal environment, which may have never happened without the FLE. Additionally, the organizations from Mozambique and Madagascar have continued to collaborate and share knowledge on small-scale fisheries projects – for example, an international knowledge sharing network was formed as a result of the FLE.

In addition to diversity in profession, diversity in gender was also important to the organizers. From the beginning phases of organizing the FLE, participation by fisherwomen was important to the Mozambican organizers because women play a significant role in the octopus fisheries in both Madagascar and Mozambique, but men still dominate the management discourse and decision-making. In Madagascar, women make up approximately 80 percent of the octopus harvesters; in Mozambique, the proportion is smaller, but still represents a majority of the fishery. While women are the main resource users in these fisheries, they are underrepresented in resource management on account of patriarchal fisheries management customs (Westerman and Benbow, 2013).

In order to assist in the knowledge exchange by and among women participants, a Gender Specialist from the Mozambican delegation served as one of the facilitators. This facilitator was specifically in charge of discussing with the women participants their thought processes throughout the FLE to ensure that the Mozambican fisherwomen got as much out of it as possible. The delegation from Madagascar also had significant participation by fisherwomen through a women's group in Andavadoaka. This emphasis on female participation had a significant impact on the FLE and brought added value to what participants learned. For example, the Malagasy fishermen noted how they learned a specific fishing and processing technique from the Mozambican fisherwomen. Also, the Malagasy fisherwomen were encouraged by the Mozambican fisherwomen's presence, as stated by a woman facilitator from Madagascar:

In both countries women are under-represented in management of marine resources. I think women in [Velondriake] were encouraged by the presence of women from Mozambique and it was noted that the vocality of women in [Velondriake] had an impact on women visitors, encouraging them to speak in the meetings. It was important that they be there from both sides to encourage more engagement and participation in management.

The Gender Specialist made a similar observation about the dialogues that occurred between men and women during the FLE:

[The FLE] really helped build the confidence of the women ... [The Mozambican fisherwoman] was able to talk directly to a trader, a male trader, which is significant from a Mozambican women fishers' perspective. A male trader, he was non-local ... he was white. This is not the type of normal interaction she would have in her community as she would never be able to pose such direct questions from her own personal experience and I was really pleased to see her asking questions.

These types of conversations were firsts for the fisherwomen from Mozambique. They were able to speak to fisherwomen from Madagascar and compare the situation in Madagascar, including the governance structures and gender norms at play, to that of their home villages in Mozambique. The same Mozambican fisherwoman who spoke openly with the trader confided in the woman Mozambican facilitator about how speaking with other fisherwomen in different communities was important to her:

It was an eye-opener for her. You know women can do this. Women do branch out into other fisheries as well. That was very helpful for her and to just speak and laugh with the other fisherwomen and create a sort of bonding between them. Because there were still a lot of similarities between the fisherwomen related to the constraints of gender operating in the community.

Additionally, a woman facilitator from Madagascar was amazed at the change in behaviour of the other Mozambican fisherwoman that they witnessed over the short period of time during the FLE, from very serious to smiling and laughing and speaking before men in meetings. One fisherman interviewee from Madagascar acknowledged the importance of hearing the fisherwomen's viewpoints because the women offered ideas that had not occurred to the men. The interviewee emphasized the importance of men and women working together in order to have successful management outcomes.

This value of having diverse participant groups has been found in other research on FLEs (Thompson *et al.*, 2017a, 2017b), but this FLE between Mozambique and Madagascar was unique in that one of its focuses was on women in the fisheries, which has not been the case for many other documented FLEs (Thompson *et al.*, 2017a).

3.3 Challenges and lessons learned

While the FLE was successful at facilitating learning among participants, interviewees did discuss certain challenges they faced when organizing and implementing the FLE. These challenges should be strongly considered by any party interested in organizing a learning exchange. Table 3 outlines the major challenges as expressed by interviewees and their recommendations for how to overcome the challenges.

The challenges of travel and logistics, translation, and follow-up are not unique to this FLE. Organizers of other FLEs also cite these challenges as difficult to overcome

TABLE 3
Challenges and recommendations for fisheries learning exchanges (FLEs) based on the results of this case study

| Challenges | Recommendations |
|--|--|
| Translation was insufficient: There were five different languages spoken by participants, but no dedicated translator was invited to attend. The facilitators also had the role of translators, which became tiring quickly and made it difficult for them to fulfil their roles as facilitators. | Include as many observational, hands-on, and informal activities as possible to limit the amount of translation necessary. Presentations can still be useful, but make them as interactive as possible and divide the information being presented into short sections. |
| Not all women were allowed to participate: Some women who were invited would have been ideal participants in the FLE because they were confident leaders and had excellent communication skills, but their husbands did not allow them to attend. | In cultures where women are often not allowed to travel alone, sometimes permission is given to a woman to travel if a male relative goes with her. Consider including funds in the budget for chaperones to travel with women participants. |
| Travel logistics were complex and time-consuming: The travel logistics were particularly challenging, as the Mozambican fishers had never left the country. Some invitees were unable to attend because they did not receive the proper travel documents. | Dedicate adequate time and personnel to make travel arrangements. If logistics are too complicated, consider conducting the FLE between villages in the same country so participants do not have to travel abroad. |
| Follow-up support was lacking: Organizers felt that there could have been more financial and logistical support for participants to implement what they learned upon returning home. The Mozambican community that did receive support was the one that implemented the closure. | The FLE should be viewed as one step in a larger fisheries management strategy. There must be adequate financial and logistical support for participants to implement what they learned during the FLE upon returning home. |

(Gardner, Latham and Roccliffe, 2017; Thompson *et al.*, 2017a, 2017b). Fortunately as more FLEs are documented and researched, organizers can improve the effectiveness of FLEs by applying the lessons learned.

4. CONCLUSIONS

This case study documents how an FLE was used to share experiences and good practices among small-scale fisheries stakeholders. The FLE facilitated learning between fishers and brought together key actors important in small-scale fisheries management in the Malagasy and Mozambican communities. During the learning exchange, the fishing communities were recognized as holders, providers and receivers of knowledge. This recognition of fishers' knowledge is an important factor in ensuring implementation of the SSF Guidelines. As Article 11.4 of the SSF Guidelines states:

All parties should recognize small-scale fishing communities as holders, providers, and receivers of knowledge. It is particularly important to understand the need for access to appropriate information by small-scale fishing communities and their organization in order to help them cope with existing problems and empower them to improve their livelihoods.

The SSF Guidelines go on to state in Article 11.6 that “the specific knowledge of women fishers and fish workers must be recognized and supported” so that the knowledge can inform responsible local governance. The FLE did recognize women fishers' knowledge, in that the organizers made a concerted effort to make half of the participant group women and to include a Gender Specialist to assist in the women participants' knowledge sharing. The horizontal and vertical two-way information flows that occurred during the FLE among fishers and across stakeholders support Article 11.8 of the SSF Guidelines, which calls for increased availability, flow, and exchange of information through the use of networks. The FLE led to creation of a regional network that continues to promote the flow of information between fishing communities in Madagascar and Mozambique today.

The results of this case study should prove useful for other parties seeking to use FLEs as tools for sharing experiences to encourage implementation of the SSF Guidelines. The results can be applied to other FLEs of similar contexts in other parts of the world. Since this FLE was held, Blue Ventures has run other domestic and international FLEs with Kenya and United Republic of Tanzania (Blue Ventures, 2016), Comoros (2016), Mayotte (2016), Mexico (Gardner, Latham and Roccliffe, 2017), India and Indonesia (Blue Ventures, 2016).

This case study was part of a larger effort to research FLEs and document their lessons learned (Thompson, Jenkins and Peckham, 2013). The results of this case study contribute to the small amount of research on FLEs that already exists by providing an individual evaluation of one FLE (Bretos *et al.*, 2017; Gardner, Latham and Roccliffe, 2017; Jenkins *et al.*, 2017; Peckham *et al.*, 2017; Thompson *et al.*, 2017a, 2017b). We must continue to conduct case studies in order to identify and rigorously test FLE good practices so that future FLEs can be conducted effectively.

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A Vezo fisherwoman gleaning for octopus in the Velondriake locally managed marine area following a period of temporary fishery closure

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Fiber Reinforced Plastic boats anchored on riverside in Nagore

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Good practices of civil society organizations in supporting small-scale fisheries in Southeast India¹

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ABSTRACT

This paper presents a case study of the small-scale fisheries of Nagapattinam and Karaikal districts in Tamil Nadu, India, showing the relevance of civil society organizations (CSOs) in the implementation of the Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines). The SSF Guidelines refer to the need to enhance the capacity of small-scale fishing communities in order to enable them to participate in decision-making and organizational development. CSOs representing small-scale fishers and fishworkers played a key role in the development of the SSF Guidelines and, with regard to implementation, they should remain the main drivers of change. The study covered four major types of institutions: traditional village councils, cooperatives, self-help groups and Non-governmental Organizations. While all four types occupy their own niche in the fisheries environment, the study shows that the village councils (or *ur panchayats*) are the most significant institution for small-scale fisheries (although others can play important roles as well). The study also identifies important actions taken, including strengthening small-scale fishers' opportunities to market their catches for fair prices, ensuring equitable access to tsunami relief and rehabilitation, and defending the coastal area and traditional tenure rights. The authors note that local CSO action needs to be linked to larger national initiatives when issues are complex and cannot be resolved merely by local action. This is of great importance in a large federal nation like India where decision-making takes place at different scale levels.

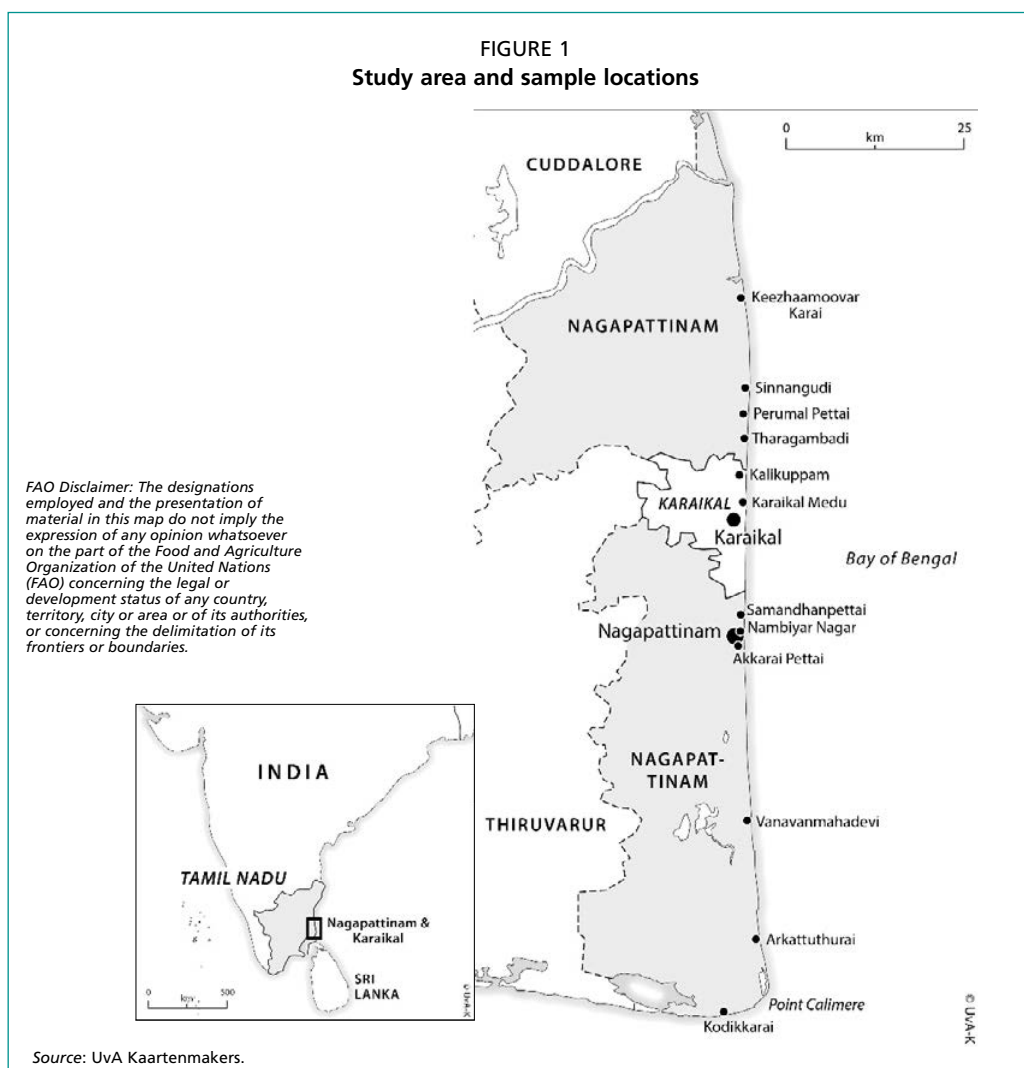
1. INTRODUCTION

The Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines), although adopted by

¹ This paper summarizes a study carried out for FAO in 2013. Sections of the paper relating to the role of traditional village councils were published earlier: see Bavinck, M. 2016. The role of informal village councils (*ur panchayat*) in Nagapattinam District and Karaikal, India. In S.V. Star and D. Kalikoski, eds. *Strengthening organizations and collective action in fisheries – towards the formulation of a capacity development programme*, pp. 383–404. FAO Fisheries and Aquaculture Proceedings 41. Rome, FAO; and Bavinck, M. 2017. Enhancing the wellbeing of Tamil fishing communities: the role of self-governing *ur panchayats* along the Coromandel Coast, India. In D. Johnson, T. Acott, N. Stacey and J. Urquhart, eds. *Social wellbeing and the values of small-scale fishing*. Dordrecht, the Netherlands, Springer.

