GWA GENDER AND WATER ALLIANCE

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Gender Mainstreaming in Coastal and Marine Ecosystems Management

Principles, Case Studies and Lessons Learned

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Abbreviations

CEDO:	Intercultural Center for the Study of Deserts and Oceans
CORDIO:	Coastal Oceans Research and Development – Indian Ocean
COVID-19:	coronavirus disease
DOPA:	Densu Oyster Pickers' Association
FAO:	Food and Agriculture Organization of the United Nations
GWA:	Gender and Water Alliance
IOM:	International Office for Migration
TNC:	The Nature Conservancy
UNDP:	United Nations Development Programme
UNEP:	United Nations Environment Programme
UNICEF:	United Nations Children's Fund
WHO:	World Health Organization

Executive summary

As oceans, seas and coastal areas all over the world are facing increasing pressures owing to climate change, pollution and globalization, women and men feel the impacts of degraded coastal and marine ecosystems in different ways. Across societies, women and men use and manage marine and coastal ecosystems differently and have specific knowledge, capabilities and needs related to coastal and marine resources. Historically, the work and contributions of women, informal workers and indigenous groups have been routinely ignored or underestimated in coastal and marine research, management and policy, including, but not limited to, their important work in fisheries and aquaculture, in the processing and trading of marine products, in managing plastic and other waste from urban and tourist growth, and in conservation and disaster risk reduction initiatives.

Increasingly, collective calls for participative, integrated and sustainable approaches to marine and coastal science and management are met with calls for gender inclusiveness, mainstreaming and sensitivity across the environment and development agendas. Yet, even as policymakers, environmental managers and development practitioners are made aware of why gender mainstreaming is important in the integrated management of marine and coastal ecosystems, they lack the practical guidance and tools on how to do it. This report brings together gender experts and experts from other fields in coastal and marine research to bridge this gender-technical divide.

The report is centred on 10 gender mainstreaming principles developed to offer structure and guide the practice of gender mainstreaming into the integrated management of coastal and marine ecosystems. These principles can be considered "tried and tested" strategies for promoting socially just, environmentally sustainable and economically efficient development in coastal and marine contexts.

The 10 gender mainstreaming principles are also illustrated in action through 10 case studies from different countries with distinct geographical and social contexts. The case studies cover a wide set of themes in coastal and marine ecosystem management and highlight the work of diverse stakeholders, including conservation organizations, researchers, government ministries, civil society, the private sector and community-based groups. Each of the 10 case studies aims to explain the rationale behind the use of a particular gender mainstreaming principle (why), illustrate the practical aspects of implementing it in a specific context of coastal and marine ecosystem management (how), and offer lessons learned and recommendations. The cases are vivid examples of the potential broader social and environmental impacts of integrating gender principles into marine and coastal management projects.

The report also offers insights into how the COVID-19 pandemic is affecting coastal people, livelihoods and ecosystems, based on information gathered from individual case studies, in terms of disaster preparedness, COVID-19 impacts, mitigation measures and lessons learned. Importantly, many coastal communities are confronting COVID-19 while also facing other overlapping climate-induced, health and environmental crises, such as dengue and cholera, flooding, monsoons, hurricanes, earthquakes, volcanoes and wildfires. The pandemic also led to drastic increases in gender-based discrimination and violence across communities and livelihood sectors in coastal and marine contexts. Coping with multifaceted crises in coastal regions often involves a heavy reliance on women and their paid and unpaid care work within households and communities.

Especially in coastal areas where the official disaster protocol is not gender- responsive or sensitive, successful COVID-19 relief and recovery has depended on the effectiveness of local social networks and collective action coalitions, often built by women and youth, who have maintained assistance to vulnerable groups throughout the past 18 or more months.

The report concludes with a set of overarching findings and recommendations to assist those working towards mainstreaming gender into projects for the integrated management of coastal and marine ecosystems. The findings and recommendations offer concrete ways to ensure that projects do not exacerbate existing gender-based inequalities, and instead provide tangible paths to include all stakeholders, especially women, in promoting equitable, efficient and truly sustainable development within coastal and marine environments.

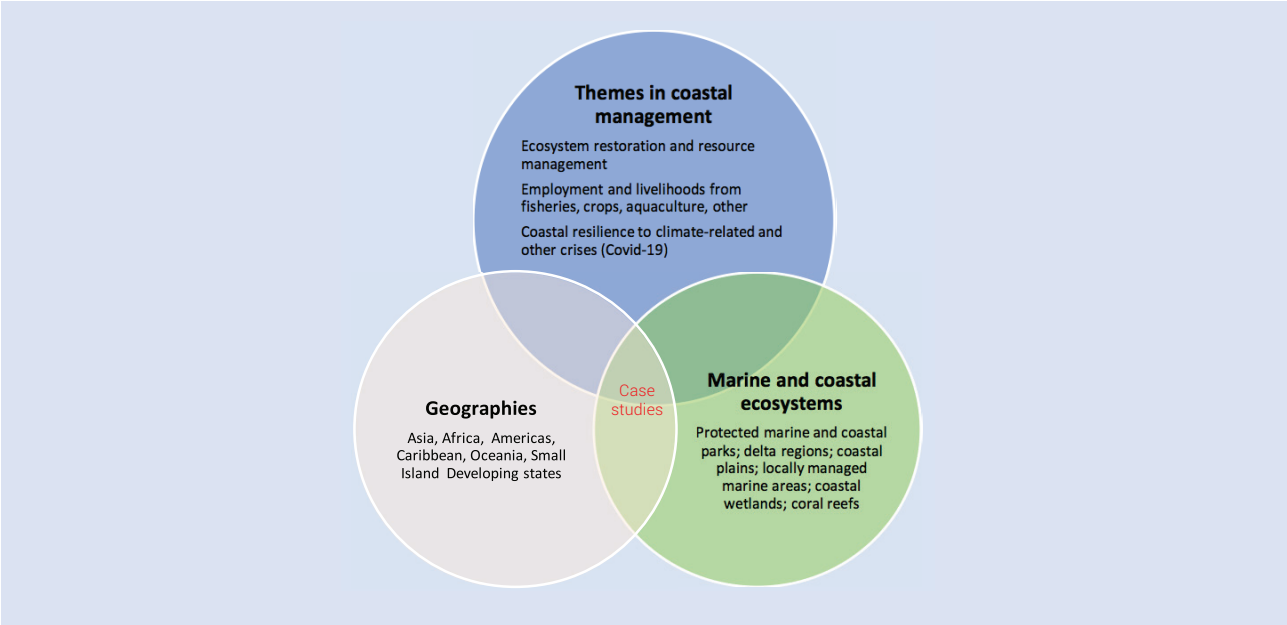
Credit: CEDO

Chapter I. Introduction

Oceans, seas and coastal areas all over the world are facing increasing pressure from human activities, climate change and extreme climate events, which are negatively affecting the resilience of coastal and marine ecosystems and the people that depend on them (Anfuso et al. 2021; Halpern et al. 2017). Overfishing, destructive fishing, ocean and seabed mining and drilling, coastal pollution, marine litter and warming sea temperatures are examples of anthropogenic threats that are undermining the delivery of ecosystem goods and services such as food, coastal protection, clean water, fuel, construction material, transport and recreation for hundreds of millions of women and men living in coastal areas. Across societies, women and men feel the impacts of degraded coastal and marine ecosystems in different ways, with a disproportionate burden on women being very likely in some contexts owing to social norms and institutional structures that marginalize them socially, politically and economically (Aguilar et al. 2015, p. 17). The same structures also prevent women from being active participants in decision-making and management processes that address coastal and marine degradation. Historically, the contributions of women in onshore fisheries, aquaculture, processing and trading of marine products and managing plastic and other waste from urban and tourist growth, as well as their important role in conservation and disaster-risk reduction initiatives in marine and coastal areas, have been routinely ignored or underestimated in research, management and policy (United Nations Environment Programme (UNEP) and Gender and Water Alliance (GWA) 2019). Sustainable development and management of marine and coastal ecosystems can only be possible if all women and men whose livelihoods depend on coastal and marine resources are able to access, manage and benefit from them equally. For this reason, it is essential that projects, programmes and policies in integrated or ecosystem-based coastal and marine management incorporate a gender approach in their formulation, planning and implementation.

Yet, within the realm of fisheries and coastal resources, gender and social equality issues are still largely sidelined, while concerns with highly technical, ecological and economic aspects remain the sector's primary endeavour (Mangroves for the Future et al. 2018). Even as policymakers, environmental managers and development practitioners are increasingly made aware of why gender mainstreaming is important in the integrated management of marine and coastal ecosystems, they lack practical guidance and tools on how to do it (UNEP and GWA 2019). Aiming to address this gap, UNEP and GWA published a baseline study (UNEP and GWA 2019) documenting examples of how marine and coastal management initiatives at community, project and policy levels from various countries had integrated a gender perspective in their design, implementation and evaluation. One of the main recommendations from the study was to build a larger compendium of case studies, from a wider set of geographies and coastal and marine ecosystem settings and covering a larger set of themes in coastal and marine ecosystem management. Another recommendation was to utilize the resources, tools and knowledge networks of past projects in coastal and marine development to produce context-specific gender mainstreaming guidance in a more structured form.

Figure 1: Demonstration of the scope of information used for the selection of case studies



Building on both those recommendations, this report presents a list of principles to guide the practice of gender mainstreaming in integrated coastal and marine development and covers a wide variety of marine and coastal themes and of regions and geographies. Figure 1 represents the increased scope of information used for the selection of case studies in the report.

Recognizing that there are many technical and subject-specific terms in the literature on gender mainstreaming and on coastal and marine management, chapter II briefly clarifies terms that are commonly used in those subject areas and which are also used in the present report.

To make the report more useful to its targeted readership of policymakers, programme officers, managers and technical staff who work in coastal and marine projects, chapter III identifies and briefly explains 10 principles, that is, gender-sensitive and gender-responsive actions, which should be easy to identify and integrate into interventions at community, project and programme levels.

Chapter IV of the report consists of 10 case studies that illustrate the gender principles. Each case study explains, from a specific coastal, marine and geographical context, how a gender action responded to particular problems, how it was implemented, what results it delivered and key lessons learned from the intervention. Each case study concludes with a section directing the reader to documents and resources that give more detail on the project or intervention highlighted in the case study.

Coastal and marine environments and their populations are doubly vulnerable to crises caused by extreme climate events and human activity. They are not only the first points to be hit by cyclones, storm surges, tsunamis, sea level rise, pollution from oil spills and marine litter, but also the last collection point of land-based water pollution and plastic waste. The remoteness of many coastal regions, especially in small island States and in marine protected areas, also means that their inhabitants, who are often the poorest and most dependent on natural resources for their livelihoods, are the hardest to reach by relief efforts during emergencies. Chapter V of the report gives a brief account of how coastal and marine environments and their inhabitants have been affected by the COVID-19 pandemic and discusses if or how focusing on gender, empowerment and equity can help women and men in coastal areas cope better with the abrupt shifts in environmental, economic and social processes due to the pandemic.

Chapter VI of the report presents some overarching lessons learned from the compilation of the report and its case studies, as well as some cross-cutting recommendations for the effective use of gender mainstreaming in coastal and marine ecosystem management. The report ends with

chapter VII, comprising a small compilation of practical resources and reports related to gender mainstreaming in coastal and marine development, which are different from the ones listed in the 2019 UNEP-GWA report.

Finally, it is important to add that the present report is intended as a living document, to be improved and built upon by the wider network of practitioners and researchers working for sustainable, inclusive and equitable coastal and marine management. In particular, UNEP welcomes feedback on the principles, case studies, recommendations and resources.