FAO in 2015, need to be further adopted by a large number of actors in addition to governments in order to become a powerful tool for improving the lot of fishing communities in developing countries. The kinds of organizations and institutions – collectively known as civil society organizations (CSOs) – that exist in fishing villages and influence the well-being of the local community are only vaguely known. Traditional institutions of various kinds as well as new forms of organizations, like cooperatives, microfinance self-help groups, trade unions and associations, all contribute towards improvement of fishing communities through a variety of mechanisms. These include service delivery, self-help, advocating for rights, fisheries governance, and linkages with government and markets, among others.

This paper presents a case study focusing on the present and future contribution of CSOs to the implementation of the SSF Guidelines and the realization of sustainable small-scale fisheries in one region of India's long and differentiated shoreline: the coast of Nagapattinam and Karaikal districts in Tamil Nadu (see Figure 1). This coast was badly impacted by the tsunami of 2004, and therefore became the scene of intense rehabilitation activity. The ensuing period of protracted attention allowed the detection of previously unidentified CSO activity, such as that of traditional village councils, or *ur panchayats*. The rehabilitation effort also resulted in a plethora of new CSO activity, sometimes in conjunction with and sometimes independent of government. All in all, this region presented the right microenvironment for an investigation into potential CSO involvement.



The research team was charged with determining the present and potential future contribution of CSOs to sustainable small-scale fisheries. More precisely, the lead questions for research were formulated as:

1. To what extent do CSOs (a) act and (b) interact with each other as well as with state agencies to provide environmental, economic and social support to small-scale fisheries?
2. How can their contribution be improved?

The Fisheries Management Resource Centre (FishMARC) has been working with small-scale fishers since its inception; it employs professionals with a long history of engagement with small-scale fisheries in southern India.² The FishMARC team put together to conduct this case study was divided into four smaller groups that produced subreports on four types of CSO activity in the region. Their results are collated and discussed in this paper.

The paper is divided into four sections. In this introduction, we describe the geographical, historical and institutional context of small-scale fisheries in Nagapattinam and Karaikal districts, as well as the characteristics of the small-scale fisheries and the challenges they face. The second section presents the research methodology. The third section then discusses the range of CSO activity occurring in the region, organized according to organizational types. It also examines interactions between CSOs and their relations with state agencies, and considers the policy environment as well. Conclusions and a set of good practices wind up the paper.

1.1 Geography

The state of Tamil Nadu has a coastline of 1 076 km, with 13 coastal districts (including Nagapattinam) and 591 fishing villages. It ranks fourth in the country in fish production and has a well-established Department of Fisheries. Historical coincidence has ensured that Karaikal belongs not to Tamil Nadu but to the Union Territory of Puducherry. Although there are administrative variations between the two districts, their fisheries policies are very similar. The minor differences that exist are therefore set aside for the purposes of this study.

Nagapattinam and Karaikal districts have a combined coastline of approximately 200 km in length, with 58 fishing villages and a fishing population of 95 663 (CMFRI, 2010). The coast is sandy and flat, but punctuated by many creeks, inlets and estuaries belonging to the delta of the Cauvery River. There is a high density of aquaculture farms. Similar to other parts of the Indian coast, many ports and power plants are currently under development.

There are two major fishing harbours located in the towns of Nagapattinam and Karaikal where the so-called mechanized boat industry is based. These trawl fleets are involved in fishing off the coast of Sri Lanka and therefore embroiled in the transboundary fishing conflicts taking place there (Scholtens, Bavinck and Soosai, 2012).

The fishing population along this coastline belongs in overwhelming majority to the Pattinavar sea fishing caste (Bharati, 1999). Only one of our sample locations – the migratory fishing site called Kodikkarai – is governed by people of non-fishing caste. The social homogeneity of the fishing population has made for extensive marriage networks up and down the coast, and a coherent institutional structure. The Pattinavar in particular are known for the strength of their traditional governing arrangements (Bavinck, 2001).

The tsunami that hit the mainland of India in December 2004 had a disastrous impact on these two districts, which therefore accounted for the majority of casualties.

² FishMARC, registered in 2009, is a professional non-profit organization specializing in fisheries.

Tsunami relief and rehabilitation efforts were intensive and sometimes overwhelming. By the time of this case study, post-tsunami rehabilitation activities had mostly concluded and almost all external agencies had left the region.

1.2 Historical development of the fisheries

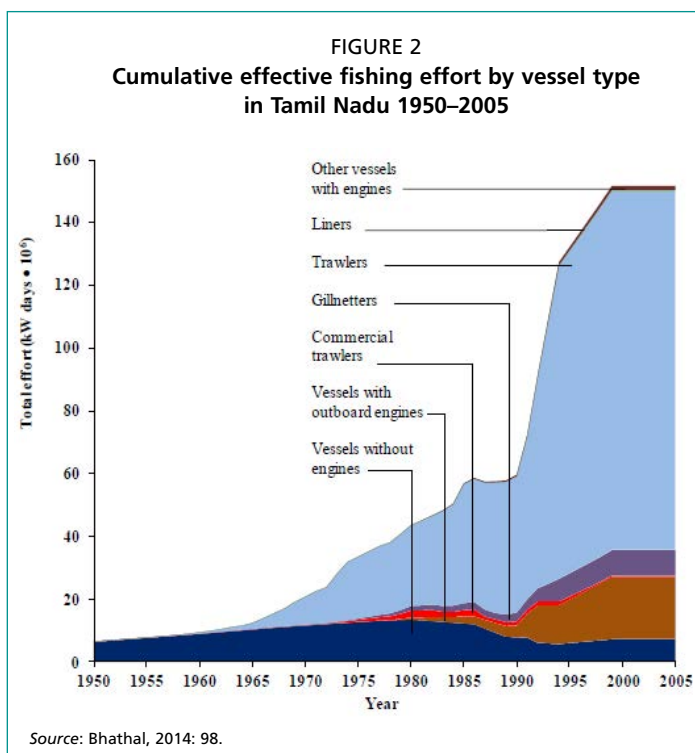
The ocean fisheries of India and specifically Tamil Nadu date back many centuries. This is evidenced, for example, by the fact that fishing has become a caste-based, hereditary occupation (albeit in the lower echelons of the caste system, as fishing involves the killing of living beings). The Tamil Nadu coastline is generally divided into three sections according to its physical features, prevailing fishing technology, and distribution of fishing castes. Nagapattinam and Karaikal districts belong to the Coromandel Coast, and are dominated by fishers of the Pattinavar caste. Fishers live in single-caste settlements along the shore and are recognized for the strength of their self-governing structures. Self-governance is anchored in the tradition of village councils, or *ur panchayats*, that have authority over coastal space and its usage, as well as over the fishing population.

Before the Second World War, the fishing population of Tamil Nadu was known for its poverty and backwardness. Fishing technology was simple and generally small-scale, catches were low, and markets were underdeveloped. This changed with Indian Independence and the pursuit of social and economic modernization. In tandem with the Green Revolution, the Government of India launched a Blue Revolution to increase fish production and improve the living standards of the fishing population (Bavinck, 2001; Ram, 1991; Subramanian, 2009). This was done through the introduction of trawl technology, the construction of landing centres, and the development of preservation and transport methods, along with integration into the world economy. Thus a trawl fishing subsector was created. Concentrated in new harbour locations, the trawl fishing population was often separate from the small-scale fishing population settled in villages along the coastline. As trawl fishers tended to fish the inshore zone, where most marine resources are located, heavy conflicts with small-scale fisheries soon developed. The Tamil Nadu Government, like other state governments in India, tended to side with

the modern fisheries it had introduced, forcing the small-scale fisheries sector to come to terms with the new context.

Although trawl fisheries have expanded along the Coromandel Coast, accounting for more than 50 percent of fish landings, the small-scale fisheries sector is still very much alive particularly in rural settings. While catch per unit effort (CPUE) has often gone down, small-scale fishers have benefited from boat motorization, the introduction of synthetic gear, and the steady increase in fish prices (Bavinck, 2014). Motorization has been widespread in small-scale fisheries, with *kattumarams*, the traditional fishing craft, being almost completely replaced by fibreglass boats in the post-tsunami rehabilitation phase.

Figure 2 presents an overview of the fishing effort as it has developed in Tamil Nadu since 1950. The small-



scale fisheries are represented by vessels with and without outboard engines. It is clear that the majority of growth in fishing effort in this period can be attributed to trawl fisheries.

Increased fishing effort has resulted in declining CPUE, as witnessed in Figure 3. Experts point to evidence that marine resources – with the exception of oil sardines – as a whole are declining. Bhathal (2014: 166) thus argues that Indian fisheries, including those of Tamil Nadu, “have suffered from sequential depletion of coastal stocks and would have shown the signs of this depletion many years ago were it not masked by the expansion

into new areas and the multispecies nature of the fisheries” (cf. Vivekanandan, Srinath and Kuriakose, 2005). Fishers along the Tamil Nadu coast generally agree with this assessment and are pessimistic about the future.

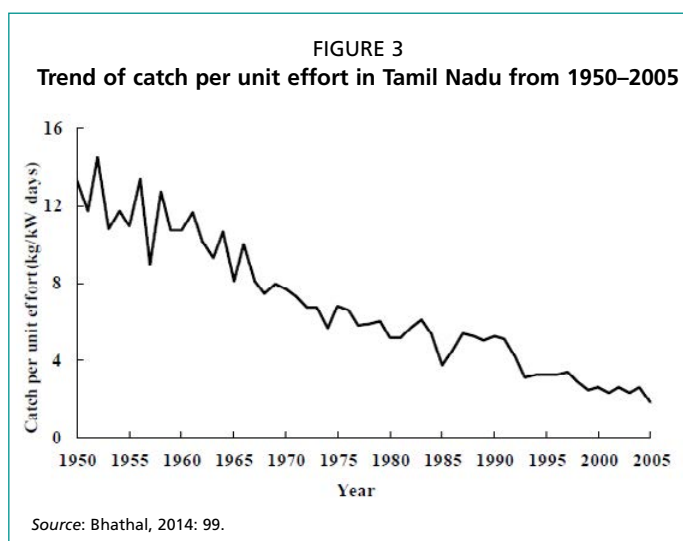
Changes in the fisheries have come about in parallel with other societal transformations. The coast is no longer the preserve of fishers alone; other user groups are appearing on the horizon. Pollution and the damming of rivers is affecting the fisheries; harbour works are causing coastal erosion; and aquaculture, industry, tourism development and urban expansion are bringing about new claims on coastal space. It is in this context that a fisher in one of the sample locations anxiously enquired of the research team whether its goal was to move the population out of the village.

Fishers are responding to changing circumstances by sending their children to school and hoping that education will help them find a profession outside fishing. Many young fishermen are seeking lucrative, if temporary, jobs in Singapore or in the Gulf countries. At the same time, most members of the population seem to be remaining in the fisheries, either through necessity or by choice.

1.3 Institutional context

The institutional context of fisheries along the Coromandel Coast has been analysed in terms of legal pluralism, or the coincidence of legal systems belonging to government as well as to the fishing population (Bavinck, 2001). The oldest and most tenuous of the legal systems in fisheries originates in fishing communities, coinciding with the authority of village councils that are traditionally the mainstay of fisher well-being. With the strengthening of government influence over coastal affairs, however, and the development of state welfare programmes, village councils have seen their power seriously reduced. The siding of government with the trawl fishing subsector has further undermined their control over village affairs – although, as we shall see below, it is still substantial.

The prime legislation governing fisheries in Tamil Nadu is the Marine Fishing Regulation Act (1984), the main aim of which has been to separate the trawl fisheries and small-scale fisheries spatially and temporarily, and to mitigate social conflicts (Bavinck, 2003). This goal, however, has only partially been achieved, and conflicts between the two subsectors continue. The Act also provides a basis for prohibiting the use of detrimental gear, such as pair trawling and ring seining. The rules that are in force, however, are barely implemented. Pair trawling and ring seining are currently the source of fierce disputes within the fishing population itself, with government officials playing a sideline role.



Governmental involvement with fisheries in Tamil Nadu has hitherto largely been motivated by production increase and conflict management. A long-term perspective on environmental sustainability and management is lacking, although the FIMSUL project, funded by the World Bank and FAO, has made inroads into a new perspective (see www.sites.google.com/site/fimsul, accessed 17-10-2018).

The cooperative movement has old roots in Tamil Nadu and was adopted by post-Independence governments as a vehicle for social development and political patronage. The Fisheries Department has promoted the establishment of fisheries cooperatives in every fishing settlement in the state mainly for the purpose of channelling government programmes. Recent decades have also seen the development of an independent cooperative movement in the fisheries of Tamil Nadu and Kerala, promoted by the South Indian Federation of Fishermen Societies (SIFFS).

In order to alleviate poverty and initiate economic development from below, governments in India have promoted the establishment of self-help groups (SHG), also in the coastal zone. These SHGs, which generally consist of women, are linked to outside credit sources such as banks. Non-governmental Organizations (NGOs) too have been establishing SHGs in the coastal zone, sometimes with the additional goals of awareness raising and political mobilization. The post-tsunami rehabilitation effort resulted in a surge in the number of NGOs undertaking activities for and with the fishing population.

1.4 Nature of small-scale fisheries in the case study area

The 58 fishing villages of Nagapattinam and Karaikal districts are distributed more or less equally along the coastline, with clusters developing particularly around coastal towns. The trawl fisheries of the region are concentrated in the harbours of Nagapattinam and Karaikal; however, many trawl owners and workers live in surrounding coastal villages. While the towns still have some small-scale fisheries, the latter predominate in rural areas – that is to say, in the large majority of fishing settlements in the region.

Like all small-scale fisheries in the world (Jentoft and Chuenpagdee, 2015), there are substantial differences within the small-scale fisheries subsector in the Nagapattinam-Karaikal region, particularly in gear type and target species. While almost all fishers nowadays make use of small, beach-landed fibreglass craft (length < 5 m, maximum 30 HP), their activities vary from season to season depending on climatic conditions, the availability of species, and market values. Fishing villages also develop their own specializations. Thus, fishers in Keezhamoovarkarai, for example, make use of twin-engine boats to longline for tuna; Kalikuppam fishers have recently taken to ring seining; and fishers in Vanavanmahadevi go for multiday gillnet fishing in search of big fish, which often takes them into Sri Lankan waters. Other villages make use of a judicious mix of fishing gear.

Village councils in most of our sample villages (N = 7) make decisions on regulating unwanted gear types, such as so-called “snail nets”. Local knowledge teaches, for example, that snail net fishing has negative consequences for other fish stocks, as well as for social equality (Bavinck and Karunaharan, 2006). The main debate now taking place along this coastline, however, is over ring seining by groups of small-scale fishers. Ring seining was introduced in Kerala in the 1980s and has since been appearing along the Tamil Nadu coast as well. Of the seven sample villages, two have banned the use of ring seines, but fishers in other villages still use this type of gear. A meeting of representatives of all 58 fishing villages in May 2013 decided to prohibit ring seining completely along this coastline as of 2016; however, this decision was not implemented and the ring seine fleet has actually increased. Understandably, many fishing leaders have expressed doubts as to whether village councils will actually be able to reverse the trend towards ring seines.

Small-scale fishers have various opinions about the future of fisheries in the region. While some fishers see positive trends, most respondents are deeply worried. Young fishers in Kalikuppam complained that “there is nothing left in the sea”, and linked this to the trend of foreign labour migration as well as to the ongoing shift to ring seining. Bottom trawling is considered to be a main cause of resource depletion, but is now too entrenched to be resisted. Emotional reactions are therefore mainly reserved for pair trawling and ring seining, both of which have been prohibited by the Fisheries Department, but are still practised nonetheless. As one fisher in Vanavanmahadevi explained: “If we can stop pair trawling and ring seining, there is definitely a future for fisheries here.” Other fishers point to industrial pollution as a cause of decline. Solutions are sought through better enforcement of existing governmental regulations, setting a ceiling on the number of fishing licenses, and curbing of pollution.

2. METHODOLOGY

The team conducted a planning workshop in Chennai on 16 October 2013 to prepare for field-work. Tasks were subsequently divided between the four subgroups that focused on village councils (*ur panchayats*), cooperatives, self-help groups and NGOs respectively. Field studies took place in subsequent months. However, three of the four sub-studies proved to contain gaps that could be filled only in the course of 2014.

The subreports contain detailed information on the methodology employed for the sub-studies. Each sub-study commenced with a review of the literature on the topic in question. A stakeholder meeting was convened in Nagapattinam on 20 October 2013 to inform fishing leaders and other key actors about the purpose of the research. The subgroups strove to achieve a balance between in-depth, local study and a review of regional trends. The in-depth analysis focused on 12 fishing villages, representing 20 percent of the total fishing settlements in the region. These villages were mainly selected on the basis of geographical coverage. Research there consisted of a combination of focus group discussions, interviews with leaders and small-scale fishers, attendance of village meetings, and observations. Table 1 provides an overview of the 12 locations and the studies situated there (also see Figure 1). In a number of sample locations, more than one sub-study was conducted. The NGO sub-study concentrated not on a selection of fishing villages but rather on organizations.

TABLE 1
Sample research locations in Nagapattinam and Karaikal districts

| | Village name | Sub-studies conducted |
|----|--------------------|---------------------------------|
| 1 | Keezhamoovar Karai | SHG/cooperative/village council |
| 2 | Chinnangudi | Village council |
| 3 | Perumal Pettai | Cooperative |
| 4 | Kalikuppam | SHG/village council |
| 5 | Tarangambadi | SHG/cooperative |
| 6 | Karaikalmedu | Cooperative |
| 7 | Samandhanpettai | Cooperative/village council |
| 8 | Nambiyar Nagar | Village council |
| 9 | Akkarai Pettai | SHG |
| 10 | Vanavanmahadevi | Cooperative/village council |
| 11 | Arkattuthurai | SHG |
| 12 | Kodikarai | Village council |

Sample study results were complemented with interviews with key stakeholders and observers from the areas of government, academia, markets and civil society. Surveys provided the necessary quantitative data on specific topics. The mixed nature of the

team facilitated the achievement of a balanced gender perspective.

It must be noted that it is not easy to separate small-scale fisheries from other types in the region. Although trawl fishing is concentrated in harbour towns, trawl fishers frequently still live in their home villages among small-scale fishers. Small-scale fishers too often also work in both subsectors. The research team was thus not able to make a sharp separation between small-scale and other fishing types, except through the choice of sample locations.

3. RESULTS AND DISCUSSION

3.1 Village councils and their contribution to small-scale fisheries

The *ur panchayats* that are found along the Nagapattinam-Karaikal coastline belong to a classical form of self-government in India (Mandelbaum, 1970). The *panchayat* system dates back to precolonial times and is closely intertwined with other forms of social organization, such as caste and community. The fishing settlements of this coast have preserved these institutions to an unusual extent (Bavinck, 2001). The fact that these settlements are generally of a single-caste variety means that social and territorial identities coincide.

Each of the fishing villages on this coast is governed by an *ur panchayat* that is elected from among the male population, using age, family lineage, education, and leadership qualities as criteria. These councils have authority over all other organizational bodies in the village (cooperatives, SHGs, etc.). They raise taxes, dispense justice, and represent the village to the outside world, such as with government agencies. They are thus the most crucial local bodies for the small-scale fisheries of this region.

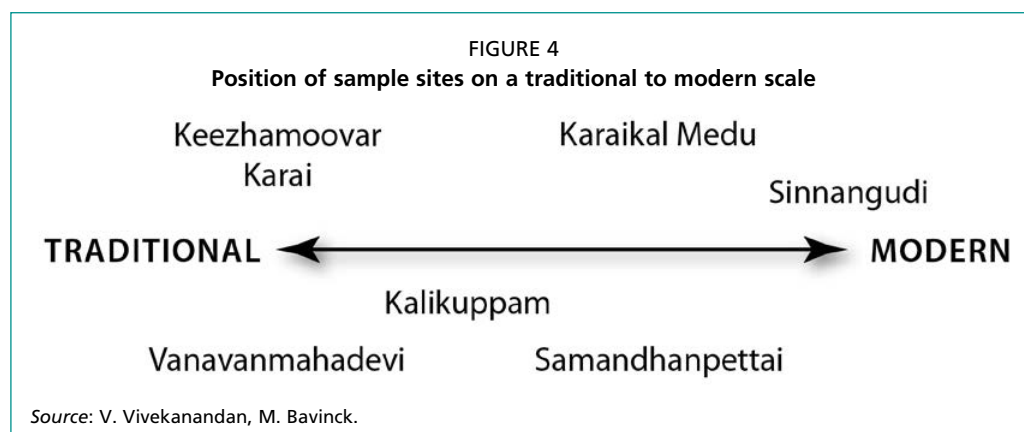
Like community organizations all over the world, *ur panchayats* in this region are sometimes factionalized and may have disputes between them, but rarely lastingly so. They are loosely embedded in higher level bodies at the *taluk* (subdistrict) and regional level. The regional organization encompasses 58 fishing villages (traditionally 64 villages³) in the Nagapattinam-Karaikal region; it has a traditional head village, but its position is currently challenged by the leaders of an urban fishing centre that also enjoys the support of the current Minister for Fisheries of the Government of Tamil Nadu.

Ur panchayats differ from each other in terms of their structure, scope and activities, and can be positioned on a scale ranging from “traditional” to “modern”.⁴ Figure 4 positions the seven sample *ur panchayats* in our case study on this composite scale. On the left side of the scale we find *ur panchayats* that are traditional in the composition of their councils, which consist almost completely of fishermen. These *ur panchayats* take upon themselves a wide range of tasks and play a strong role in community affairs. Their traditional concerns emerge from their intrusion into the marriage decisions of their members. They are also heavily involved in fisher dispute regulation and rule-making.

The *ur panchayat* on the right is the only one to be found on the other side of the spectrum. The dominant leaders here are well-educated and have largely moved out of fishing. Their interests have shifted to handling the relations between the village and

³ The difference in number is explained by the exit of some villages on the northern end of Nagapattinam, as it made more sense for them to be part of the regional organization of the Cuddalore district to which they belong. It may be noted that the number 64 is notional, as it is an auspicious number in local tradition. Thus it is quite likely that the Nagapattinam regional body may not have had 64 villages as members most of the time. The redrawing of district boundaries by the state government has often resulted in the redrawing of the boundaries of the Pattinavar regional organizations. This is in stark contrast to Karaikal, which has remained part of the Nagapattinam regional organization despite not being part of Tamil Nadu. This is best explained by the fact that Karaikal is an enclave within Nagapattinam, and is neither viable as an independent regional organization nor can it join any other regional organization.

⁴ We use the terms “traditional” and “modern” not in a normative but in a descriptive sense, indicating various measures of continuity with the past.



the outside world, and in accessing relevant government programmes. The concerns of fishing concomitantly receive less attention. Still, this *ur panchayat* assumes prime authority over local affairs. It is also one of only a few *ur panchayats* that have implemented a public sanitation programme.

Other *ur panchayats* occupy middle positions on the scale from traditional to modern, thereby confirming their institutional dynamism and the very local centre of gravity. Whereas the more remote settlements tend to have more traditional *ur panchayats*, and vice versa, this pattern does not, however, always run true. Other factors – which lie beyond the scope of this study – seem to play an intermediary role in *ur panchayat* orientation.

Ur panchayat activities can be categorized in various ways. We have chosen to distinguish between social concerns, fisheries management concerns (economic and environmental), and concerns of connecting with (or defending against) government (and other external agencies).

Social concerns

Ur panchayats' prime responsibility – and the ultimate justification for their work – is social in nature and can be formulated as “care for the settlement’s population”. This concern expresses itself in various ways. From a financial viewpoint, the largest outlay any *ur panchayat* in the region makes is for the annual temple festival, which always lasts several days and draws crowds from the entire region. One belief of these temple festivals is that they can ensure safety at sea as well as the possibility of good catches. It is for these reasons that the extravagant religious activities of *ur panchayats* cannot be dissociated from inhabitants’ general well-being, and from the hope and expectation of continued wealth from the sea.

Another principal responsibility of the *ur panchayats* is dispute resolution. In the fishing settlements of the region in the case study, it is generally understood that – with the exception of serious offences like murder – disputes are preferably handled by the *ur panchayat* and not by the police (who it is felt bring about serious losses in terms of money and time). Fines are actually imposed on those who, without prior consent, seek the support of the police to settle disputes. The range of disputes handled by *ur panchayats* is wide and reflects the variety of quarrels and conflicts that permeate closely-knit rural communities, as well as small-scale fisheries. While some disputes are local in nature, others involve people outside the fishing village; in such cases, *ur panchayats* play a representative role.

Fishers in this region generally acknowledge the importance of education, and it is important to note the role of *ur panchayats* in boosting educational performance. For example, in one of the sample villages the *ur panchayat* has committed itself firmly to supporting the government-funded elementary school in the village. Not only does it oblige parents to send their children to this, and not to other schools in the vicinity; it

pays the salary of a supplementary teacher, contributes additional school materials, and helps ensure the success of school events.