Credit_Joan Kawaka

Chapter II. Definitions and key concepts

Gender-related concepts[1]

Empowerment refers to the expansion of people's capacity to make and act upon decisions (agency) and to transform those decisions into desired outcomes. Empowerment can affect any and all aspects of people's lives – social, economic, political and physical. It entails overcoming socioeconomic and other power inequalities in a context where this ability was previously denied.

Gender refers to the economic, social, political and cultural attributes and opportunities associated with being a woman or a man. It is different from sex (male/female) in that it is socially rather than biologically determined, is context-specific rather than universal and changes over time. Gender is not about women only, but rather the (unequal) power relations between men and women. Efforts towards gender equality must therefore engage with men as well as women. Gender also interacts with other variables such as age, ethnicity, class, race, sexual orientation, religion, location, ability/disability and other factors, creating differences in power not only between women and men, but also among women and among men.

Gender analysis organizes and interprets information about gender relations in a systematic way so as to make clear the importance of gender differences for achieving development objectives. It involves collecting and analysing data disaggregated by sex and other qualitative and quantitative information.

Gender-disaggregated data goes a step further than sex-disaggregated data, that is, presenting information separately for men and women and boys and girls, by collecting the necessary data with gender as a primary subcategory, relying on women's agency in the data analysis. This does not mean gender-disaggregated data is focused only on women. Rather, this data can be used to show how certain issues affect men, women and all gender-diverse people differently. In addition, gender-disaggregated data must reflect other intersecting identities such as race, ethnicity, religion, age and mental or physical disability.

Gender mainstreaming is the process of assessing the gender implications of any planned action, including legislation, policies and programmes, to ensure that girls, boys, women and men benefit equally and that inequality is not perpetuated. The goal of this process is equal rights, responsibilities and opportunities for women and men and girls and boys (gender equality).

Gender-blind is a failure to recognize the roles and responsibilities ascribed to or imposed on women/girls and men/boys in specific social, cultural, economic and political contexts.

Gender-sensitive programmes and policies are those that consider gender norms, roles and

1 Adapted from Gender Analysis Toolkit for Health Systems, Jhpiego, 2016; Gender Equality: Glossary of Terms and Concepts, UNICEF, 2017; Women 2030 Master Manual for Training of Trainers: Module 1, Concepts and Approaches to Mainstreaming Gender into the 2030 Agenda, GWA, 2018; and European Institute for Gender Equality Thesaurus, available at https://eige.europa.eu/thesaurus.

inequalities and raise awareness of these issues, although appropriate actions may not necessarily be taken.

Gender-responsive programmes and policies are those that consider gender norms, roles and inequalities and take measures to actively address them. Such programmes go beyond raising sensitivity and awareness and actually do something about gender inequalities.

Gender-based violence is violence derived from gender norms and roles as well as from unequal power relations between women and men. Violence is specifically targeted against a person because of his or her gender and it affects women disproportionately. It includes, but is not limited to, physical, sexual and psychological harm. It includes violence perpetuated by a State.

Inclusion is about giving a seat at the table to those who are currently excluded and supporting them to engage in wider processes of decision-making to ensure that their rights and needs are recognized. An inclusive approach recognizes that people are different and need different support and resources to ensure that their rights are realized.

Coastal and marine management-related terms[2]

Co-management[3] (marine and coastal) describes management processes by which governments (especially local governments) share responsibility and work together in dynamic partnerships with all groups that have a stake in the management of natural resources in a particular coastal or marine area, combining scientific and technical knowledge with local and traditional knowledge of coastal men and women. Government retains responsibility for overall policy and coordination, while the local community plays a large role in day-to-day management.

Blue economy is defined by the World Bank as the sustainable use of ocean resources for economic growth, improved livelihoods and jobs, while preserving the health of marine and coastal ecosystems. The concept encourages better management of ocean or "blue" resources.

Disaster risk resilience is a component of building climate resilience and refers to the practice of reducing exposure to hazards and reducing vulnerability of people and property through environmental stewardship and preparedness for adverse events.

Ecosystem-based management,[4] also called "ecosystem management" in this report, is a strategy for the integrated management of land, water and living resources that protects biodiversity and provides sustainable delivery of ecosystem services such as food, coastal protection, carbon capture and storage, clean water, fuel, transport and recreation for human populations in an equitable way.

Integrated water resources management refers to the coordinated management of water, land and related resources in order to maximize economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems and the environment.[5]

Integrated coastal zone management[6] refers to the process to plan for, coordinate between and balance environmental, economic, social, cultural and recreational objectives for use in coastal areas.

Locally managed marine area refers to an area of nearshore waters and its associated coastal and marine resources that is largely or wholly managed at a local level by the coastal communities, land-owning groups, partner organizations and/or collaborative government representatives who reside or are based in the immediate area.[7]

2 Terms specific to individual case studies in this report are explained in the respective case study itself.
3 Adapted from the Philippine Coastal Management Guidebook No. 4, Involving Communities in Coastal Management, 2001; and International Union for Conservation of Nature, Managing Marine Protected Areas: a Toolkit for the Western Indian Ocean.
4 Adapted from Jupiter and others (2013).
5 See website of Global Water Partnership.
6 Adapted from Jupiter and others (2013).
7 See website of LLMA Network International.


Credit: Roshini, TNC

Chapter III. Principles for mainstreaming gender in coastal and marine management

A growing number of case studies, research papers and policy recommendations, as well as some toolkits, have been written on good practices for integrating an inclusive and/or gender approach in coastal and marine resources management. For this report, a list of 10 guiding principles for mainstreaming gender, specifically in the context of sustainable coastal and marine development, was compiled from:

- A literature review of relevant articles and reports from targeted online searches[8]
- A systematic review of responses and published and unpublished documents shared by resource persons from GWA, UNEP and other networks, through an initial questionnaire survey circulated from March to April 2021
- Discussions with gender experts and practitioners from coastal and marine projects
- A webinar event in October 2021[9] presenting and soliciting feedback on the 10 principles from practitioners working in gender and/or coastal and marine development

The 10 guiding gender principles can be seen as tried and tested strategies or actions for promoting more socially just, environmentally sustainable and economically efficient development in coastal and marine areas. Each of the 10 principles are illustrated by a case study that explains the rationale behind the use of the principle (why), the practical aspects of implementing it in a particular context (how), the results from it and key challenges and lessons learned from its implementation, monitoring and evaluation.

It should be mentioned that:

- The principles identified in this report are founded on gender-responsive strategies that take a human rights-based and intersectional approach to gender and power.
- The principles do not form an exhaustive or complete list. Additional gender principles can and should be identified in the future as the understanding of sustainable and socially just development evolves.
- The gender principles are interconnected. Most of the case studies featured in this report include the use of more than one of the listed principles in the project or programme, underlining their strength in combination, rather than as isolated actions.
- The principles are listed in an order which somewhat, though not rigidly, reflects the logical process for developing and implementing projects. As such, gender-responsive actions should be mainstreamed throughout all stages of the project cycle, the starting point of which is a gender analysis. Gender and social dimensions should be revisited and analysed periodically

8 The documents and literature used for compiling the principles proposed in this report can be found under the section on further reading of each case study, as well as in the references.

9 Details on the webinar event can be found at www.unep.org/events/webinar/gender-mainstreaming-coastal-and-marine-ecosystem-management-facilitated-unep-and.

throughout a project or programme to track and measure progress and to ensure any unintended consequences or risks are being managed and adequately addressed.

- Applying the gender principles does not guarantee perfect results. For gender equality to be achieved at all levels it should be mainstreamed into organizational and institutional policies, strategies and culture. However, if they are taken into account, these principles can lead to more sustainable and socially equitable outcomes.
- There may be alternative ways of selecting, defining and ordering the principles.

Principle 1

Data that reveals the invisible work of unrecognized stakeholders

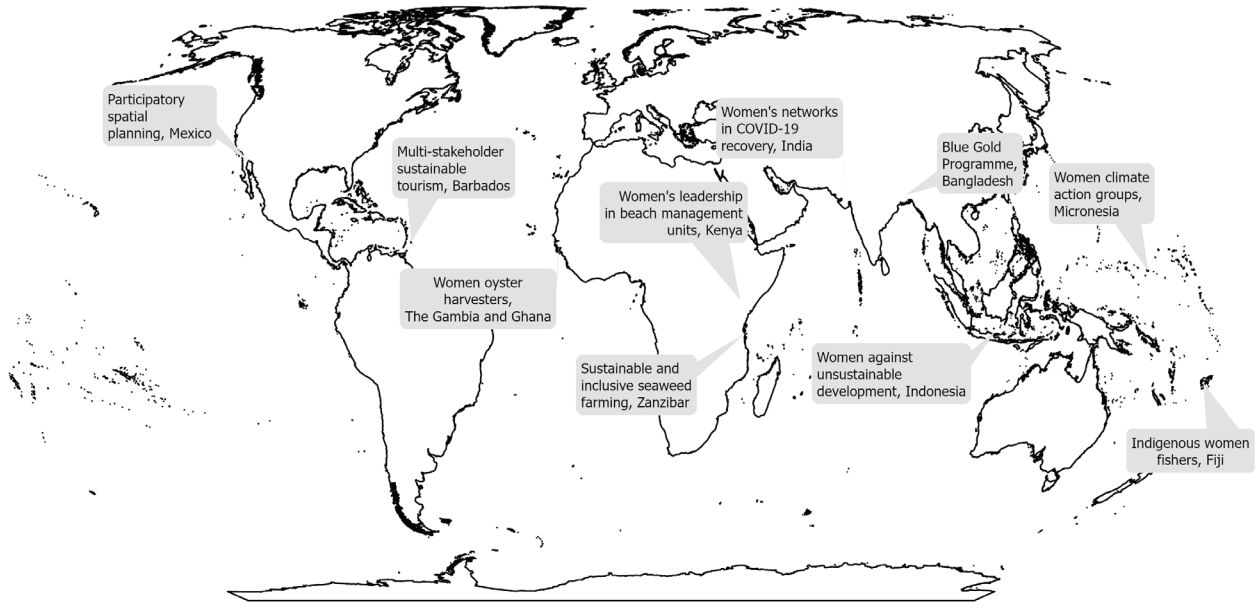
Coastal women and men often have specific responsibilities and work related to natural resources management, from which they acquire different knowledge and skills and contribute differently to commercial and subsistence economies. They also have differentiated access to resources and face particular constraints in coping with stress from human activity (such as overexploitation of resources and pollution), climate change and natural disasters.

It is important to collect, enumerate, analyse and document gender-disaggregated data on the above gendered domains for effective, equitable and efficient formulation and adaptation of projects and policies in sustainable coastal and marine ecosystem management.

Good practices: Disaggregate data by sex; use gender indicators (such as access to boats, equipment for fishing, time spent on household work, access to credit); recruit women and men field staff to gather data and train them in gender-sensitive data gathering that ensures the most disadvantaged groups are not left out (for example, elderly women and men, youth, landless labourers and ethnic minorities).

Case study: Research on indigenous women fishers in small-scale fisheries in Fiji.

Figure 2 : Case study locations



Source: Geographic Information Systems Laboratory, University of Illinois, Springfield.

Principle 2

Creating spaces for the unheard to speak and be listened to

The intersection of gender with other variables such as class, age, sexual orientation, ethnicity, education, religion and geography deepen inequalities of power and make it very difficult for certain groups of coastal women and men to be involved in public consultations and forums on development planning. Often, even when present in meetings, some groups are less likely to speak freely owing to unequal power dynamics, as a result of which their concerns and needs are often left out when designing and implementing projects and interventions. In addition, unconscious biases of policymakers, technical staff and managers of projects can unintentionally exacerbate gender inequalities in a particular community.