Fisheries management concerns

With the majority of their population depending on fishing and fish trading for a livelihood, the *ur panchayats* of the Nagapattinam-Karaikal coastline naturally involve themselves in fisheries matters. Everyone in the region, including government officers, agrees that the disputes that take place over fishing matters – quarrels over nets getting tangled or vessels being damaged, fish that has been bought but not paid for, loans that are not settled – are brought to the *ur panchayats* for resolution, and nowhere else. Here again, if such disputes involve parties outside the village, other *ur panchayats* are consulted and involved.

The rule-setting behaviour of *ur panchayats* is structurally significant. As is seen along other parts of the Coromandel Coast (Bavinck and Karunaharan, 2006), *ur panchayats* in this region often strive to curb the use of fishing methods that are considered environmentally and/or socially harmful. The decline of resources is a matter of anxiety. The most significant current evidence of *ur panchayats*' concern for regulating harmful fishing gear derives from the current internal debate on the prohibition of ring seines. Some villages have actually prohibited this kind of gear, while others are more permissive. The discussion that takes place over these matters at the regional scale is fierce and still undecided.

While prohibition of gear constitutes one form of regulation, the prevention of negative interactions with other gear types is another. Thus the small-scale fishers of one sample village, who depend on longlining, have successfully intervened with nearby trawl centres to limit trawl fishing in the inshore zone. This same village also presents an example of how *ur panchayats* regulate market access at the landing site. Safety at sea is another issue of key concern for small-scale fishers: What if an engine fails, or the men – for whatever reason – do not return to shore as expected? In these circumstances, *ur panchayats* take charge of organizing rescue operations.

Connecting with the outside world

As the importance of government and the outside world has grown, other aspects have come to the fore. This became most evident in the post-tsunami period, when relief and rehabilitation were important concerns. It was during this period that *ur panchayats* replaced older, illiterate leaders with younger men who had been to school and knew how to talk to officials.

Interventions with government can be divided into two types. The first is directed towards maintaining village autonomy and protecting villagers from untoward interference. The abovementioned rule of discouraging the involvement of the police in village matters is one example of this. *Ur panchayats* similarly guard their autonomy *vis-à-vis* other government agencies, such as the Fisheries Department. The other type of intervention is aimed at obtaining access to crucial government services. The Fisheries Department is a key agency for a variety of fisher welfare schemes, as well as for the distribution of fishing material and the realization of projects such as harbour sites. It is important also for matters such as the registration and licensing of boats. *Ur panchayats* thus stay informed of who occupies such positions as Fisheries Inspector and Assistant Director, and approach them directly or indirectly via the fisheries cooperative president if needed. Similar methods are used with regard to other important outside agencies and departments.

3.2 Cooperatives and their contribution to small-scale fisheries

The fisheries cooperatives seen in the villages of the Nagapattinam-Karaikal region are of two kinds. The first type is linked to the Fisheries Department and available in every

village without exception. The second has been initiated by SIFFS and forms part of its own network. It is available in a selection of fishing villages along the coast in the region. While government cooperatives provide access to a variety of governmental programmes, the SIFFS cooperatives are unique in that they mainly provide marketing services. Being closer to the actual business of fishing, the SIFFS cooperatives also take a stand on important fishing issues.

3.2.1 Government cooperatives

The cooperative movement in India dates back to the first decades of the previous century. The Government of Tamil Nadu established cooperatives for men and women in all fishing villages of the state, channelling important services through this avenue. As a result, both men and women fishers consider membership in these cooperatives a necessary condition not only for professional performance but also for general subsistence. It is interesting in this regard to note that the total membership of fishing cooperatives in Tamil Nadu is significantly higher than the size of the fishing population – an indication of their attraction also among non-fishers. Figures on government cooperatives in the Nagapattinam-Karaikal region are presented in Table 3.

TABLE 3
Government cooperatives and membership in Nagapattinam and Karaikal districts

| Cooperatives and membership | Nagapattinam | Karaikal |
|------------------------------------|--------------|----------|
| Number of fishermen cooperatives | 52 | 10 |
| Male membership in cooperatives | 28 140 | 6 702 |
| Number of fisherwomen cooperatives | 45 | 6 |
| Female membership in cooperatives | 25 353 | 3 576 |

The services offered by government cooperatives are regulatory and supportive. The regulatory services include the provision of fisher identity cards and the registration of fishing craft. Cooperatives also provide the following services:

- Preparation, verification and forwarding of lists of eligible fishers for the savings and relief scheme to the Assistant Director of Fisheries;
- Verification and recommendation of lists of eligible fishermen for financial relief schemes, such as ban period relief and lean period relief, to the Assistant Director of Fisheries;
- Processing lists of fishermen eligible for diesel subsidies;
- Forwarding applications for engine subsidies to the Fisheries Department;
- Interfacing with the Fisheries Department to obtain insurance coverage for fishermen;
- Forwarding applications for educational scholarships to the Tamil Nadu Fishermen Welfare Board.

In addition, some of the cooperatives also run businesses, such as for the provision of fuel or fishing accessories.

3.2.2 SIFFS cooperatives

SIFFS established the Nagai (Nagapattinam) District Fishermen Sangams' Federation (NDFSf) in 2007; the first village-level fish marketing societies were formed around 2004. By 2014, NDFSf had 31 primary societies in the Nagapattinam district with 2004 members, and 3 societies in the Karaikal district with 252 members. While the government cooperatives include practically all adult males, membership in an NDFSf society is typically limited to those owning a fishing unit. Thus, in the villages covered by NDFSf only 10–20 percent of government cooperative members are typically members of the SIFFS cooperative. However, the NDFSf society does cover a relatively high percentage of actual fishing units in any given village.

Every primary society is run by an executive committee that takes decisions on four critical functions: fish sales, credit, savings and insurance. The conventional model of fish sales in a primary society is through open auction on the beach. Societies have regular groups of merchants who participate in auctions, and who benefit by being able to buy fish at a single point. The auction is done by the salespersons appointed by the societies. Credit is typically mobilized by NDFS from sources such as NABARD and other nationalized banks and then extended to the societies. In addition, societies are free to run their own credit programme using their own funds or by obtaining loans from banks. Every member fisher has to join the savings scheme run by the society, which is administered by deducting a certain percentage of the day's catch. The society offers loans as well.

The NDFS societies work only with small-scale fishers, and have been consistent in their position against trawling and other fishing practices such as ring seining. Those fishers that indulge in ring seining have had to leave the societies; in some cases, the societies have been closed down when the practice became too widespread.

3.3 Self-help groups and their contribution to small-scale fisheries

The term “self-help group” in India denotes a group of 10–20 persons (generally women) belonging to a homogeneous economic class who have voluntarily associated for microfinance activities. The origin of the SHG movement in India dates back to the 1980s. A pilot project for linking the SHGs with banks was initiated in 1992, with NABARD taking the lead. Although SHGs are first of all seen as a vehicle of efficient credit delivery, they often have social and political objectives as well. For the purpose of this case study, the team identified three SHG types in the Nagapattinam-Karaikal region (see the SHG subreport for a discussion):

- SHGs that are directly associated with government programmes or schemes: These SHGs are mainly vehicles of microfinance, but their benefits include subsidies under various government schemes as well.
- SHGs as institutions promoted and sustained by NGOs: What makes these different from the first category is their political character, which prompts them to take up roles beyond the confines of microfinance or development delivery.
- Women *Sangams*⁵ organized by SIFFS: These are associated with the SIFFS cooperatives and are engaged in economic activities, but have kept an identity of their own.

Our study found that every fishing village contains an average of 20 SHGs, and that there is generally a mix of the three types mentioned above. Women SHG members are shown to act in an anchoring role so far as family finances are concerned. Survey results show that 50 percent of the members had enrolled in SHGs within the last five years. All respondents had been married, and 25 percent were widows; almost 50 percent consisted of fish vendors.

The most common loan size appeared to be INR 5 000–10 000 (USD 75–150), taken out by 41 percent of the respondents. More than half of the respondents also had loans from other sources such as private moneylenders. Loans from SHGs were used mainly for consumption and to address occasional shocks in the household economy.

3.3.1 Governmental SHGs

The government at different levels has been involved in three different SHG initiatives in the coastal zone: (a) the Mahalir-thittam⁶ programme of the Government of Tamil

⁵ *Sangam*, along with its variants *Sangh* or *Sangha*, is a pan-Indian term denoting a group, association or collective (including cooperatives, trade unions and even political parties).

⁶ Mahalir-thittam, literally meaning “women’s scheme”, is a scheme of the Government of Tamil Nadu for the welfare of women and uses the SHGs as its vehicle for women’s development.

Nadu; (b) the National Rural Livelihood Mission (NRLM), which is the flagship rural livelihood promotion programme of the Government of India; and (c) the Post-Tsunami Sustainable Livelihood Project sponsored by the International Fund for Agricultural Development (IFAD). Although none of these programmes make a distinction between fisher beneficiaries and others, figures for coastal versus non-coastal regions are available.

Mahalir-thittam

Mahalir-thittam is a socio-economic programme targeting women and the disabled which brought the Nagapattinam district into its fold in 2010–2011. A total of 15 008 SHGs were formed in the district, with 233 420 women as members. According to the Project Implementation Unit of Mahalir-thittam, the coastal blocks of the district together have 8 076 SHGs, of which 6 263 are rural and 1 813 are urban. While half the rural SHGs in the district are in coastal blocks, 69 percent of the rural SHG members are also found in coastal blocks. The programme is implemented in partnership with NGOs that handle social mobilization and the formation of SHGs. The NGOs also train SHG members and monitor their functioning in a facilitating role. Mahalir-thittam has a system of NGO affiliation based on pre-set criteria. In addition, independent SHGs (where the promoting NGO has already withdrawn in most cases; or in cases where SHGs were formed without a facilitating NGO) are affiliated through their *Panchayat*-level federations (PLFs). In the Nagapattinam district, there are 20 NGOs and 10 PLFs affiliated with Mahalir-thittam.

NRLM

NRLM has been implemented in 252 village *panchayats* in seven blocks of the Nagapattinam district, each of which has multiple clusters. In all there are 15 clusters of NRLM in this region serviced by three facilitators each. The facilitators have the following functions: (a) social mobilization and institution-building, (b) livelihood and skills development, and (c) financial inclusion and reporting. Funds are channelled through Village Poverty Reduction Committees. These are headed by the president of the governmental village *panchayat*, which is different from an *ur panchayat* and is part of a three-tiered system of local self-government institutions mandated by the country's constitution.

IFAD Post-Tsunami Sustainable Livelihood Project

Prompted by the need to promote small livelihoods in the tsunami-affected regions of the district, IFAD's Post-Tsunami Sustainable Livelihood Project covers only coastal villages, and has a total of 1 545 SHGs. IFAD has developed its own design for SHG institution-building to be applied during the course of the project. SHGs are expected to join the new institutional structure irrespective of their origins and past activities.⁷ According to the IFAD team in Nagapattinam, all the SHGs that became part of the IFAD institutional system did not have direct links with any other institutional structure, even if up until then they had been promoted by an NGO (in practice, however, other linkages exist). At the time of this study, the IFAD system had 1 545 SHGs in 192 hamlets, spread across 29 coastal village *panchayats* in seven blocks of the district. The total membership was 22 934.

3.3.2 NGO-sponsored SHGs

Many of the SHGs established by NGOs have become integrated with government programmes and have lost their distinctive identity. Still, some of the older SHGs

⁷ *Panchayat*-level federations were formed subsequently, and all the IFAD-sponsored SHGs have joined these. The *panchayat* in this context refers to the local body that is part of the official government system. Many of the SHGs not sponsored by IFAD have also joined the PLFs, often by cutting off their ties to the NGOs who organized them in the first instance.

maintain connections with their parent NGOs and partake in selective activities. Only one NGO in the Nagapattinam-Karaikal region, called Social Need Education and Human Awareness (SNEHA), has a distinctive SHG programme with a politically activist angle. An outstanding feature of its activities has been the sustained focus on women from fishing communities.

SNEHA today has 598 SHGs in 51 villages along the Nagapattinam-Karaikal stretch of fishing villages. There are 10 676 members. These SHGs are gathered in Village Coordination Sangams, which are present in all villages; however, only around 30 are active. SHGs meet twice a month: the first meeting for discussing the village-level issues and decisions of the *Sangams*, and the second meeting for financial transactions. The women save INR 100 per month each.

SNEHA works in close coordination with the National Fishworkers' Forum (NFF), an independent, all-India association of traditional fishworkers. It has been involved in several struggles waged by NFF over the last two decades. SNEHA has also been one of the key members of the Coastal Action Network, a state-level forum formed in 1996 for the protection of coastal ecology and livelihoods. This network has also participated in several struggles in the Nagapattinam-Karaikal region, including protests against the proliferation of coal thermal power plants and coastal shrimp farms. Furthermore, it played an important role in providing relief and rehabilitation services in the post-tsunami period, and has taken initiatives to promote the role of women in *ur panchayat* decision-making.

3.3.3 SIFFS-sponsored SHGs

SIFFS, the apex federation of around 150 village-level fish marketing societies and their district-level federations, is a well-known organization of small-scale fishworkers in south India. It was started in 1994 as an organization of fisherwomen in the Nagapattinam district. Women fish vendors are organized into *Sangams* with a minimum of 20 members. Each group has its own meetings, savings and credit, and operates much like an SHG; groups are also gathered into a village-level committee. The savings of the *Sangram* are managed by NDFSFS, the district-level federation of fish marketing societies under the SIFFS umbrella.

3.4 NGOs and their contribution to small-scale fisheries

Following the tsunami of December 2004, almost 500 NGOs registered with the NGO Coordination Centre in Nagapattinam to coordinate the relief and rehabilitation activities in the region. The glut of funds encouraged many NGOs to expand their work and workforce. With the completion of many projects and the reduction in available funds, the number of NGOs had tapered off by 2010. A handful of NGOs that are currently active in the fishing villages of the region focus their work in one of six fields: (a) disaster risk reduction, (b) advocacy, (c) livelihood support, (d) development, (e) education, and (f) social welfare. These NGOs are of different “denominations” and originate at different scale levels. While some are part of national- or international-level organizations, others have a local origin. Those that established SHGs as part of their social welfare activities have generally seen these integrated into the programmes of IFAD and the Government of Tamil Nadu (see Section 3.3).

Among the ten NGOs covered under the current study, four stand out in terms of their ability to engage with fishing communities regarding implementation of the SSF Guidelines:

- NDFSFS focuses on livelihoods with a clear strategy of promoting fisher organizations among small-scale fishers. It advocates its own approach to fisheries management (also see Section 3.2.2).
- Building and Enabling Disaster Resilience of Coastal Communities (BEDROC) has its origin in post-tsunami coordination and centres its work on disaster

risk reduction (DRR). BEDROC enjoys a good relationship with the district administration in Nagapattinam and has established linkages with banks and other financial institutions. It also has good working relationships with other NGOs in the region.

- SNEHA has a long history of working with women in coastal communities as well as implementing educational programmes and awareness-raising initiatives. It employs an activist, rights-based approach (also see Section 3.3.2).
- Established in 1988 as a not-for-profit trust, MS Swaminathan Research Foundation (MSSRF) is an organization with a declared focus on using science and technology for development. So far, however, its technology application programmes for fishing communities have been far from convincing. But its linkages with universities, research institutions and government have been impressive.

3.5 Rights-based CSOs and their contribution to small-scale fisheries

The role of CSOs in Tamil Nadu in ensuring that the rights of the fishing population are established and protected cannot be underestimated. Over the years, they have had considerable influence on policy, both at the national and state level. Some of their landmark achievements that have also impacted small-scale fisheries in our study area are worth listing:

1. Marine Fisheries Regulation Act (1981) and protection of small-scale fisheries rights to the inshore zone;
2. Diesel and kerosene subsidies;
3. Widespread access to welfare schemes;
4. Repeal of scheme for joint ventures in deep-sea fishing;
5. Retention of the Coastal Regulation Zone (CRZ) notification;
6. Regulation of coastal aquaculture.

It is worth noting, however, that in many instances CSO activity has tended to focus more on rights without being aware of the dangers such rights pose for sustainability of fishing.

The role of *ur panchayats* in managing the internal affairs of the fishing village in the Nagapattinam-Karaikal region is clear and paramount. The *ur panchayat* is also seen as the most significant – if not the sole – representative of the village community *vis-à-vis* the outside world, though it may seek support from outside forces (political parties, NGOs, etc.) to achieve its objectives. For issues relevant to more than one village, the *ur panchayat* system relies on the network of 58 villages (or part of it). However, in terms of representing fishing community interests that transcend village boundaries, the issue of representation becomes more complex.

In the last five decades, the challenges emerging from the outside world that fishing villages must face have become diverse, and are multiplying rapidly. The levels at which these challenges must be addressed are also changing. If most issues could be dealt with at local and district levels a few decades back, now they increasingly require action at the state government level. More importantly, some crucial issues – matters of life and death for the community – require action at a national level. In the era of globalization and climate change, even the international arena requires attention.

This has given rise to a new set of organizations and networks – both formal and informal – that help the community transcend the local and attempt to influence the higher levels. These organizations/networks vary in scale, methodology and style. They increasingly speak what can be considered the language of rights. These “rights-based” organizations take up issues related to the fishing community. Some focus more on general issues while others focus more on fisheries issues. There are also organizations that represent specific subsector interests that take up issues that affect a section of the

fishery or fishermen. This is a phenomenon common to the entire Tamil Nadu coast, but there are some variations that can be observed in Nagapattinam and Karaikal.

Table 4 provides a list of the kind of organizations and networks that have emerged across the coast and their role or relevance in the Nagapattinam-Karaikal region.

3.6 Interaction with civil society organizations and state agencies

The CSOs included in this study have many kinds of interactions, both with each other as well as with state agencies. Bavinck and Gupta (2014), writing about governance in

TABLE 4

Rights-based organizations in Tamil Nadu and their role in small-scale fisheries

| Organization/network | Description/role | Modus operandi | Status on Tamil Nadu coast | Status in Nagapattinam-Karaikal region |
|--|--|---|---|---|
| Local association taking up community issues | Led by an educated person from community who is not an active fisherman but is keenly engaged with fishermen and community issues. | Watchdog role on issues affecting community; lobbying; newsletters; mobilizing community for mass action; networking with others. | Widespread, though with higher density in urban areas. | Weak in Nagapattinam, as traditional <i>panchayats</i> are strong and do not encourage other forms of representative bodies; low level of urbanization. |
| Political party-affiliated trade union | Advocacy organizations of political parties that take up fishermen issues. | Large demonstrations; lobbying and advocacy. | Weak in Tamil Nadu, but with some presence in pockets like Rameswaram. | Generally absent in Nagapattinam, as community does not encourage organizations with potential to divide the community on political lines. |
| National Fishworkers' Forum (NFF) | National-level trade union of fishers in existence since 1978; strong fisheries focus. | Takes up state- and national-level issues; mass struggles at national level; advocacy. | Has a presence in most districts through independent affiliated units. | Bay of Bengal Fishworkers Union in Nagapattinam is active and affiliated with NFF. |
| State-level network(s) of leaders | Loose network of fishing population leaders across the state that is active on important issues. | Solidarity for local struggles occurring in other areas; state-level mobilization on common issues. | Network specific to Tamil Nadu, with weak links in southern districts; dominated by mechanized boat owners. | Nagapattinam often represented in the network by leaders from dominant villages like Akkaraipettai. |
| Mechanized boat associations and other subsector organizations | Represent interests of particular fishing groups. | Lobbying, advocacy and mass mobilization on issues affecting members. | Boat associations are strong throughout Tamil Nadu; other groups organized only sporadically. | <i>Ur panchayats</i> do not allow subsector associations to try and put up a common front for all fishing groups; individual or groups of fishing villages form temporary alliances to take up gear issues. |
| Neythal | Alliance of NGOs and fishermen leaders across Tamil Nadu coast that takes up coastal issues. | Awareness raising, advocacy and mass action. | Presence in many coastal districts through member NGOs and leaders. | Strong local membership in Nagapattinam-Karaikal; led successful campaign against shrimp aquaculture in 1990s and campaign against repealing of coastal regulations in 2000s. |
| National Coastal Protection Campaign | Network of NGOs and fishworker organizations fighting for protection of coastal environments and access rights for fishers to the coast. | Awareness raising, advocacy and mass action. | Good presence in Tamil Nadu through member organizations. | Good presence in Nagapattinam-Karaikal through member organizations. |

legal pluralism settings, have drafted a typology consisting of four types: indifference, conflict, accommodation and mutual support. All four relational types are present in the small-scale fisheries of Nagapattinam and Karaikal districts.

Village councils play a key role in the small-scale fisheries of this geographical region, and determine the opportunities and action parameters of other CSOs. Village councils wield far-reaching authority over space, activities and people at the local level, but their ties at supralocal and regional levels are far less developed. Although the shells of previous supralocal and regional decision-making bodies have survived into the present age and continue to play a role in determining larger fisheries management issues, their power is limited. Still, they constitute legitimate platforms for discussions among fishers. The connections that exist between individual councils allow for addressing and resolving smaller intervillage disputes.

The government cooperatives that have been set up in fishing villages seem to adjust themselves to the existing power structure. Local cooperative leaders belong to the village elite and generally bow to the will of the village council. As cooperative leadership is vested with control over important external resources, however, there is a potential tension with the village council that plays out differently in various settings. As individual cooperatives are nested in larger cooperative structures, local leaders have opportunities to meet each other, as well as with government officers.

SIFFS cooperatives are similarly embedded at the local level and constitute a strong regional network with regular consultations. As they have fewer resources and lower membership than government cooperatives, their leadership probably occupies a lower rank locally. However, there is still positive interaction that takes place between the SIFFS cooperatives and the village councils, as clearly seen in the example of Keezhmoovarkarai, where the council temporarily took charge over cooperative activities.

SHGs form part of different networks, depending on their institutional embedding. Those that are linked to state programmes are generally accepted in the village as “government-recognized groups”; their relatively easy access to bank finance contributes to their credibility. SHGs that are connected to NGOs and involve themselves in political activities may be received differently, depending on the issue at hand. For example, the women’s empowerment activities promoted by SNEHA and its network have not been equally appreciated by male-dominated village councils in the region.

The NGOs that have continued to work in Nagapattinam and Karaikal districts after the post-tsunami rehabilitation phase generally concentrate on specific activities and locations where they have achieved a measure of local standing. Relations with village councils are cordial, although the presence of some NGOs is more contested than others. Depending on their respective qualities and networks, these NGOs have connections with each other, as well as with a broader range of civil society, market, and state actors.

The Fisheries Department is the state agency most engaged with the fishing population of the region, and its network of assistant directors and fisheries inspectors is the most involved. The authority of these officials is, however, limited by the political powers that be, as well as by the resistance and demands of village councils with whom they are in contact. It must be noted here that officials generally abstain from visiting the beaches; rather, they wait for fishers and their leaders to present themselves in their offices. Attitudes towards the village councils are mixed: Fisheries Department officials recognize the power of village councils, while not always agreeing with their views. This ambivalence is reciprocated by fishers and their leaders: while realizing the importance of the department for their livelihoods, its officials are often assumed to be ignorant of the fisheries and sometimes corruptible.

3.7 CSOs and the SSF Guidelines

An overview of the activities and achievements of the CSOs in the Nagapattinam-Karaikal region indicates that, without being aware of the SSF Guidelines, they have already implemented many of the recommendations. Many of the recommendations have not just been derived normatively but are based on successful practices as well as learning from failed attempts. Table 5 summarizes the contribution of CSOs in Nagapattinam and Karaikal districts towards implementation of the SSF Guidelines. It also indicates the weaknesses of the different CSOs *vis-à-vis* the SSF Guidelines. For convenience the CSO role is assessed with respect to the major headings in the SSF Guidelines: (i) governance of tenure; (ii) sustainable fisheries; (iii) social development, employment and decent work; (iv) value chains, post-harvest and trade; (v) gender equality; and (vi) disaster risk and climate change.