For coastal and marine development and management that "leaves no one behind", it is very important to create safe and inclusive spaces for different groups of women and men to voice their concerns, access relevant information and build their capacity.

Good practices: In contexts where men dominate discussions, arrange discussions separately for women; organize workshops so that there is equal representation of women and men and make sure the agenda caters to both their interests and needs; ensure that workshop moderators and facilitators are gender-sensitive; plan events so they suit the availability of women and other groups who are often left out.

Case study: Workshops on climate action with local women's groups in Yap, Federated States of Micronesia.

Principle 3

Validating and utilizing different capacities and knowledge of women and men

Stemming from their different household, community and work responsibilities, local women and men possess specific knowledge and capacities in how they use and manage natural resources for their livelihoods. As a result of persistent discriminatory social norms and practices, in many countries women still do not have full legal rights to land, water bodies and property, or they are unable to exercise their tenure rights, which makes them particularly vulnerable to livelihood loss and loss of access to coastal and marine resources.

When coastal and marine projects and policies take this into account, it can reduce conflicts over different uses of the shared seascape and lead to more effective, efficient, equitable and sustainable solutions for integrated coastal and marine management.

Good practices: Engage local women and fishers in participatory project planning, implementation and monitoring; include their knowledge of marine and coastal resources in stock assessment; assess their traditional practices in natural resource management.

Case study: Encouraging participation of small-scale fisher men and women in a coastal and marine spatial planning programme in Sonora, Mexico.

Principle 4

Ensuring that project-generated resources and innovations benefit all

Innovative technology, equipment, inputs and new information and management approaches that are brought into coastal and marine areas through projects and policies in integrated coastal and marine development are never gender neutral. They change the social relations of production, access to resources and power dynamics within households and villages. These changes affect women and men differently, often creating unintended negative outcomes for particular groups and undermining the sustainability and equity goals of the interventions.

To counter this, projects must ensure that the most socioeconomically disadvantaged groups of women and men also benefit or gain from improved technology and innovations for better production (of crops, fish, livestock).

Good practices: Ensure that resource-poor groups gain from alternative livelihood options; facilitate collective action of these groups to improve market access and profitability.

Case study: Improving livelihoods of women and landless households through integrated water resources management in coastal Bangladesh (Blue Gold Program).

Principle 5

Using a gender-responsive approach to develop skills and knowledge for sustainable livelihoods

A majority of poor coastal women and men depend on their natural environment for their household food, income, water and sanitation and energy requirements. With the increasing degradation of coastal and marine ecosystems such as mangroves, seagrasses and corals, these groups face rising insecurity and risks in fulfilling their livelihood needs and often have no choice but to resort to unsustainable fishing and seafood and fuel collection. Furthermore, women's insecure access to land and lack of recognition of their legal rights are factors that exacerbate inequalities and hardship for women, affecting their ability to participate in marine conservation activities.

To be effective, coastal conservation and ecosystem regeneration projects must first identify the local groups that are the most dependent on natural resources for their livelihoods. In developing knowledge and skills training curricula for sustainable use and management of fisheries, seafood and other natural resources locally, project teams must consult with these groups about their gender-specific needs, interests and constraints so as to ensure that the interventions benefit and engage local women and men user groups equitably and do not create negative consequences for the most marginalized.

Good practices: Ensure that the training curriculum for sustainable aquaculture, fisheries and farming addresses the needs and constraints of those most dependent on these resources for their livelihood; develop risk-reducing options throughout the value chain of a product (for example, fish, shellfish, seaweed) by enhancing product quality and developing secure tie-ups between producers and buyers.

Case study: Prioritizing women farmers for training in sustainable seaweed production in Zanzibar, United Republic of Tanzania.

Principle 6

Enhancing inclusive decision-making in community-based organizations

Coastal women and men are increasingly being called upon by their regional and national governments to participate in co-management of local coastal and marine resources through formally recognized community-based organizations such as village fishery committees and beach management units. These local management bodies have the potential to generate important wins for a resilient environment, livelihood security and resource stability in coastal and marine contexts if they are managed properly and monitored for inclusive representation.

Good practices: Quotas that mandate a certain minimum percentage of women and other minority groups for leadership positions in an organization; developing the capacity of women and other disadvantaged groups for effective organizational management, advocacy and leadership.

Case study: Enhancing effective participation of women in beach management units in coral reef dependent communities in Kenya.

Principle 7

Political mobilization of excluded groups to advocate for their rights

As countries with maritime areas are rapidly expanding their coastal and marine infrastructure and shipping routes and using their oceans and seas for commercial and economic growth, there has been an increased involvement of international actors and a rise in conflicts over the use of coastal and marine spaces. Within this scenario, women and men who are dependent on small-scale fisheries and other coastal resources for their livelihoods are finding themselves increasingly marginalized. Women, especially, are left out of most consultations on coastal development as their work is not formally recognized and is undervalued, drawing them into a vicious circle of poverty and violence. In certain contexts, legal dimensions and customary laws relating to inequitable ownership and control of resources further contribute to gender-based violence.

Creating rights awareness within these groups and building their capacity for political mobilization and advocacy is an important means to counter their marginalization and the unsustainable development of the coastal and marine ecosystem they depend upon.

Good practices: Build critical awareness among women and disadvantaged groups on their rights as women and fishers; define common goals and develop strategic alliances between women's groups and other human rights networks and groups for more effective advocacy for policy change.

Case study: Fisherwomen advocating against unsustainable coastal reclamation in Indonesia.

Principle 8

Multi-stakeholder collaboration for gender-equitable sustainable development

As more governments all over the world are adopting the blue economy approach to create greater value for the economy, people and the environment through sustainable utilization of ocean resources, there is an urgent call for collaboration between multiple sectors and stakeholders to generate a shared understanding of problems and an alignment around the aims, focus, resources and commitment. Yet in reality the establishment and management of multi-stakeholder partnerships involving governments, multilateral organizations, research organizations, civil society and the private sector are very complex tasks, and gender equality therein often remains merely an add-on or afterthought. Strong representation of women and minority groups in such collaborations is essential to ensure that outcomes are gender-equitable and address the needs and priorities of underrepresented groups.

Good practices: Pay attention to gender balance when forming stakeholder groups; include female and minority leaders and managers in the group to encourage participation of these groups; and budget for capacity-building of these groups.

Case study: Women's leadership in multi-stakeholder collaboration for sustainable tourism in Barbados.

Principle 9

Leveraging diversity, equity and inclusion in building local resilience to crises

Crises in the form of climate-related emergencies, global economic recession and pandemics hit coastal populations hard and suddenly, leaving the poorest and most vulnerable groups, such as women, the elderly and children worst off and even more vulnerable to poverty and exploitation. With the increasing frequency of extreme climate events and disasters in island nations and coastal areas, it is crucial to build the resilience of coastal communities, and especially the most vulnerable people within those communities, to better cope and recover from them. In doing this, it is important to utilize the diversity of local resources and capacities and plan interventions in participation with local women's and men's groups.

Good practices: Targeting food and livelihood support to the most vulnerable during a crisis; strengthening women's leadership in collective and participatory planning and monitoring of relief.

Case study: Building on social solidarity and women's empowerment in the response to the COVID-19 pandemic in Gujarat, India.

Principle 10

Sustaining empowerment and ecosystem benefits in the long term

Sustaining coastal and marine ecosystem management activities after the phase out of projects and funding support is a challenge faced by governments and user groups that are dependent on natural resources all over the world. In this context, rights-based, co-management approaches have the potential to empower poor women, men and youth in coastal areas to sustain benefits for their households, the larger community and the environment, so long as they are accompanied by gender-responsive strategies that build social, human and natural capital.

As such, it is important to revisit and learn what components and practices of policies and programmes build social, economic, political and physical empowerment of marginal user groups to continue and even amplify ecosystem management practices for the benefit of people, as well as the environment, in the long term.

Good practices: Granting officially recognized user rights to marginal women harvesters of specific fisheries; integrating peer-to-peer learning and networking as part of community-level capacity-building efforts during interventions; creating opportunities for unemployed youth to join in coastal co-management through skills building and compensation arrangements.

Case study: Sustaining rights-based shell fisheries co-management in The Gambia and Ghana.

Credit: Blue Gold Program

Chapter IV. Case studies

Gender principle 1: Data that reveals the invisible work of unrecognized stakeholders

Wildlife Conservation Society, Fiji

Revealing the contributions of indigenous fisherwomen to food security and livelihoods in Fiji

Contributor: Sangeeta Mangubhai, Wildlife Conservation Society, Fiji Country Program,

https://fiji.wcs.org/ Contact: sangeeta@talanoa-consulting-fiji.com

Women and men in coastal areas and island states have specific needs, responsibilities and work related to natural resource management and face different constraints in resource access. However, the work and contributions of women have been undervalued and unrecognised in projects and policies related to fisheries, aquaculture, conservation and climate change adaptation and mitigation.

It is important to collect, enumerate, analyse and document gender disaggregated data for effective, equitable and efficient formulation and adaptation of projects and policies in the above sectors.

Objective: Understanding and quantifying the work and contributions of indigenous (***iTaukei***) women fishers in small-scale fisheries in Fiji to enable informed and effective decision-making and to provide evidence to call for greater support and investment in them by their government and other stakeholders.

Key outputs and outcomes

Over 1,200 ***iTaukei*** women fishers in 113 villages and 11 provinces across Fiji were interviewed between 2017 and 2018, individually and as a group, using interview questionnaires and focus group discussions. A 2020 study filled in important knowledge gaps in fisheries at the national level with recent, accurate and accessible data on indigenous women fishers' changing fishing patterns and habits, their contributions to household food security and nutrition, their livelihood-dependency on small-scale fisheries and the challenges they face in fishing and seafood[10] trade (Thomas et al. 2021).

A summary for decision-makers highlighted important findings from the study and made key recommendations to fill gaps in national and international fisheries policies (Thomas et al. 2020).

Researchers provided scarce gender-disaggregated data for an ongoing global study on small-scale fisheries (FAO and others, 2020), which aims to provide global and local-level evidence of key

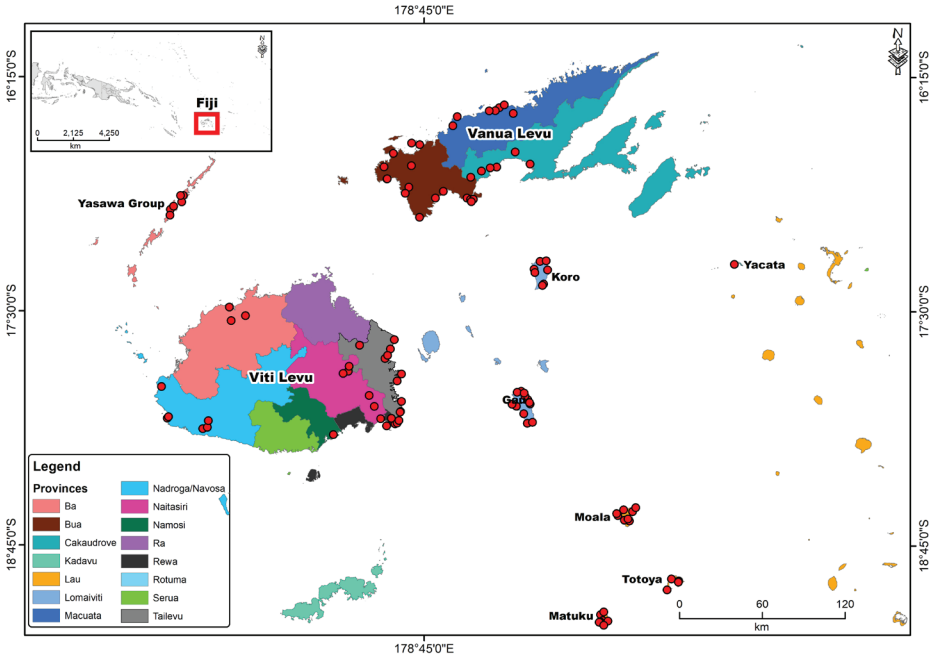
10 The term "seafood" is used to include edible freshwater and saltwater fish, invertebrates and seaweed.

social, nutritional, environmental, economic and governance contributions of small-scale fisheries. The study has a strong gender focus and builds on a 2012 FAO/WorldFish report, including case studies on regions such as the Pacific Islands that were absent in the earlier publication (Harper and Kleiber, 2019).