TABLE 5
CSO contributions towards SSF Guidelines implementation

| CSO | Governance of tenure: coastal' | Sustainable resource management/ sea tenure | Social development, employment and decent work | Value chains, post-harvest and trade | Gender equality | Disaster risk and climate change |
|--------------------------------|--|--|--|---|--|--|
| Village council (ur panchayat) | Custodian of customary use of coastal space; manages use of coastal space satisfactorily among its members; struggles to protect it from encroachment and usurpation by powerful external forces that often enjoy state support. | Sets rules for fishing for its members including use of gear, timings of fishing, landings, etc. While no TURFs exist formally, councils control sea areas close to their shore; settles disputes among fishers, creditors and merchants; controls government cooperative that is involved in fisher and boat registration; struggles to ensure sustainability of fishing, as this requires consensus on common fishing rules along coast. | Lobbies with district administration and government agencies for educational, health, transport and other needs of the village population. Actively cooperates with government agencies in implementing such schemes in the village; spends some of its own resources for such needs as well. Tries to ensure that its workforce has decent working conditions, though notions of decent work may not be in line with ILO conceptions. | Has control over value chain actors operating in village and regulates their activities (timings, terms of engagement, etc.). Lobbies with government for establishment of auction halls, net-mending facilities, etc. Supports establishment of SIFFS cooperatives to obtain better fish prices. However, village councils dominated by local merchants tend to favour them over fishers' interests. | A weakness of the council. Traditional beliefs that women should not be formally part of the council still dominate thinking. However, importance of women's livelihoods is recognized and supported; SHGs are also encouraged. Still, male mediation on women's needs is perceived to have limitations. | Crucial player in almost all aspects of tsunami and cyclone relief and rehabilitation. Role after tsunami in ensuring all-around rehabilitation / development of village was outstanding. Is crucial partner with district administration and NGOs in disaster preparedness. |
| Government cooperative** | No role | Plays important role in Fisheries Department's tasks of registering fishers and fishing boats, and is a conduit for government subsidies and schemes related to fish production. Democratic functioning is absent; also tends to aggravate fisheries management problems. | Contributes only to the extent that the Fisheries Department may have schemes in this regard. A few cooperatives do run ration shops and provide local services. | Once again, contribution depends on Fisheries Department schemes which are not strong in this thematic area. | Fisheries Department has set up separate fisherwomen cooperatives that are even weaker than the men's cooperatives. | No significant role |
| SIFFS cooperative | Has contributed significantly to improved economic sustainability of small-scale fisheries through marketing, credit and insurance; takes up fisheries management issues affecting members; decides on issues that can be resolved within membership, but does not have authority (by tradition or law) to act further; acts as a strong pressure group in favour of small-scale fisheries; rejection of ring seine use sends strong signal in favour of sustainability. | As part of SIFFS network, promotes new technologies and methodologies that improve sea safety and on-board comfort. | Significant player in post-harvest and marketing stages; has brought considerable improvements in fish marketing for small-scale fisheries in Nagapattinam-Karaikal (better prices, improved infrastructure, preservation, etc.); also supports women fish vendors through credit sales; has improved fish vendors' access to institutional credit in many villages through formation of joint liability groups and fish vendor societies. | SIFFS cooperatives are basically fishermen's organizations providing useful livelihood support to fisherwomen. While this will strengthen women's role in the fishing economy, it does not automatically help women achieve equality. | Contributes in many ways to disaster risk reduction by making small-scale fisheries more robust and resilient; insurance of fishing equipment still remains unimplemented due to reluctance of insurance companies to accept an unorthodox package and donors' hesitancy to provide initial financial support. | |

TABLE 5 (CONTINUED)

| CSO | Governance of tenure: coastal ¹ | Sustainable resource management/ sea tenure | Social development, employment and decent work | Value chains, post-harvest and trade | Gender equality | Disaster risk and climate change |
|-------------------------------------|--|--|---|---|---|--|
| Women SHGs | SHGs organized by SNEHA have been at the forefront of many struggles to protect the coast from outside forces. | Limited or no role, but can play useful role if there is greater awareness raising among women. | Many SHGs tend to take up a social development agenda in addition to providing financial services; focus is more on motivation/ awareness raising on health, education, etc. | Provide financial services to women involved in livelihoods; limited support with technology and marketing; despite many initiatives, post-harvest practices and value addition have not improved. | SHGs strongly strengthen women's role in the fishing community by giving them new capabilities and self-confidence. They provide a platform for articulating women's (and families') needs and influencing external bodies as well as the village council. However, state control and standardization may rob women of social and gender agendas. | An important possible channel to provide women with knowledge and skills to deal with disasters; not clear if this is how SHGs are being utilized. |
| NGOs | SNEHA and some other NGOs have played a major role in fighting land grabbing, destruction of mangroves, industrial pollution, etc. They have also been successful in building awareness among fishers on coastal issues. | SIFFS has worked in the past with village councils to develop a community-based fisheries model in Nagapattinam-Karaiikal. It has also provided technology and organizational support to improve small-scale fisheries. MSSRF has Village Knowledge Centres in Nagapattinam and does attempt to raise awareness on sustainable fisheries; otherwise NGOs seem to be weak in understanding fisheries management issues. | NGOs are strong in this thematic area. They tend to provide social services as well as create institutions to handle social development work. However, the limited access to donor support has weakened NGO capabilities in these districts. | Limited role; some attempts to help women develop products and marketing. SNEHA and MSSRF have made serious efforts in this direction, but have a long way to go. | NGOs have played a major role in supporting a gender agenda on the coast. Organizing SHGs and strengthening women's economic roles have gone a long way to increasing women's voice in village and public issues. However, SNEHA has often clashed with village councils on women's issues, and has met with limited success. | Another thematic area where NGOs play a huge role, including information collection and dissemination, awareness raising, mobilization, and service delivery towards disaster risk reduction. BEDROC has experience and expertise in many disaster risk reduction aspects, while SIFFS and SNEHA have rich knowledge on coastal disaster response. |
| Rights-/ issue- based organizations | Neythal, National Coastal Protection Campaign, NFF and other NGOs and networks play an important role in raising awareness about the coast and mobilizing fishermen and public opinion against coastal destruction. | NFF has fought at national and state levels for policies in favour of small-scale fisheries and sustainability; however, contradictions exist in its demands. While championing the priority of the fishing community in accessing marine resources, most networks are weak in their understanding of fisheries management issues and rarely address inequity in access between small-scale fisheries and mechanized boats. Some articulated demands go against the spirit of sustainable fisheries. | These organizations are strong in taking up social development issues, and they advocate for improvement of state efforts in development of fishing communities. Many have taken up issues of marginal groups in fisheries and post-harvest activities. NFF is also working with government the ILO convention on decent work in fishing. | Some organizations have strongly advocated for improvements in markets and post-harvest infrastructure. However, demand formulation is weak due to lack of successful models and good results in the field. | Some organizations have done good work in highlighting needs of women in fisheries, notably NFF and the International Collective in Support of Fishworkers. They have also drawn attention to women leaders and to national and international issues, and have undertaken various capacity-building initiatives. | Limited contribution except in general awareness raising on climate change and articulation of demands for better disaster preparedness at state level. |

* Coastal and marine tenure are separated for this analysis as they form distinctive issues in Nagapattinam, with the former requiring disputes with outside forces while the latter is mainly concerned with use of the sea by the fishers themselves. We have lumped sea tenure together with resource management.

** Though the government cooperative and the SIFFS cooperative have been placed in the same category, both are radically different in their functions and important enough to warrant separate treatment.

4. CONCLUSIONS

This case study demonstrated the relevance of CSOs to the small-scale fisheries of the Nagapattinam-Karaikal region in the context of implementing the SSF Guidelines. The study covered four major types of institutions: traditional village councils, cooperatives, SHGs and NGOs.

While all four types of institutions occupy their own niche within the fisheries environment of the Nagapattinam-Kariakal region, the study shows that the village councils (or *ur panchayats*) are the most significant institution for small-scale fisheries. While being grounded in traditional culture and practices, these village institutions do exhibit significant differences, falling on a continuum of largely traditional to modern. They have three sets of activities: social, fisheries management, and interfacing with the outside world – including *inter alia* the government. In this regard the councils, while protecting their autonomy, work to ensure access to government services for their member families.

Village councils could be considered the most critical, as they also have a say in and even control over some of the other institutions. The government cooperatives are a case in point. Set up by the Government of Tamil Nadu as channels for delivering government programmes at the village level, these cooperatives work in tandem with the village councils. In most villages the councils control their operations; there are even instances when village councils literally manage the functions of the government cooperatives.

A second kind of cooperative institution seen in the Nagapattinam-Karaikal region are the village-level fish marketing societies affiliated with NDFSf. Although not recognized as such, these institutions function as cooperatives and play critical roles in the lives and livelihoods of their members. However, their membership is not as universal as that of the government cooperatives.

Formed under different programmes and by various agencies, SHGs appear to be converging into a government-sponsored structure. The original promoters in most cases are not playing a critical role in their functioning anymore (with the exception of SNEHA and NDFSf, which still try to maintain their identity within the SHGs that they have promoted). The emerging framework of SHGs shows potential for them to take up capacity-building initiatives as well.

After the flurry of the post-tsunami rehabilitation phase, there appears to have been a significant drop in NGO activity in the Nagapattinam-Karaikal region. Now there are only a limited number of NGOs with critical size and presence in the region. NGOs addressing specific themes such as disaster risk reduction (BEDROC), rights awareness (SNEHA), proper technology (MSSRF), and livelihoods (NDFSf) seem to be players with a long-term interest in the region and its people.

Below we present four CSO initiatives that we consider good practices worthy of emulation.

GOOD PRACTICE 1

SIFFS cooperatives: strengthening small-scale fisheries through value chain interventions

The SIFFS cooperatives in Nagapattinam represent a model that gives fishers control over the “first point of sale” and improves their fishing returns. This is most relevant in conditions where preharvest advances from intermediaries and traders tend to depress prices due to lack of bargaining strength on the part of the small-scale fishermen. It involves a two-pronged market intervention: free and fair auction of locally consumed species, and bulk sale of species going to distant markets.

The auction system is preferred for locally consumed species as it caters to a large number of small-scale buyers, mostly fisherwomen. The system in Nagapattinam,

though similar to a traditional auction system, achieves almost “perfect competition” by removing various imperfections: unfair rebates to buyers, price manipulations by auctioneers, and difficulties faced by fishermen in receiving payment from buyers. The cooperative auction is run by salespersons appointed by the cooperative who ensure that the auctions are free and who take full responsibility for collecting payment from buyers. The fishermen’s responsibility is reduced to observing the auction and collecting the money from the cooperative office later in the day, at their own convenience.

The bulk sale methodology is more suitable for distant-market species, as the buyers in this case are large merchants with greater market power with whom the small fishermen lack bargaining power. Cooperatives with a significant quantity of species going to distant markets, including export, pool the member catches of these species, sort them according to species and size/grade, and then temporarily stock them in tanks. The pooled catch is then put up for competitive bidding – species- and grade-wise – by interested merchants. The bulk availability of these species reduces transaction costs, and often bigger buyers and agents of export companies enter the fray to push up prices.

The success of this model is proven by the fact that it has been adopted by small-scale fishers in over 150 fishing villages in South India, with some of the SIFFS cooperatives functioning for over two decades. Evolved and refined over a period of time by the work of pioneering CSOs in South India, this model’s sustainability can be attributed to the following factors: (i) provision of “debt redemption” loans to release fishermen from intermediary control and regular access to credit for replacement of fishing equipment, and (ii) a system of supervision and support through district federations and technical inputs from SIFFS.

GOOD PRACTICE 2

Ur panchayats: ensuring equitable access to tsunami relief and rehabilitation

The tsunami in December 2004 saw the *ur panchayat* play a crucial role in coordinating the relief and rehabilitation work in each and every fishing village of Nagapattinam and Karaikal districts. As the agency with knowledge about every family in the village, the *ur panchayat* dealt with all agencies external to the village (including Government agencies), brought relief to every family in the village, and planned for various village rehabilitation developments. The following examples of actions by the Tarangambadi *ur panchayat* showcase the role of the *ur panchayats* after the tsunami.

Ensuring relief for all

Tarangambadi is a large village with one thousand families. When aid agencies brought 900 food packets, the *ur panchayat* was unwilling to distribute the food packets until the concerned agency brought another 100 packets. The village was unified enough to negotiate with aid agencies to ensure that the needs of all were satisfied. This ensured that during the relief phase when community members were helpless and displaced from their homes, adequate relief reached every family.

Boats for all

With NGOs showing willingness to supply boats (with motors) when the fisheries rehabilitation began, the *ur panchayat*, based on discussions in the village assembly, set a target of 250 boats (with a crew size of four). This would provide employment to all the fishermen in the village. The *ur panchayat* approached many NGOs and negotiated with them to achieve this target. To ensure the quality of the boats supplied, the *ur panchayat* insisted that all NGOs who supplied boats source them from manufacturers approved by the village. Though the boats were given to specific individuals or groups,

they were all parked in the village square over a period of six months until the entire lot of 250 boats reached the village. A village meeting then endorsed the following formula for distribution of the boats:

- All families were notionally given an equal share in the value of the boats.
- Fishermen wanting to own a boat could buy them from the village at 50 percent of the market price.
- As no one had funds to purchase boats, the boats were given to fishermen who agreed to pay the amount within a one-year period.
- Each prospective buyer was to form a group with three other families. The buyer agreed to pay those families their share of the boat price within one year. If this was done and reported to the village, the buyer's full right of ownership would be recognized. If the buyer failed to do so, the boat would be taken back by the village and given to someone else.

This carefully crafted formula was successful, with all the 250 fishermen (representing 250 families) who opted to buy the boats paying the remaining 750 families the value of their share of the boats. Thus a potential situation of inequity between owner and non-owner households was avoided, and was handled instead in a manner that satisfied all families.

An important circumstance in this particular context was that group ownership of boats had not been historically successful in Nagapattinam, as not all families were willing to take on the responsibilities and risks associated with owning a boat. This can be gauged by the fact that the 50 percent subsidy on the value of the boat was not enough to create competition to own the boats. Interestingly, as the *ur panchayat* did not handle any of the money involved, this huge financial transaction was not part of their annual accounts.

Land redistribution to ensure equity and a less congested village

Most of the houses in Tarangambadi were damaged in the tsunami, some partially and others totally. The state policy for post-tsunami housing required that all those who lived within 200 m of the sea were to be relocated beyond the 500 m zone, while those who lived in the 200–500 m zone were given an option to move beyond 500 m, if they wished.