Context of the intervention: geographic, socioeconomic, gender and governance aspects

Fiji is one of most developed island country economies in the South Pacific, comprising over 300 islands and 500 islets, with a total land area of 18,270 k^2 and an exclusive economic zone[11] of 1.29 million km^2.

Figure 3: Fiji survey sites



Source: Wildlife Conservation Society, Fiji.

Stakeholders and agencies involved

iTaukei women fishers, the Wildlife Conservation Society, Conservation International, the Fiji locally managed marine area network, the Ministry of Fisheries of Fiji, the University of the South Pacific, the Vatuvara Foundation, the Women in Fisheries Network – Fiji and the World Wide Fund for Nature. The study was funded by the Flora Family Foundation, the David and Lucile Packard Foundation, the John D. and Catherine T. MacArthur Foundation, Pacific Community, the Moccasin Lake Foundation, the United States Department of State Bureau of East Asia Pacific Affairs Regional Environment Office, the Vatuvara Foundation and the Federal Ministry for Economic Cooperation and Development of Germany.

More than half of Fiji's population live in coastal cities and towns because of the rough inland terrain and are highly reliant on coastal fisheries for their subsistence and livelihoods. While tourism and agriculture are the biggest contributors to Fiji's gross domestic product, the fisheries sector is the third largest natural resources sector and a major source of employment for women and men.

Fiji's coast comprises unique mangrove forests, coral reefs and seagrass beds, which are all key habitats in terms of their rich biodiversity, carbon

11 An exclusive economic zone is an area of the sea in which a sovereign State has special rights regarding the exploration and use of marine resources. It stretches from the baseline out to 200 nautical miles from the coast of the State in question (United Nations Convention on the Law of the Sea).

storage ability and provision of ecosystem services such as coastal protection and food security. These are increasingly deteriorating under pressure from human activities such as overharvesting and overexploitation of land and sea resources, mining, tourism, pollution and sedimentation, as well as the impacts of climate change and natural disasters such as tropical cyclones. Coupled with decades of poor or neglected management, this has resulted in a near collapse of the reproductive stocks of a number of marine species and has altered food web relationships, affecting ecosystem productivity and food security (Kinch et al. 2010).

With a 20.7 kg national annual per capita consumption rate, seafood is crucial to Fiji's food security and nutrition (Bell et al. 2009). Despite this, subsistence fisheries are grossly undervalued in national accounting and development planning, in comparison with commercial offshore fisheries, which receive higher levels of resources for monitoring, surveillance and management.

Fiji is a largely patriarchal society with existing cultural traditions and practices favouring male decision-making at the village, district and provincial levels. As a result, women are often not included in decision-making on natural resources management and do not receive equal benefits from commercial fisheries in their customary fishing areas.

Indigenous ***iTaukei*** women, as well as Indo-Fijian women, play important roles in small-scale fisheries in Fiji. Stemming from customary rights to fishing grounds and cultural norms, the ***iTaukei*** women are predominantly involved in fishing, harvesting and selling of seafood, whereas Indo-Fijian women are more involved in the fish trade and businesses. Although these women play an important part in securing the food, nutritional and income needs of their households and communities, their contributions are largely invisible, unreported and unrecognized by fisheries institutions, which favour offshore, commercial fisheries.

The inshore waters of Fiji, extending from the foreshore to the outer edge of the reef, are managed through both customary and statutory laws (Clarke and Jupiter 2010). There are 411 registered traditional fishing grounds (***qoliqoli***) in Fiji, within which ***iTaukei*** maintain traditional fishing access and use rights but the State retains the power to legislate or regulate resources use. A licence and user fee is required for all commercial fishing within ***qoliqoli*** waters. Although Fiji does not have specific protected area legislation, protected areas have been declared through formal and informal channels with varying designations and financing mechanisms (Vukikomoala and others, 2012). As of 2014, more than three quarters of Fiji's inshore waters within ***qoliqoli*** were considered managed within locally managed marine areas (Mangubhai et al. 2019).

The importance of counting the contributions of women fishers in Fiji

The work and contribution of women fishers to small-scale fisheries in Fiji is largely invisible, unreported and unrecognized, illustrated by their poor participation in fisheries planning and management at the local and national levels and gender-blind policies, which translates into insufficient funding for women in the sector (Thomas et al. 2021). Although there have been an increasing number of individual case studies on women in fisheries in past decades, these are narrow in their geographic focus and do not give a comprehensive national dataset of information on women's contributions to subsistence and commercial small-scale fishery sectors.

To address this gap, a number of key stakeholders in fisheries and conservation research, development and management in Fiji collaborated from 2017 to 2018 in an extensive baseline study targeting indigenous ***iTaukei*** fisherwomen. The study objective was to document and quantify the changing fishing patterns and habits of the women fishers, their contributions to household food security and nutrition, their livelihood-dependency on small scale fisheries and the barriers they face in fishing and selling marine and freshwater catches.

Setting up and implementing the research

The study aimed to cover as many coastal provinces in Fiji as possible, focusing on where there were existing relationships between partner organizations and local communities. The sample of villages was selected to ensure representation of saltwater and freshwater habitats, commercial and subsistence fishing and larger and smaller islands.

The questionnaire was designed through a review of existing socioeconomic, fishery and gender

surveys and reviewed by small-scale fishery experts and organizational partners. It was subsequently pilot tested at a rural fishing village, adapted from suggestions made by interviewers and translated into *iTaukei*.

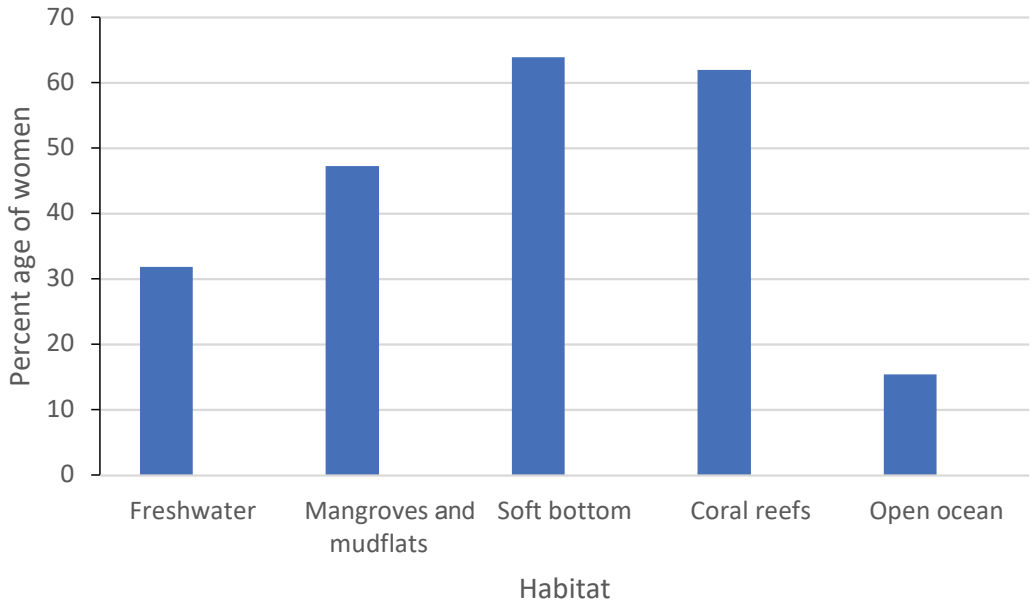
Trained women and men interviewers, including staff and volunteers from the partner organizations involved in the study, conducted both the household surveys and focus group discussions in the *iTaukei* language. Household interviews of rural women fishers made up the main part of the study. The women selected the location, usually their house or the village hall, with the aim of ensuring privacy and the respondent's comfort.

Traditional consent at the village level, and individually with the women, was taken prior to beginning the survey. Within each village, a convenience sample was used to survey as many women as possible, that is, all women fishers who were available and willing to participate within a time window of five to six hours were interviewed. The household survey was designed to gather information on general fishing practices, species targeted in different habitats, fishing gear use and access, post-harvest processing, fisheries consumption and sales, and fisheries dependence. Focus group discussions (composed solely of women fishers) were conducted to complement and verify information gathered from the household questionnaire. These discussions also gave the women a chance to respond to questions that were better answered at the village level, such as the challenges they face.

Results from the study

The study provided vital insight into the diversity of fishing habitats used by women fishers and the variety of species harvested by them, which can help with improved planning and implementation of coastal ecosystem interventions. For example, it revealed that women are fishing in multiple habitats from mangroves and mud flats to coral reefs and the open ocean. Women are the main fishers in mangrove forests and seagrass beds, which are key nursery areas for many fish and invertebrate species, so it is important to consider and involve the women fishers in conservation and monitoring efforts.

Figure 4: Percentage of total surveyed women fishing in each habitat



Note: In this study, "open ocean" in the context of women fishers refers to the outer edge of the coral reefs and out to deeper, State waters.
Source: Wildlife Conservation Society, Fiji.

Importantly, the study revealed the changing scope of women fishers' work and generated new knowledge that corrected an earlier understanding of their work. For example, it showed that women are fishing further out to sea, in areas typically thought to be male fishing zones (the open sea and past coral reefs). They are harvesting more than 100 species of fish and at least 10 species of invertebrates and seaweed, which goes against the conventional view that women fishers mainly harvest invertebrates and seaweed. The study also documented the main fish species targeted by the women, on which there had previously been very limited information. One of the fish families favoured by women fishers is groupers (Epinephelus spp.), for which some species are subject to seasonal bans. An increasing number of women fishers are selling more than quarter of their catch to pay for household expenses and school. All this information is important to include in reporting of fisheries landings, stakeholder consultations on seasonal fishing bans, setting minimum size limits and plans for locally managed marine areas.

Figure 5: Mud crab fishers from Bua Province
Credit: Alyssa Thomas

A crucial component of the study was to quantify women fishers' contributions to their household nutritional status and food security. The study showed that more than half the fresh fish, which is the main source of protein for rural households in Fiji, was harvested by women fishers and that they were also the main harvesters of invertebrates and seaweed, which provide supplementary protein and micronutrients. This validates the importance of valuing and including subsistence fisheries in national and global statistics for the vital contribution they make to food security and nutrition and to achieving Sustainable Development Goal 2 (zero hunger) and Goal 3 (good health).

The study also lists the main barriers faced by women fishers, such as in accessing time- and effort-saving fishing gear and boats, due to the insecurity of fishing in extreme weather and in damaged habitats, because of difficulties faced in marketing their catch and in actively participating in village meetings on fisheries. Moreover, women are increasingly suffering from time poverty[12] and health problems owing to their increasing participation in income-generation activities in addition to their household and caregiving tasks. Identifying these challenges provides easier entry points for fisheries institutions, policymakers and other stakeholders to address them and to integrate gender-sensitive strategies in project planning.

Lessons learned

Recent studies assessing reef fish stocks in Fiji have shown that several inshore fish species that coastal communities depend upon for food and income are in crisis in many areas. Studies such as this can help fisheries managers ascertain the level of dependency of women and men on different fish and invertebrate species for their livelihoods and accordingly develop effective and equitable strategies that protect declining fish stocks without negatively affecting the short- and medium-term food security of households.

The findings from this study fed into a series of knowledge products for targeted groups, including decision-makers in fisheries and coastal ecosystem management, the science and academic community and multilateral fisheries organizations. This amplified the potential for uptake of the findings of the study into policy, research and development interventions so they integrate gender more effectively in their programmes.

12 Time poverty refers to the scarcity of time for rest and leisure and is a key aspect of gender inequality when considering women's unpaid work in household tasks and caregiving.

Further reading

The following resources give more detail on the study briefly described in this case study.

Thomas, Alyssa, et al. (2021). Why they must be counted: significant contributions of Fijian women fishers to food security and livelihoods. ***Ocean and Coastal Management***, vol. 205. https://doi.org/10.1016/j.ocecoaman.2021.105571

Thomas, Alyssa, et al. (2020). Valuing the critical roles and contributions of women fishers to food security and livelihoods in Fiji. Women in Fisheries Information Bulletin No. 31, pp. 22–29. Nouma: Pacific Community.

https://coastfish.spc.int/en/publications/bulletins/women-in-fisheries/510

Thomas, Alyssa, et al. (2020). The critical contribution of women fishers to food security and livelihoods in Fiji, Summary for decision-makers. Suva, Fiji: Wildlife Conservation Society.

https://fiji.wcs.org/Resources/Reports.aspx

Figure 6: Kai fishers selling at a local market
Credit: Alyssa Thomas

Gender principle 2: Creating spaces for the unheard to speak and be listened to

The Nature Conservancy, Federated States of Micronesia

Fostering dialogue and partnership for climate action with local women's groups in Yap, Federated States of Micronesia

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In many coastal areas and small island states, deeply embedded patriarchal norms and biases make it difficult for women and certain other groups to be seen and/or heard in public meetings or in consultations for development planning.

For coastal and marine development and management that 'leaves no one behind' it is very important to create safe and inclusive spaces for different groups of women and men to voice their concerns, access relevant information and build their capacity.

Objective: To build local resilience to climate-related crises and impacts in Yap, Federated States of Micronesia, through targeted networking, context-specific capacity-building and peer-to-peer learning with local women's groups.

Key outputs and outcomes

Twelve women's groups from Yap participated in two women's learning exchange workshops on building local resilience to climate change, held in the context of the International Day for Disaster Risk Reduction (13 and 14 October 2020) and International Women's Day (8 and 9 March 2021). The workshops provided a space for women to connect with each other and key government stakeholders, learn from peer experiences and benefit from capacity-building training on climate change and climate actions.

Local women's groups developed 10 workplans, with budgets, for enterprises and initiatives that use ecosystem regenerative practices to improve local food security and increase alternative income generation. Examples included cultivation of traditional crops and compost production and sale. The women's groups received up to $1,500 worth of supplies to implement their workplans, such as gardening equipment, seeds and fees for relevant training.

Relationships between local women's groups, state government offices and The Nature Conservancy (TNC) were strengthened as a result of the partnership on the women's learning exchange workshops, creating a foundation for future partnerships on climate action.

Stakeholders and agencies involved

The learning exchanges were funded through donations from private individuals interested in community conservation and gender. Stakeholders included 12 women's groups from Yap; government partners, including the Yap State Office of Planning and Budget, the Yap State Gender Support Office, the Yap Protected Areas Network Coordinator, the Federated States of Micronesia Ridge to Reef Programme, the Yap Pacific Resources for Education and Learning, IOM, the Yap Small Business Development Center, and two research and civil-society partners (TNC in Micronesia and Catholic Relief Services).

Context of the intervention: geographic, socioeconomic, gender and governance aspects

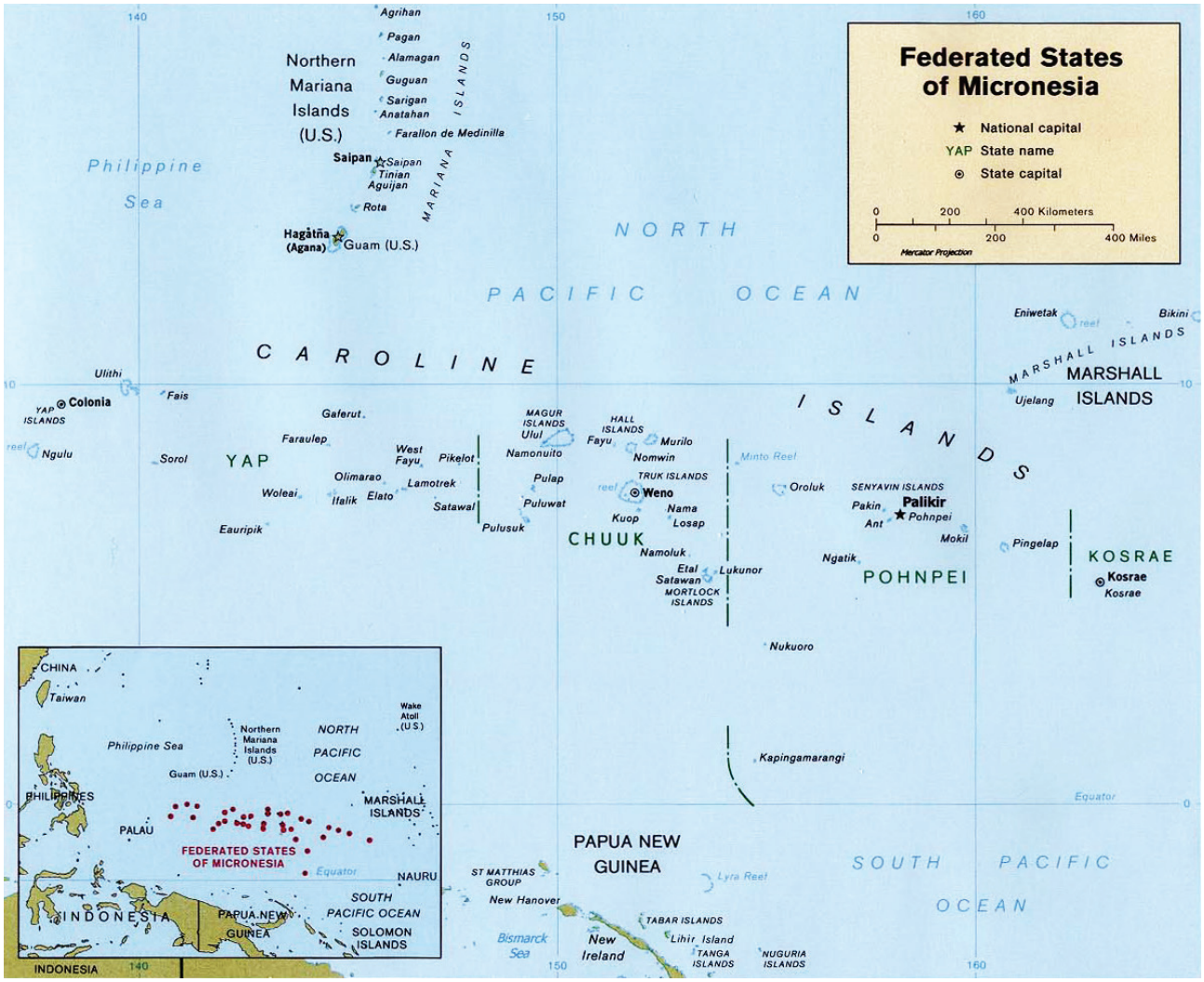
Yap is one of four states comprising the Federated States of Micronesia, which consists of a total of 134 islands, 22 of which are inhabited, spread across nearly 1,000 km of the north Pacific Ocean. The four main islands in Yap are connected by coral reefs and have shores populated with mangroves and seagrass beds. The unique biodiversity of these

13 The authors work for The Nature Conservancy, a non-profit environmental organization working globally to lead conservation projects. The Nature Conservancy has been working with local partners across the Pacific region for over 20 years. See https://www.nature.org/en-us/about-us/where-we-work/asia-pacific/

areas is, however, undergoing significant decline and the valuable protection they provide for the ecosystem is being adversely affected by climate change and pressures from human activity (Pacific Community, 2015).

gets salinized. Food sovereignty and food security are a major concern in the island state as food imports significantly exceed local food production (Pacific Community, 2015).

Figure 7: Administrative divisions of the Federated States of Micronesia, with the names of the islands and atolls



Source: https://en.wikipedia.org/wiki/Federated_States_of_Micronesia

Like many of the Pacific Islands, Yap is greatly affected by extreme weather events and climate change. The state is hit by typhoons every year, has recorded significant earthquakes and is highly susceptible to drought. Sea level rise in the ocean surrounding Yap is at 10 mm a year, a rate much higher than the global average of 2.8–3.6 mm per year. Storm surges, coupled with sea level rise, have forced the displacement of the islanders from the coral atolls to the main islands and led to decreased ability to grow food as near-shore agricultural land

Traditional local knowledge and customs play an important role in building climate resiliency in the island state, as Yap's constitution recognizes a role for traditional leaders and customs in governance and traditional kinship and exchange networks and food preservation techniques have historically enabled communities to deal with extreme events and natural disasters.

Gender roles in Yap are clearly defined and dictate that women are primarily responsible for household

work, water provisioning, managing food and tending to home gardens. In Yap, fishing is not considered an important activity for women, even though women are involved in many aspects of fisheries from gleaning, to processing and marketing (Lambeth and Santiago, 2000). Men work in offshore fisheries and construction and maintain and protect family and community resources. Women suffer the most from climate change and extreme climate events that affect the availability of cultivable land and freshwater sources, as they have to travel further to fetch water and find gardening plots. This exposes them to increased risk of violence and harassment and leaves them less time for other work and caregiving responsibilities. Women are also worst affected during climate and health crises as financial hardship, food insecurity and the risk of gender-based violence increases. As a result of these distinct gender roles, women and men have different knowledge and experiences of natural resources, and different needs and priorities that need to be taken into account in disaster management and planning for climate change adaptation.

Women are mostly excluded from local and regional consultations on climate action despite their unique perspective, knowledge and potential for contributing to interventions. Recognizing the importance of engaging women to improve climate adaptation policies and projects, TNC organized a workshop in 2017 bringing together 19 women from seven Pacific Island nations, including Yap, to discuss how they are affected by and responding to climate change (Mcleod et al. 2018). Since the national gender policy was approved by the Government of the Federated States of Micronesia in 2018, the Yap Gender Support Office has been increasingly supporting outreach and engagement of women's groups for conservation activities with relevant partners, including TNC.

Creating spaces for local women to discuss and learn about climate action effectively

There are many reasons why it is difficult for women in the Federated States of Micronesia to influence and be involved with climate action. Male hierarchy within the traditional Yapese culture, lack of attention to gender and traditional knowledge in western science and technological solutions, and political and economic marginalization of Pacific Island women has led to their exclusion from local and regional consultations on climate action.