The old settlement was quite congested, with varying plot sizes. Many of the fishermen had less than 3 cents worth of land, which was the plot size allotted to fishermen in the new settlement. Moreover, the civic facilities in the settlement were also poor with narrow winding roads and insufficient space for proper sanitation. When this was pointed out to the *ur panchayat* by the NGO mandated by the State Government to build new houses (as per Government guidelines), a village meeting was convened to discuss the issue. The village accepted a vision of both the old settlement and the new one having similar facilities to ensure good quality of life and equal access to civic facilities. This resulted in an agreement to relocate some of the families in the 200–500 m zone to the new settlement beyond it, giving up their existing plot of land in the old settlement to the village community. This measure ensured that land could be redistributed in



A tsunami colony coming up in Tarangambadi

the old settlement (all those remaining got 3 cents worth of land) and good common infrastructure including roads could be developed.

Eventually, 1 081 new houses were built in Taragambadi, 690 of them in a new settlement beyond 500 m, and the remaining in the old settlement. This resulted in Taragambadi becoming a model village visited by many of those interested in post-tsunami rehabilitation.

An important reason for this success was the participatory process adopted by the NGO in the planning and construction process, which got the inhabitants excited about the future and willing to make sacrifices and changes necessary to achieve it. This experience highlighted the potential for the *ur panchayat* to transform the village when provided with suitable resources.

GOOD PRACTICE 3

CSOs and the fight to protect customary rights to the coast

The fishing communities on the coast have been facing growing threats to their livelihoods and settlements due to a variety of new private and public investments: thermal power plants, ports, jetties, industries, shrimp aquaculture, etc. This trend has been increasing since the early 1990s. While some activities affect livelihoods, others affect quality of life through negative impacts like groundwater depletion/salinization and coastal erosion. Still others also physically displace fishermen settlements, or parts of them, to accommodate the new activity.

An aggravating factor is the absence of proper documented tenure rights to coastal lands and resources. Despite living for centuries on the coast on the basis of customary rights, the absence of proper legal documentation makes it difficult for the fishing communities to protect their settlements, especially the open spaces they use for beaching boats, mending nets, drying fish, and for religious and cultural purposes. The only legal instrument available at the moment is the Coastal Regulation Zone (CRZ) notification, first brought out in 1991. Though mainly intended to protect the coastal environment, it has been used by fishing communities across the coast to protect their interests. Below are a few instances where the Nagapattinam CSOs have creatively used this instrument.

Taming shrimp aquaculture

Brackish water shrimp aquaculture was begun on a commercial basis in the early 1990s and started spreading across the east coast of India, particularly in the states of Andhra Pradesh and Tamil Nadu. With a good price for tiger shrimp, the initial investors received windfall profits and a large number of outsiders moved in to cash in on the new “pink gold” rush. Without a regulatory framework in place, and with strong encouragement from state agencies like the Marine Products Development Authority, there was unbridled growth with strong negative consequences, such as groundwater contamination, soil salinization, mangrove destruction, blocking access to fishermen settlements, harvest of shrimp fry from river mouths for natural stocking, and takeover of large tracts of coastal lands and beaches.

The Nagapattinam district was one of the areas where shrimp farms grew to a significant scale, thanks to the low price of land and the decline in agriculture (due to an upper riparian state denying adequate water flow to the lower riparian areas). In response, the fishing community organized protests. However, these were of no use, as government agencies saw the “success” of shrimp aquaculture, and thus the potential to realize a long-cherished ambition to catch up with Southeast Asia, which already had its shrimp aquaculture boom in the 1980s.

The Nagapattinam CSOs, with SNEHA prominent among them, joined hands with CSOs across the east coast of India to form national networks to challenge shrimp

aquaculture at the policy level and in the courts. Public hearings were organized and independent experts were brought in to study the situation and highlight the damage done by shrimp aquaculture, as well as the plight of the fishing communities.

Though much of the fight against shrimp aquaculture was led by CSOs working in the fisheries sector, fishermen were not the only victims. The damage done to farmlands affected farmers and farm labourers. While the affected farmers could survive by joining the shrimp aquaculture bandwagon or sell their lands to those who wished to invest, farm labourers did not have any alternatives. They lost their employment and were left in dire straits. It was from the farm labour sector in Nagapattinam that a strong movement arose against shrimp aquaculture that would make a major impact, both locally and nationally.

The farm labour of the predominantly agrarian district of Nagapattinam had been organized by a Gandhian and veteran freedom fighter, S. Jagannathan and his wife Krishnammal Jagannathan. The couple led a group called LAFTI (Land for Freedom of Tillers), which started fighting for land rights for agriculture labour and mobilizing public opinion against shrimp aquaculture. Jagannathan's image as a freedom fighter and his tireless efforts brought more support to the fight against shrimp aquaculture. He filed a case in the Supreme Court of India in 1993, *S. Jagannath vs Union of India*, that resulted in the first official enquiry into the effects of the practice. The case made legal history in many ways. It made use of the CRZ notification of 1991, which regulated activities within the 0–500 m zone landward of the high tide line. Though shrimp aquaculture was not listed in the notification, the Supreme Court agreed that most forms of shrimp aquaculture were in violation of it. In its landmark judgement of 1997, the Court ruled all shrimp farms within 500 m of the high tide line as illegal and asked the Government to close them down.

The Supreme Court judgement led to closure of a large number of shrimp farms and the eventual creation of a Coastal Aquaculture Authority through a law of the Parliament in 2005. Even though there are many lacunae in this legislation and the implementation of it is far from satisfactory, the CSOs were successful in ensuring that a framework exists to manage shrimp aquaculture in India. Nagapattinam CSOs played a crucial role in this process.

The fight for coastal regulations (2007–2010)

The CRZ notification of 1991, first used to great effect by CSOs in the shrimp aquaculture case, became a major tool for protection of the coastal ecosystem as well as the livelihoods of the fishing communities. Throughout the 1990s, the CRZ 1991 was used to fight new industries and projects that came to the coast without proper environmental assessment. The “public hearing” provision was fully utilized by NGOs and local fishing communities to raise objections to such projects, and the authorities were required to verify these objections carefully. Even if they were lax in this, the courts would then examine them carefully.

This was resented by ambitious investors and government departments promoting investments on the coast. Some State Governments also found their pet projects scuttled on account of the CRZ. Instead of aiming to tighten the compliance of such projects, government departments and the corporate sector started lobbying against the CRZ itself. The Ministry of Environment and Forest, the custodian of the CRZ notification, appointed a committee to explore the reforms needed in the CRZ regime. In 2005, the committee proposed the replacement of the CRZ with a new notification: the Coastal Management Zone (CMZ) notification. Under this new proposal, instead of “rigid” regulations, a more flexible regime based on decentralized “management” plans would be put in place. This was obviously an attempt to avoid a minimum set of regulations common to the coast as a whole, and which could be easily scrutinized by the CSOs and the courts.

This recommendation to scrap the CRZ and replace it with a CMZ was not taken up immediately. It would take another couple of years before the idea would get traction and move forward rapidly within the Government of India. The fishing communities in at least three coastal states had been affected by the tsunami and were all too busy trying to achieve normalcy, and hence they largely ignored this development. However, when the actual steps toward a CMZ started in earnest in 2007, the fishing communities and the CSOs woke up and started discussing its pros and cons.

Recognizing the dangers posed by the CMZ, and the need to take up the issue nationally to have any impact, the local and national CSOs joined together to influence the Ministry of Environment and Forests. NFF, the independent trade union of fishing communities, took a lead in challenging the CMZ concept. It created a broad-based platform called the “National Campaign against the CMZ” that included fishers’ organizations, environmental groups and other CSOs working across the coast. This campaign, which would eventually become the National Coastal Protection Campaign, was instrumental in raising public awareness on the issue and among the fishing communities themselves.

When the draft notification to replace the CRZ with CMZ was officially brought out in March 2008, the NFF launched a Coastal *Yatra* (“march”) that saw its leaders travel across the coast, from Kutch on the west coast to Kolkata on the east coast, over a period of one month. The march helped mobilize the entire fishing community along the 6 000 km coastline of peninsular India against the proposed CMZ. Protests and demonstrations took place all over the coast, including a “fisheries ban” where fishing activities completely ceased and no fish was sold in the major coastal cities.

Eventually, the Ministry caved in and agreed to scrap the proposal for a CMZ and retain the CRZ regime. However, a new CRZ notification was proposed with a view to “strengthen” the CRZ. A series of consultations were held in the coastal states by the Ministry in preparation for this. The first draft that came out of this proved unsatisfactory to the fishers, and they took to protests and demonstrations again. Finally, a clause by clause negotiation with an NFF team in December 2010 paved the way for a new CRZ 2011, which is the prevailing regulation at the moment. Though the notification did not weed out all the defects that had crept into the CRZ 1991 through administrative amendments, it contains a number of provisions that protect the fishing settlements on the coast and ensures that the needs of the fishing communities are considered while protecting the environment.

Nagapattinam, as one of the districts with the longest history of action on coastal issues, continued to be active throughout this period, with many CSOs playing their role in local mobilization against the CMZ. SNEHA and the Coastal Action Network were prominently involved in the fight against the CMZ.

Mapping the fishing villages and establishing tenure rights

The absence of proper documentation of the use of coastal space by the fishing communities has been seen as a major gap in the establishment of fishing community tenure rights on the coast. The CRZ 2011, though only an environmental regulation, has attempted to partially resolve this through a creative provision. It requires that all fishing villages on the coast be mapped, including common spaces used for livelihood and cultural purposes. This in turn will ensure that the Coastal Zone Management Plans (CZMPs), an important tool for implementation in the CRZ regime, will record this use of coastal space by the fishing communities. While providing land rights was well beyond the scope of the CRZ notification, it would ensure that there is an official record that would help fishermen establish their customary rights.

However, despite this provision, the government agencies responsible for this did not take any action in mapping fishing villages, due to a combination of apathy and a lack of clarity on how this could be done. To break this impasse as well as to ensure

that fishing community rights are best established by the communities themselves, a few CSOs have started the process of mapping fishing villages using hand-held GPS devices (used nowadays by small-scale fishermen on motorized canoes). The Tamil Nadu and Puducherry CSOs are at the forefront of this attempt. The Pondy CAN (Pondicherry Citizens Action Network), Coastal Resource Centre in Chennai and SNEHA in Nagapattinam are all active in working with fishing communities in their respective areas of influence to help them map their own villages.

The “Map Your Village” movement has gathered some steam and around 25–30 fishing villages in Tamil Nadu and Puducherry have been mapped as part of this process. Most of these have been drawn in a participatory manner and have received approval by the village population that has verified the maps. This has already had an impact on the current process of development of new CZMPs as per the CRZ 2011. Some of the community-drawn maps have been used by the authorities in the official CZMPs. In some areas, these self-drawn maps have been used to point out mistakes in the draft CZMPs released for public comment by the Tamil Nadu state authorities. Some of these have also gained legitimacy, as they were drawn up using training provided by a Central Government scientific institute, the Integrated Coastal & Marine Area Management, and have been verified by them as well.

The community-drawn maps are now showing the way forward in establishing the customary rights of coastal fishermen. Nagapattinam and its CSOs continue to play a crucial role in this.

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Dry fish at landing centre
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Sharing good practices: concluding discussion

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THE CASE STUDIES: A RICH SELECTION OF EXPERIENCES

The SSF Guidelines were endorsed by the FAO Committee on Fisheries in June 2014 and had hence existed for about four years when this publication started to take shape. During those four years there have been many changes in perspectives and attitudes, most notably increased recognition of the importance of small-scale fisheries and awareness of the existence and content of the SSF Guidelines. The SSF Guidelines are now reflected in various regional and national policies and strategies. More importantly, in many places small-scale fisheries organizations have become stronger and are being consulted more often in policy-making processes. Moreover, as can be seen from the case studies that have been presented, the principles and provisions of the SSF Guidelines are being applied at country and local levels.

The case studies constitute a rich selection of experiences. They are quite diverse, not only with regard to their geographical setting but also in scope and approach. They span from looking at one specific tool for sharing experiences (the FLE methodology in Madagascar and Mozambique) or examining the enabling environment in a specific thematic area (disaster risks in Bangladesh) to regional policy formulation on small-scale fisheries (the SSF Guidelines protocol for Caribbean policies) and reflection on how to use the SSF Guidelines in participatory processes (the Myanmar step-by-step approach used in discussions with small-scale fisheries communities). A few of the studies looked at co-management, in some cases combining fisheries management and social development (Senegal, Uruguay and Nepal), and one study focused on the role of small-scale fisheries and community organizations (India).

Sharing of knowledge is essential in supporting change and reform processes. The case studies contained in this technical paper were commissioned to identify, document and encourage good practices for the implementation of the principles and provisions of the SSF Guidelines, including with regard to the application of the human rights-based approach (HRBA). Below, a number of the good practices that have been presented throughout this paper are summarized and discussed. The practices tend to cut across SSF Guidelines principles and thematic areas and the discussion is hence not structured according to specific principles or types of human rights, but rather presents groups of practices that support SSF Guidelines implementation in different ways. This summary is not exhaustive but focuses on practices that are common to more than one case study. The reader is encouraged to read the full paper to learn more and fully appreciate all the experiences described.