In many Pacific Island cultures, including Yap, mixed-gender groups are not conducive to women's participation, and social norms dictate that women remain quiet out of respect for men and elders in the group. As a result, previous "whole community" engagements that focused on conservation and

Figure 8: A local conservation planner from The Nature Conservancy works with women from local community groups in Yap during a women's learning exchange event held during International Women's Day
Credit: TNC

climate solutions largely benefited and engaged men. This gendered dynamic not only affects how information flows up (through village chiefs and elders) but also how it is passed down. Women are often second- or third-hand recipients of updates related to conservation measures and other plans in their community and they often lack the technical knowledge to fully understand their impact. Policies and programmes focused on building more resilient coastlines are typically targeted towards men, excluding women not only from conservation activities but also from education on climate change impacts and solutions for their nearby coasts. This exclusion leads to an enormous missed opportunity for women to support these efforts with their specific knowledge of drought-resistant and hardy food crops, food preservation and climate smart cultivation techniques, and their specific skills in community organization and negotiation.

By effectively engaging local women's groups through peer learning, direct engagement with government offices and capacity-building on specific concepts related to conservation and climate action, it is possible to greatly strengthen women's agency in climate-smart natural resources management. At the same time, crucial gaps can be filled in research and policy on linkages between indigenous communities, traditional knowledge and gender and how these components influence climate vulnerability and adaptation.

Capacity-building through learning exchanges on climate adaptation strategies

TNC had originally planned to bring women together from seven Pacific Island nations in 2020 for a learning exchange in Pohnpei, but cancelled the event because of the COVID-19 pandemic. However, Yap's isolated geography and people's adherence to strict quarantine rules resulted in limited community transmission of the virus, creating an opportunity for safe gatherings and in-person events. Taking advantage of these safety conditions, TNC Micronesia and the Yap state Gender Support Office brought together 10 women's groups for a two-day learning exchange in October 2020 on the occasion of the International Day for Disaster Risk Reduction. Two of these groups were from communities where TNC had existing relationships and projects, while the other groups were invited by the Yap Gender Support Office. Most members of women groups are under- or unemployed and less educated.

Figure 9: In small groups, women identified barriers and opportunities around climate resilience in Yap
Credit: TNC

Consequently, they are more likely to participate in voluntary community efforts as they have less chances of formal employment. The exchange was held during the week to prioritize attendance and participation of these women, who have a greater need for capacity-building and a better insight into village dynamics. The women-only space allowed participants to voice ideas and ask questions in a free and unencumbered way, unlike in village meetings where their contributions are delivered by a male messenger.

The Yap women's learning exchange focused on sharing ideas around building resilience for ecosystems and local economies in the face of climate change. The TNC facilitators guided the women through workplans and budgets to build their agency to transform ideas and initiatives into sustainable enterprises. The workshop agenda was designed in close consultation with the staff of the Yap Gender Support Office and addressed knowledge gaps they had observed during previous engagements with the local women's groups. The workshops were conducted in Yapese and English and used breakout groups to create more intimate and comfortable settings for the women to ask questions and express ideas.

Capacity-building of women was a critical goal of the learning exchange, with a particular focus on educating participants on climate change concepts and terms such as ecosystem-based adaptation and disaster risk reduction, as well as facilitating discussions on activities that contribute to coastal degradation. The agenda also included discussions on how to identify conservation actions and alternative income options within the context of climate change. Learning was then built into project management workplans, the majority of which focused on food security, a topic of

particular importance for women due to gendered norms around cooking and caretaking. The women observed and discussed the many similarities between modern regenerative agriculture practices and Yapese traditional ways of caring for the land, such as mulching, ground cover and composting of organic waste. Members of the Tamil Women's Association discussed how they were cultivating native banana trees, which have significant value in cultural exchanges, thereby reviving traditional gardening practices and crop rotation systems. Banana trees are planted first with heavy mulching to build topsoil, then after harvesting them, trellised yams are planted in the healthier soil.

After the learning exchange concluded, the participants were given two weeks to consult with community partners on their workplans, many of which focused on food security, composting/soil health and nurseries to grow food and coastal buffer plants, such as mangroves. The finalized plans were then submitted to TNC for review and each of the women's groups received up to $1,500 worth of supplies to support their work. Budgets included practical supplies such as garden tools, seeds, PVC pipes for water supply and buckets, as well as fees for training, for example on composting practices.

Following the success and positive reception of the workshop held in October 2020, TNC hosted a second women's learning exchange with participants from the earlier workshop and two additional groups, invited by IOM, on International Women's Day in March 2021. During this second learning exchange, women presented updates from the implementation of their project workplans and brainstormed how to transform readily available, underused and wasted resources into economic opportunities. Through TNC partnerships with the Yap State Office of Planning and Budget and Gender Support Office, the women were able to hear from speakers who work directly on state-wide plans for disaster risk reduction. This was a new experience for most of the women, who are excluded from conversations about high-level planning efforts. In addition, this was an opportunity for the women to learn about what was happening across other areas in the state.

The learning exchanges helped the women's groups to understand their sphere of influence as it relates to ecosystem resilience and climate change. For example, during verbal feedback sessions, one woman shared how she felt angry at her local leaders regarding the lack of management of her nearby coastal area, which was experiencing great erosion. Learning more about how decisions are made, and

Figure 10: Women from local community groups in Yap pose for a group photo during the women's learning exchange, held during the International Day for Disaster Risk Reduction
Credit: TNC

what opportunities women have to address climate challenges, helped her to channel her feelings into action. In another example, a women's group that operates a local nursery opted to focus on coastal buffer plants that could be purchased by groups, led by men, who work in coastal conservation.

Feedback from the workshops revealed that most women felt more motivated and informed as a result of their participation. It was recommended that TNC find ways to include more women and increase the frequency of workshops. Most participants planned to share what they had learned with other group members and their community. Some women, however, cited potential challenges, such as lack of confidence in public speaking and resistance by male community members to see value in the training. One participant shared: "Some people think it's nonsense to have training on garden projects."

Lessons learned

The success of the Yap women's learning exchanges was enabled by the strong partnerships of TNC with local government offices. In particular, the Yap Gender Support Office was crucial in identifying women's groups across the state that could participate in the learning exchange. Hosting the events on international days of recognition (disaster risk reduction and women's rights) helped to capitalize on existing government mandates and made it easier to garner support and publicity for the learning exchanges and to facilitate the attendance of government speakers. Government representatives were able to have a more direct view into how women's groups are tackling climate resiliency in their communities and open doors for greater collaboration between relevant state offices and local women.

It is important to recognize that while seeking to engage women in planning for climate action, careful planning is needed to prevent exacerbating inequality or risk of violence at the household level in the short term. For example, when husbands feel threatened by women's participation in learning exchanges and other events, women may face an increased risk of gender-based violence at home. To mitigate the risk of gender-based violence, it is essential to work with men to increase their awareness and understanding about the benefits that can be realized for the family and the community by building women's capacity.

Further reading

The following article provides background on the initiative briefly described in this case study.

Mcleod, Elizabeth, et al. (2018). Raising the voices of Pacific Island women to inform climate adaptation policies. ***Marine Policy,*** vol. 93, pp. 178–185.

https://www.sciencedirect.com/science/article/pii/S0308597X18300344

Gender principle 3: Validating and utilizing different capacities and knowledge of women and men

CEDO, Mexico

Participatory coastal-marine spatial planning in the Puerto Peñasco-Puerto Lobos biological and fisheries corridor, Sonora, Mexico

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From their different household, community and work responsibilities, women, men, elderly and youth possess specific knowledge, skills and capacities in how they use and manage their coastal and marine environment.

Coastal and marine projects and policies should utilize this local knowledge and agency to reduce conflicts over different uses of the shared seascape and find more effective, efficient, equitable and sustainable solutions for integrated coastal and marine management.

Objective: To achieve sustainable use of shared seascape and marine resources for the benefit of vulnerable ecosystems and coastal households, by facilitating engagement of artisanal fisher men and women in the design and implementation of a comprehensive plan for integrated management of coastal fisheries and other resources in the Puerto Peñasco-Puerto Lobos corridor in Sonora, Mexico.

Background

In 2015, CEDO promoted coastal marine spatial planning as a solution to the declining health of the marine and coastal ecosystems of the northern Gulf of California and to the problems faced by small-scale fishermen and fisherwomen. CEDO first applied the coastal marine spatial planning framework along Mexico's Sonora coast in a highly productive biological and fisheries corridor, a unique ecosystem characterized by its rich and interconnected biological and socioeconomic diversity. Unlike many coastal marine spatial planning processes driven by large development projects and strong economic interests, in its programme CEDO gave priority to defining the spatial use and rights of traditional local users, such as coastal fishermen and women oyster farmers, through a rigorous participatory consultation and planning process (CEDO 2019).

Key gender-related outputs and outcomes of the coastal marine spatial planning programme

- Technically sound proposals for the integrated management of coastal fisheries in the Puerto Peñasco-Puerto Lobos corridor were developed with the consensus of 75 per cent of the fisher households and presented to the government for implementation. These proposals included tools for mapping and regularizing the fishing effort, establishing a network of fishery refuge zones, defining exclusive local areas for managing benthic species (blue crab and pink and black murex snail) and setting catch quotas for vulnerable species. The proposals were validated by artisanal fisher communities, wetland users, sport fishers, the CEDO technical group and participating authorities (CEDO 2019; Morzaria-Luna et al. 2020).
- A total of 2,758 coastal women and men, who were previously excluded from coastal and marine planning and permitting processes, participated in 46 training events and 116 workshops on the coastal marine spatial planning programme and were elected as representatives in intercommunity fishers groups.
- Formation of intercommunity fishers groups with 45 representatives, including eight women leaders, to represent the diverse small-scale fisheries in all regional planning processes of coastal and marine planning.
- Formation of nine cooperatives (with 80 men and 38 women members) from five coastal wetlands

14 All authors are affiliated with CEDO, a unique collaboration between Mexican and United States of America non-profit organizations to offer realistic environmental and community-based solutions that recognize, respect and leverage the cultural, socioeconomic and biological interconnections between the United States and Mexico. See www.cedo.org.

to address the needs of artisanal fishers in the context of oyster aquaculture and wetland conservation.

- Formation of the first women-led federation in Mexico, from the village of Desemboque, representing seven fishing cooperatives. The members secured fishing permits for women fishers and were elected as representatives of intercommunity fisher groups.
- Through the process, both women and men from small-scale traditional and artisanal fisheries acquired official fishing permits, including 16 permits for women fishers (the first-ever permits for women fishers in the area), which strengthened their fishing tenure rights, reduced social-spatial conflicts and increased local stewardship for 11 small-scale fisheries.

Stakeholders and agencies involved

Small-scale fishermen and women from six fishing communities; research and civil-society stakeholders, including CEDO, Centro de Investigaciones Biológicas del Noroeste, University of Arizona, Universidad Autónoma de Baja California Sur, Comunidad y Biodiversidad, Environmental Defense Fund- Fondo Mexicano para la Conservación de la Naturaleza, Niparajá, The Nature Conservancy and SuMar Voces por la Naturaleza; government stakeholders: national and regional institutions for fisheries and aquaculture (CONAPESCA) and protected areas (CONANP), the Secretary of the Navy, Sonora State Aquaculture and Fisheries Institute and municipal governments of Puerto Peñasco and Caborca, Sonora; donors: David and Lucile Packard Foundation, MarIsla Foundation, Resources Legacy Fund, Televisa Foundation, Walton Family Foundation, Alliance between World Wildlife Fund and Carlos Slim Foundation; and German Corporation for International Cooperation (Blue Solutions Initiative).

Context of the intervention: geographic, socioeconomic, gender and governance aspects

The California Gulf region includes a unique corridor of interconnected habitats ranging from wetlands to sandy and muddy bottoms, pelagic waters, riparian zones, intertidal and sub-tidal rocky reefs and the rich San Jorge Island archipelago. The interconnected habitats support a high diversity of species, many exploited by the region's coastal fishers. The corridor overlaps the upper Gulf of California/Colorado River

Figure 11: Puerto Peñasco-Puerto Lobos biological and fisheries corridor, northern Gulf of California, Sonora, Mexico

Delta Biosphere Reserve, home of the endemic and endangered vaquita porpoise (***Phocoena sinus***) and totoaba fish (***Totoaba macdonaldi***), two species that are primary drivers for conservation and marine management of the California Gulf coastal region.

Figure 12: Artisanal fishermen at work
Credit: CEDO

Extensive commercial relationships, friendships and kinships create strong ties among the people of the corridor, but communities are diverse in their socioeconomic character, level of organization and gendered economic activities. Puerto Peñasco is the largest town and has the most diverse economy, with active industrial and recreational fishing fleets and an important tourism industry. In some small communities, fishing livelihoods are supplemented by terrestrial mining for gold and other minerals, agriculture, oyster cultivation and growing tourism services. Some of the smaller towns lack basic social services, such as schools and medical facilities. Some of them are also removed from the coast, requiring travel by car to get to fishing landing sites.

Fishing forms the backbone of the economy of the corridor, which comprises 60,000 inhabitants, at least 2,000 of whom are small-scale fishers. Men are the primary offshore fishers, but many women have paid work in post-harvest processes or provide unpaid labour to their husbands or male family members. Women from Puerto Peñasco represent the first oyster growers in the state of Sonora and are national leaders in oyster aquaculture. In the smaller towns of San Jorge and Campodónico, women are involved in crab processing and fish filleting. In recent years, women have also become involved in crab and shrimp fishing and in commercial diving. In several communities, women help with monitoring the catch at fish landing sites, for which they are sometimes paid.

Mexico" National Fisheries Law (2015) defines a need to develop advisory councils for fisheries management in coordination with state agencies, especially for priority species or areas of international ecological importance (like the Gulf of California). Historically, these advisory planning processes included only (male) leaders of major fisheries organizations and hence, by design, the majority of local and traditional users were excluded, including unorganized groups of women wetlands users and traditional "un-permitted" fishermen and women.

Figure 13: Woman oyster farmer at work
Credit: CEDO

Furthermore, continually changing environmental regulations in the western side of the upper Gulf of California, in particular to protect the endangered vaquita porpoise, creates uncertainty and distrust between different stakeholders involved in planning processes.

According to the National Fisheries Charter, the small-scale fisheries of commercial interest have already reached their maximum sustainable yield or have been overexploited and hence new permits are not available. This official assessment, however, was made without actual and current fisheries data from the region and are based on inaccurate catch records and an official fishing record that only included legally permitted activities. Before the start of coastal marine spatial planning, more than 50 per cent of artisanal fishing in the corridor was carried out without the required permits, which made local fishers vulnerable and unable to defend their coastal and marine resources. Without permits, fishermen and fisherwomen have no legal rights to remove poachers from their waters or to defend their traditional launch sites on local beaches, which are being acquired by coastal developers.

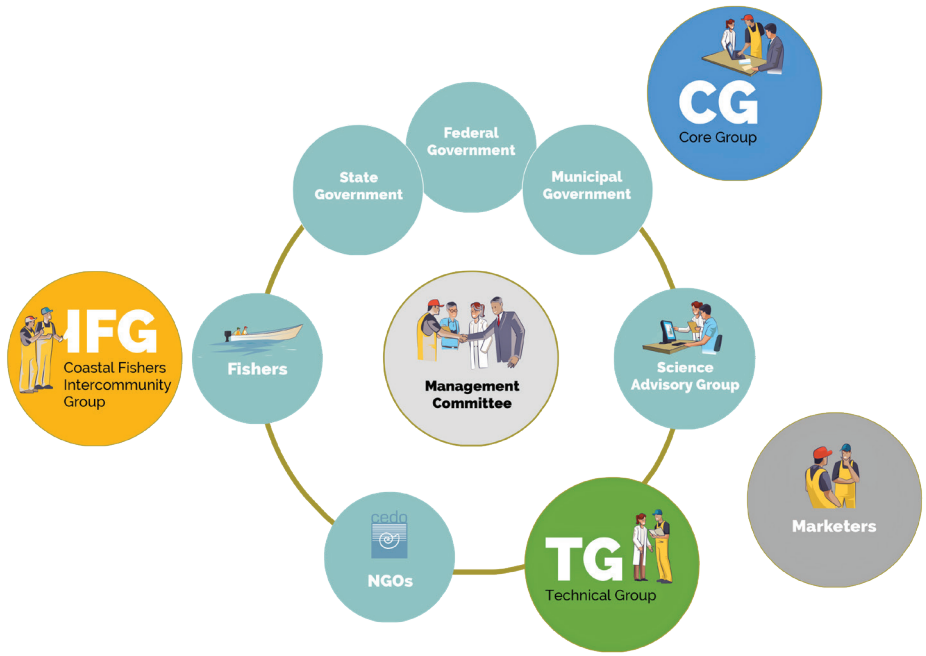
Organized criminal groups are growing throughout the region, often requiring payments from fishers and pressuring them into illegal activities, such as fishing during seasonal bans or catching protected species such as the totoaba. These groups lobby and influence government actors and fishers at all levels to oppose integrated coastal and marine management and use their political connections to obtain fishing permits to the detriment of small-scale and traditional fishers.

An inclusive governance model that encourages participation of artisanal fishermen and fisherwomen

A transparent governance structure and a real commitment to the process are often cited as two of the most important enabling conditions for the successful implementation of coastal marine spatial planning. In the isolated fishing villages of the corridor, however, traditional users lacked the organization and institutional structure to spur collective action and were presented with few opportunities for interaction with scientists, management experts or government authorities (CEDO 2019).

Therefore, from 2015 to 2019, CEDO implemented a governance system to guarantee the equitable participation of all the stakeholders needed to solve fisheries-related problems. The governance model consists of four interacting management groups:

Figure 14: Governance model implemented in the participatory coastal marine spatial planning project



Source: CEDO.

the intercommunity fishers group, composed of small-scale, organized and unorganized fishermen and fisherwomen, elected as representatives of their coastal communities through a transparent and inclusive voting process; a technical group, including researchers and specialists in fisheries management, marine conservation and social participation; a core group, including government authorities from all levels with jurisdiction over fisheries issues; and a base group, represented by CEDO staff.

To ensure active and informed participation by the fishing communities in the governance of their marine and coastal resources, both men and women received training in leadership, communications and negotiations to strengthen the capacity of intercommunity fisher groups for collective action, as well as in technical subjects such as marine ecology and fisheries management tools so they could make good management decisions. As a result of that process, women and men members of the fishers groups now take an active role as spokespersons for the corridor programme and its goals within their communities and beyond. They give radio interviews and represent the corridor in forums with fishers throughout Mexico and with authorities. They have helped to organize beach clean-ups and are sharing their perspective and knowledge with local students, becoming role models of environmental stewardship. What is more, fishermen and fisherwomen have actively participated in monitoring their resources to generate the information required for management (CEDO 2019).

Women catalysing an inclusive bottom-up planning process to reduce existing social conflicts

CEDO staff played a vital role in fostering an inclusive, bottom-up consultation process to reduce conflicts between various stakeholders in the shared seascape of the corridor. As part of the initial consultations and data gathering on fishing activities of coastal households, women staff of CEDO encouraged and mobilized 150 local fisherwomen from six communities to accompany them in their door-to-door survey of fisher households. Fishermen and fisherwomen are distrustful of external agencies and wary of sharing information with them, but the local women helped in allaying their fears and explaining the advantages of sharing information and participating in the coastal marine spatial planning process (getting fishing permits, for example). As a result, they were able to access confidential (and often hidden) information about the fishing activities of men in their community. Women also played a valuable role as spokespersons and organizers of community forums to present management proposals from intercommunity fisher groups to the other stakeholders in the management group. CEDO created a strategic communication campaign with strategies that included community bulletin boards, posters, videos, radio programmes and other tools aimed at informing and involving corridor communities. CEDO also held workshops, often led by local women, to overcome the trust divide between intercommunity fisher groups and other groups and rebuild confidence in the coastal marine spatial planning process and the benefits of implementing marine conservation measures such as fishery refuges (protected areas for juvenile and brooding fish). The participatory consultations integrated valid, first-hand information from artisanal fishers and other marginal coastal user groups and women's and men's traditional and experiential knowledge with detailed spatial data to develop an informed coastal marine spatial planning. The process built the confidence of all groups, especially intercommunity fisher groups, in the validity of the data and motivated the implementation of the coastal marine spatial planning interventions. In this way, the region´s male and female fishers organized and articulated their vision for the spatial planning in the corridor and their voices have reached the highest levels of government with sound proposals for resources management.

Lessons learned

Strong, women-led organizations such as CEDO can play an invaluable role in bridging the gender divide at the local and institutional levels and can mobilize coastal women to play a more active role in conservation efforts, for regularizing and monitoring small-scale fishing activities and for better coastal and marine area management.

Women in coastal communities are often overburdened with underpaid and voluntary work, participating in fishing activities while also assuming most household and caregiving duties. The spatial planning process demonstrated the need for more official mechanisms that value and compensate both women's and men's roles in small-scale coastal activities.

Women and youth can help to promote a culture of accountability and integrity in their communities and in certain political contexts where petty corruption is normalized and transparency is largely missing.

The men and women of the corridor are strengthening their capacity to influence public policy by legally incorporating their intercommunity groups and by voluntarily implementing management actions within their communities and fisheries groups. To reap the full benefits of their work, however, they will require the continued commitment of the relevant government authorities, which should remain in place regardless of shifts in government personnel. The influence of cartels and the lack of support from government in the community-based spatial planning process are major challenges to the sustainability of the project and the people and ecosystems it is designed to protect.

Further reading

The report below gives more detail on the project highlighted in this case study.

CEDO report on the coastal marine spatial planning programme of the Puerto Peñasco– Puerto Lobos Corridor in Sonora, Mexico, available at:

https://cedo.org/downloads/publications/241908_CEDO_Intercultural_Booklet_2019_EN_web.pdf

Gender principle 4: Ensuring that project-generated resources and innovations benefit all

Blue Gold Program, Bangladesh

Boosting income, food security and empowerment of women and landless households in coastal Bangladesh

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New technology, resources and management approaches that are introduced into coastal and marine areas through projects and policies are never gender-neutral. They change social relations of production, access to resources, and power dynamics within households and villages. These changes affect women and men differently, often creating unintended negative outcomes for particular groups.

To counter this, projects must ensure that the *most socio-economically disadvantaged groups of women and men also benefit or gain from improved technology and innovations* for better production (of crops, fish, livestock).

Objective: To reduce poverty, improve food security and build climate resilience of 185,000 households in south-west coastal Bangladesh by creating a healthy and secure living environment and sustainable socioeconomic development.

Background

Running from 2013 to 2021, the Blue Gold Program was aimed at reducing risk, increasing incomes and improving the food security of the predominantly marginal agricultural households in flood-prone coastal polders[15] of south-west Bangladesh, through participatory in-polder water management, improved agricultural productivity and enhanced market linkages for buying inputs and selling produce.