CO-MANAGEMENT AND SOCIAL RESPONSIBILITY: A HOLISTIC APPROACH

The importance of participation of small-scale fisheries actors in decision-making and development processes is demonstrated to various degrees in all the case studies. Participation and consultation are a fundamental principle of both the SSF Guidelines and HRBA. Some of the good practices described include participatory arrangements for co-management of resources, such as participatory surveillance in collaboration with government authorities in Senegal or the participation of fishers in data collection for monitoring in Uruguay.

In Uruguay, there is a relatively new fisheries law promoting co-management that formalizes community participation in fisheries management processes and decision-making. The importance of a formal legal basis for co-management is a good practice that has already been recognized for some time (see, for example, Westlund, Holvoet and Kébé, 2008), and this is confirmed by the case studies. In Senegal, the facts that co-management legislation acknowledges traditional law and that there is a formal co-management agreement between the local fishers' committee (CLP) and the ministry are considered important factors contributing to the success of the co-management arrangement in moving towards more sustainable fishing practices. The delegation of responsibility fostered a commitment by fishers to comply with their own rules. At the same time, it also led to the emergence of social responsibility, with the Ngarapou CLP committing human and financial resources to many welfare and business initiatives that were not directly related to fisheries, but highly appreciated by the recipient community members. This is a good example of applying the holistic approach promoted by the SSF Guidelines: combining fisheries management with social and economic development.

Similarly, in the context of disaster risk management in Bangladesh, a cross-sectoral approach has been applied successfully. In addition to immediate relief and infrastructure reconstruction after a disaster, the government and NGOs provide, among other things, a social safety net programme to support poor and disadvantaged groups (Vulnerable Group Feeding programme) and support for environmental restoration through tree plantation. This integrated approach follows the concept of "building back better" in line with the SSF Guidelines.

In Uruguay, co-management appears to have proven successful in advancing gender equity, improving living conditions and well-being, and hence in supporting certain aspects of human rights. However, the co-management arrangements seem to have been less successful in protecting human rights that go beyond fisheries management, as this is not part of the mandate of the fisheries agency. To expand their reach, co-management arrangements would need to be accompanied by broader structural changes in legislation and efforts to improve cross-sectoral coherence and collaboration among different sectors and related government agencies.

The Rupa Lake cooperative described in the case study in Nepal applied a broader co-management approach and showed how benefits can be distributed among not only the fishers who are directly harvesting fish but also others who are dependent on the particular water area and who are part of the ecosystem. The cooperative, established to support restoration of the lake, has introduced a transparent mechanism for distribution of benefits to both upstream and downstream communities. The upstream communities receive benefits even if they were not initially members of the cooperative and do not use the lake's fishery resources. The health of the lake is dependent on what is happening upstream (e.g. tree planting and use of pesticides); this implies changes in behaviour and potential costs to upstream communities, and hence justifies their sharing in the benefits.

Change can be facilitated if the problem and the need for change are clearly perceived by the fishers themselves. Both in Nepal and in Uruguay, fishers recognized the need for improved management and the real risk of losing their livelihoods if

this wasn't addressed. Still, addressing overexploitation can lead to conflict, even in a co-management system. In Nepal, because of the need for lake and fisheries restoration, traditional fishers lost their exclusive right to fish in the lake whenever and however they wanted. To compensate for the loss of livelihood, fishers' families were given employment in the cooperative. These arrangements were transparent, but the processes needed to be handled carefully and with great accountability in order to be successful.

Another challenge in the context of co-management concerns how to deal with fishers from outside the co-managed area and who are not part of the co-management arrangement. A conclusion from the case study in Senegal is that legislation and related surveillance need to be in place to regulate access to a co-managed fishery by outsiders. In Senegal, the community did not have the monitoring and inspection resources needed to fully enforce their rights, and the legal status of the locally managed marine area needed to be more assertively defined. The study also noted that the examples of successful co-management tend to be fisheries with relatively low-mobility species, or in a lake as in the Nepalese case. To replicate these successes in, for example, the small pelagic fisheries of Senegal would require a mechanism for collaboration between all communities in different localities that fish using the same resource – i.e. they would need to share the same management system. Similarly, the case study in India notes the need to set common fisheries management rules over a longer stretch of the coast.

In India, coastal fishing communities have been facing growing threats to their livelihoods and settlements from outside the fisheries sector due to a variety of new private and public coastal investments. Civil society organizations (CSOs) have been fighting for coastal regulations that protect small-scale fishing communities' rights to water and land, including through assistance in drawing maps in support of tenure rights. A "Map Your Village" movement has covered some 25–30 fishing villages in Tamil Nadu and Puducherry. These maps are now showing the way forward in establishing the customary rights of coastal fishers.

INCLUSIVENESS AND PARTNERSHIPS: THE NEED FOR BROAD ENGAGEMENT AND CAPACITY DEVELOPMENT

Inclusiveness needs to be applied not only with regard to the sharing of benefits (as mentioned above) but also with regard to decision-making. It is particularly important to make sure that women and indigenous peoples and marginalized groups are included. Members of the Rupa Lake cooperative's executive committee are elected from the cooperative, but certain positions are also reserved for women and ethnic minorities to ensure their participation. It can be argued that the successful lake restoration was in part due to this inclusive governance mechanism and cooperative leadership combined with transparent decision-making. An inclusive governance approach is also showcased in Senegal, where any fisheries stakeholder may join the local fisheries council regardless of gender and occupation. Further, at the level of specific activities, such as the fisheries learning exchange (FLE) described in the Madagascar/Mozambique case study, inclusiveness and diversity are considered important for having a wide range of perspectives, and likewise it is recommended that mixed groups (fishers, traders, community leaders, seaweed farmers, etc.) participate together in FLEs.

In Uruguay, there are two nested decision-making bodies: the fishers' assembly and the Local Fishery Council. The latter is open to a broader audience, including academia that has played an important catalytic role in the co-management process. The usefulness of partnerships, as well as a need for capacity development, is also evident in the Caribbean case study. This study found that there are times when small-scale fisheries actors may desire guidance and support: for example, most fisherfolk were not willing to spend time contemplating policy unless external actors such as the university and some NGOs, perceived as having more power, intervened on

their behalf as well. It was not entirely clear why this was the case, and the factors affecting fisherfolk engagement need to be studied further. Better awareness raising and leadership are clearly needed to show fisherfolk the potential for them to influence policy. But partnerships, based on participatory approaches and transparency, can also be important, and the development and endorsement of the protocol incorporating the SSF Guidelines into the Caribbean Community Common Fisheries Policy was much helped by this collaboration.

External assistance can be critical when setting up new arrangements and instigating change. This assistance can be both financial and technical. The case study in India points out the need to carefully identify suitable partners, as they have different strengths and roles to play. The authors of the case study on the Madagascar/Mozambique FLE note the need for follow-up support on processes that have been set in motion, so that FLE participants may start implementing what they have learned. In Bangladesh, the presence of a strong network of NGOs, active in particular at the grassroots level, is a key element of the country's disaster risk management framework. In Nepal, the Rupa Lake cooperative has been able to leverage support and collaborate with various NGOs. In Senegal, the CLP did not have the necessary means required to offset or alleviate the negative effects on fishers of the new management measures, and so critical assistance was required from resource partners. At the same time, the CLP also exercised responsibility for its sustainability by requiring financial contributions from members in the form of fees.

These experiences seem to indicate that a good practice for small-scale fisheries organizations and fisheries co-management is to ensure that the resources needed for implementing change are available, and that there can be collaboration with partners (when required and appropriate) – but also, at the same time, to ensure that they build their own capacities and financial strength. Effective participation of small-scale fisheries actors is key, and strong, representative small-scale fisheries organizations that are given the space for participation in decision-making are a fundamental building block for sustainable small-scale fisheries. The case study in India shows the critical role of civil CSOs, including in particular village councils, in implementing the SSF Guidelines and in interacting with the government and external partners on behalf of communities.

THE POWER OF COMMUNICATION

A key ingredient for an effective partnership is good communication. Communication includes a number of dimensions and challenges, and is fundamental not only for collaboration but for any development process. It is a tool for exercising influence and provides the basis for a common understanding of goals and approaches. What's more, it also helps avoid conflicts. In the Caribbean case study, persistent and consistent communication on the protocol process was one of the keys to success. A lesson learned was that it is important to have a common understanding, right from the outset, of the collective capacity needed to influence policy. In hindsight, it would have been useful to host capacity-building workshops for fisherfolk prior to initiating the participatory process, had this been feasible. It is also important to ensure that the right means of communication are used. Policy briefs and other material – that can be useful in other contexts – were in fact not used as there is a strong preference for personal and interactive communication among fisherfolk in the Caribbean.

Ensuring effective communication is also critical in a more hands-on and practical context. In the Madagascar/Mozambique FLE, the question of what languages to use and how to deal with interpretation requirements became a key issue, as the whole FLE initiative is built on direct sharing of experiences between members of two communities – who may of course not speak the same languages. In addition to interpretation, observational activities may be useful because they allow participants to casually interact and learn by demonstration.

GENDER EQUALITY AND THE ROLE OF WOMEN

The role of women is highlighted and discussed in all the case studies. In Uruguay, men and women have equal tenure rights in the form of fishing licenses and individual fishing quotas. Women have played a key role in fisheries management by strengthening governance initiatives. They were explicitly included in the co-management process and the Local Fishery Council, and their participation in fishing activities has increased. In Bangladesh, special training was organized for women on disaster management as well as homestead gardening and other income-generating activities to strengthen their resilience. These are important steps towards gender equality, but there is still a long way to go. In both Madagascar and Mozambique, women play a significant role in the octopus fisheries, but men still dominate the management discourse and decision-making. Similarly in Senegal, there is a special line of credit for women businesses, but women are still notably at a disadvantage.

The case study in Myanmar describes current gender roles and how women often play a crucial but invisible role in community life and the local economy. Women's productive work is seen as mere support for men's earnings. These perceptions are nested in broader societal and cultural frameworks that are not specific to small-scale fisheries; hence it is questionable whether all solutions can be found within the sector. Changing perceptions and attitudes is a long process involving the dismantling of stereotypes. In Myanmar, an approach was taken using transparent discussions with communities and allowing those participating to choose the topics to be discussed and how they wanted to participate. The case study in India warns against too much external pressure to change gender roles as this could backfire, and instead suggests supporting women's livelihoods and organizations as a way towards gender equality. The experience of FLEs in Madagascar and Mozambique shows that special provisions may be needed to allow women to participate in certain activities. For example, with regard to travel, it could be necessary for there to be chaperones if it is not accepted culturally for women to travel alone.

In summary, the case studies indicate that, to promote gender equality, a mix of measures is needed, including ensuring that formal processes and institutional structures are inclusive and clear about the participation of both men and women; ensuring that there are actions that cater specifically to women's needs and facilitate their participation in specific processes; and embarking on long-term processes to explore and question existing gender roles in a participatory way. The small-scale fisheries gender handbook (FAO, 2017), developed to support SSF Guidelines implementation by FAO in collaboration with small-scale fisheries actors and stakeholders (in particular the International Collective in Support of Fishworkers), includes more detailed advice and guidance on gender issues in small-scale fisheries.

FINAL REMARKS

The SSF Guidelines are complex, covering a wide range of issues that go well beyond the fisheries sector. This is necessary, as the SSF Guidelines reflect the reality of small-scale fisheries' livelihoods. This integrated approach is one of the key characteristics that make the SSF Guidelines different from other fisheries instruments. It is not evident, however, that the holistic approach they prescribe should address all aspects at the same time. Neither perhaps should it be expected that this is even immediately possible, considering existing institutional structures and current practices; rather, they need to be addressed one step at a time. It is still of fundamental importance, however, that the guiding principles of the SSF Guidelines be applied at all times and that initiatives and activities be planned and implemented using HRBA. These case studies showcase a number of experiences and practices that relate to human rights principles in general terms, but it would appear that most activities were designed and implemented without explicitly using HRBA. Still, collectively, the case studies refer

to many of the principles and thematic areas of the SSF Guidelines and the human rights that they refer to. As more experience is gained, our knowledge on how to go about implementing the SSF Guidelines will improve and nurture new and continued initiatives. For the present and the future, efforts should be made to apply HRBA, while continuing to share experiences and good practices showing how to do so when implementing the SSF Guidelines.

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This document explores good practices in support of sustainable small-scale fisheries and the implementation of the Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines). It includes eight case studies from across the world and it is hoped that the experiences that these present will help inform policy and policy processes and, in this way, promote sustainable small-scale fisheries according to the SSF Guidelines and the human rights-based approach to development (HRBA).

ISBN 978-92-5-131260-5 ISSN 2070-7010



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CA3041EN/1/02.19