Key gender-related outcomes of the Blue Gold Program[16]

More effective and equitable water management groups at the village level and water management associations at polder level, with active participation by women and men:

- 43 per cent of all water management group members are women.
- One third of the executive committee members of all water management groups and associations are women. Over time, women leaders have grown more capable, confident and vocal, taking more decisions and actions.
- The proportion of women in senior positions (i.e., president, secretary and treasurer) doubled from less than 5 per cent to over 9 per cent during the existence of the Blue Gold Program. Both women and men acquire and apply new skills and improved agricultural technology:
- 62 per cent of the total 88,650 farmer field school participants[17] were women and 42 per cent of the homestead farmer field school participants belonged to the most marginalized landless group.
- Increased cropping intensity and yields as improved agricultural technologies were adopted by both men and women farmers, for example, high-yielding variety rice (18 per cent women), vaccination of cattle and poultry (63 per cent women) and integrated pest management (24 per cent women).
- Homestead production of vegetables, fish, poultry and eggs, with maximum participation of women and the landless, more than doubled, benefiting both home consumption and sales.

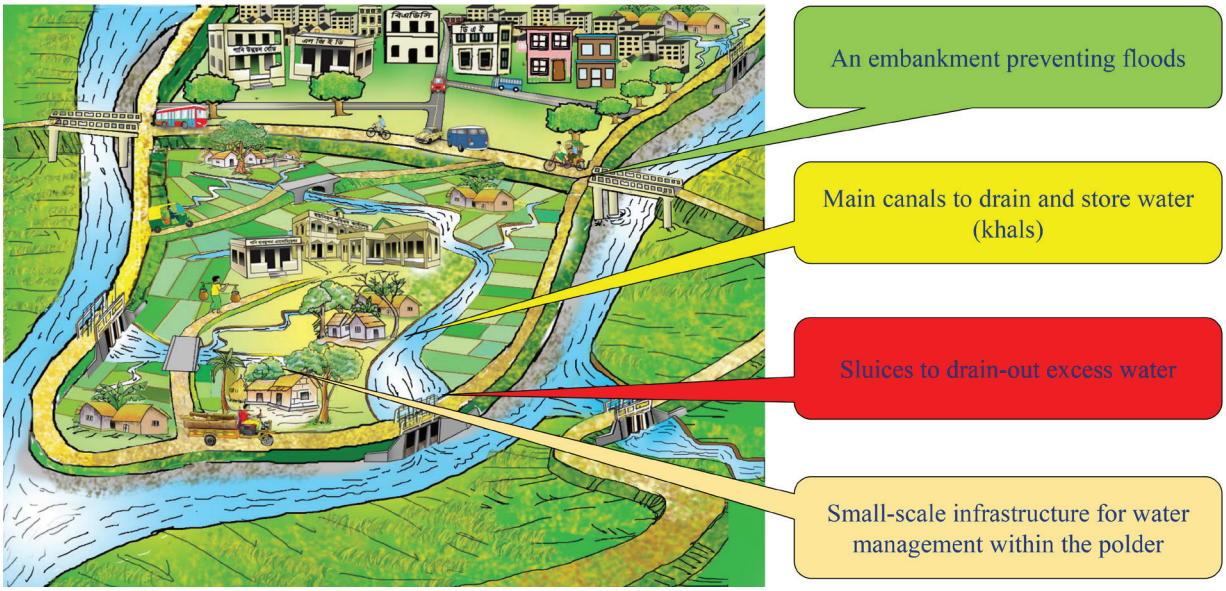
From 2017, women and men were increasingly involved in market linkages and collective actions:

15 A "polder" is an area of low-lying land surrounded by raised earthen embankments (dikes) to prevent flooding by riverwater or seawater, provided with associated structures to either drain excess water from the polder or to admit and store freshwater for irrigation.

16 The statistics under this section have been compiled, by the case study author, from current Blue Gold Program monitoring documents, which are not yet unavailable for public viewing.

17 A farmer field school brings together a group of farmers, livestock herders or fishers to learn how to shift towards more sustainable production practices, by better understanding complex agro-ecosystems and by enhancing ecosystem services (http://www.fao.org). The Blue Gold Program had schools for both field and homestead production (vegetables, poultry, fish and livestock), with the latter having a much higher participation of women.

Figure 15: Diagram explaining a polder and associated structures for water management



Source: Blue Gold Program, Bangladesh.

- 13,600 participants (92 per cent women) were trained in market linkages through homestead field farmer school; women became increasingly contact traders using mobile phones and able to negotiate better prices for buying inputs and selling produce.
- Improved access to inputs, also for women farmers, through home production of compost and animal feed, connecting farmers with qualified input suppliers, collective input purchase and training community animal health workers (62 per cent women) to deliver services.

Stakeholders and agencies involved

Women and men from four districts on the south-west coast of Bangladesh, Bangladesh Water Development Board, Ministry of Water Resources, Department of Agricultural Extension, Department of Livestock Services, Department of Fisheries and local government institutions. The programme was funded by the Government of the Netherlands and the Government of Bangladesh.

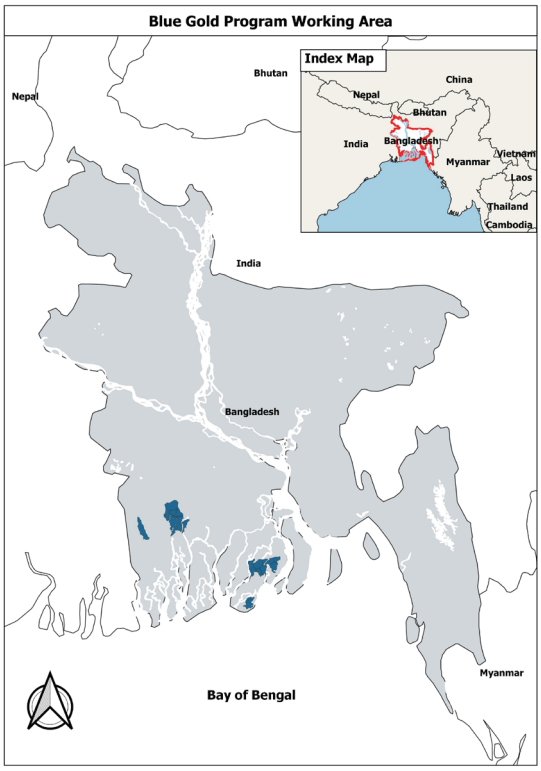
Context of the intervention: geographic, socioeconomic, gender and governance aspects

Bangladesh, which has the largest river delta in the world, has an economy largely dependent on the integrated and sustainable management of its saline and freshwater resources. Beginning in the 1960s, low-lying tracts of land in the south-west coastal zone were enclosed by earthen embankments to create polders, which protect coastal communities and their crops from tidal floods and surges. There are now 139 polders enclosed by embankments, with an overall length of nearly 6,000 km. The Blue Gold Program covers 22 selected coastal polders in this region covering about 120,000 ha in the districts of Patuakhali, Khulna, Satkhira and Barguna.

In addition to suffering from the effects of tidal floods and sea surges, people in the coastal polders are vulnerable to salinity intrusion, shortage of fresh water in the dry season and the impact of extreme events such as cyclones. On the south-western coast, river siltation hinders drainage and causes prolonged water logging in the polders after monsoon rains, which can persist for extended periods of up to six months. This results in loss of crops and income, reduced food security, ill health and increased drudgery, especially for women, owing to flooded tube-wells and latrines and affecting access to safe drinking water and hygienic sanitation. Climate change and the accompanying rising sea level will only increase the threats posed to these coastal people and their livelihoods.

About 38 per cent of the coastal population of Bangladesh lives below the national poverty line,

Figure 16: Blue Gold Program areas of work



Source: Blue Gold Program, Bangladesh.

which is much higher than the national average of 20.5 per cent,[18] and faces insecurity of food, income, water and health. Of these, women and the landless are the most disadvantaged groups owing to their lack of access to productive resources and poor participation in decision-making, local governance and planning.

The guidelines for participatory water management issued by the Government of Bangladesh in 2001 were particularly relevant to the Blue Gold Program. These guidelines set out provisions incorporated in the National Water Policy of 1999 and the Bangladesh Water Development Board Act of 2000 to improve the involvement of stakeholders in all stages of water management planning, and they explicitly refer to involving men and women. Water management groups are designated as the unit of social organization at the village level and as the local hydrological basis, with water management associations at the project and subproject levels, corresponding to polder level in the Blue Gold Program. The guidelines allow membership of more than one person from a household in a water management group, which facilitates women's membership.[19] They mandate that of the 12 elected members of the executive committees of the water management groups and associations, at least 30 per cent should be women and that representatives of landless people, destitute women and fishers should also be included. The guidelines were updated by the Participatory Water Management Rules of 2014, but without changing the above provisions.

18 See Blue Gold website: http://www.bluegoldbd.org/what-we-do/about-blue-gold/; and Asian Development Bank website:https://www.adb.org/countries/bangladesh/poverty.

19 If only one person per household can be a member, it is usually the husband who enlists.

Figure 17: Woman catching fish from her own pond, an activity traditionally done by men
Credit: Blue Gold Program

Enhancing access to productive resources and capacity-building for all

The gender and poverty reduction strategies of the Blue Gold Program recognized barriers faced by women and landless households in accessing the benefits of the program and developed interventions that specifically targeted them. The gender strategy also aimed to change discriminatory gender norms.[20] The poverty reduction strategy focused on homestead farmer field schools for poultry rearing, horticulture, livestock and small-scale aquaculture, targeting the poorest households (with a high proportion of women), which lacked access to crop land but had some homestead land. The category of poor households without access to homestead land and without non-farm employment also benefited from the program because of the increased demand for wage labour by crop farmers, whose production increased. Though a wage gap between men and women remained, the gap proportionally narrowed and the demand for female labour increased.

Below are examples of key actions implemented in the Blue Gold Program to increase access and control of women and landless groups to resources and skills for their livelihoods:

- **Inclusive and women-friendly agricultural extension**. The homestead farmer field schools were a key intervention to improve knowledge and skills about sustainable production practices and technologies. Their outreach was increased by encouraging participants in the schools to share their learning with neighbours and family members and by organizing farmer field days and other learning exchange events. Rather than gender stereotyping (e.g., women for poultry and men for beef fattening), participants were selected on the basis of who was most likely to apply the new knowledge and skills. This led to mixed groups, but with a large majority of women – 88 per cent of all 29,450 homestead farmer field school participants.
- **Improved access to inputs**. To reduce dependency on external inputs and better monitor input quality, farmer field school participants were taught how to prepare compost and animal feed themselves and how to use integrated pest management[21] techniques. For other necessary inputs, the participants were introduced to trusted suppliers during sessions. Sharing mobile phone numbers of local input suppliers, traders and service providers was standard practice in all farmer field schools.
- **Increased market orientation and collective market-related actions**. Information was provided on how local markets and traders work, how to get price information over the phone and how to negotiate with traders and buyers. The benefits of jointly buying inputs, selling produce and acquiring market information (so-called collective actions) were discussed as part of the farmer field schools. This market orientation acted

Figure 18: Woman farmer field school participant applying improved skills and technology for poultry rearing
Credit: Blue Gold Program

20 For example, men were encouraged to share in domestic household tasks and couples were encouraged to take decisions on business activities together.

21 Integrated pest management is an ecosystem-based strategy that focuses on long-term prevention of pests or their damage through a combination of eco-friendly techniques such as biological control, habitat manipulation, modified cultivation practices and use of resistant varieties (see http://www.fao.org).

as an eye-opener for many women participants, whose self-confidence increased as they learned how to take control and make decisions on the marketing of their produce. Collective actions are now organized by water management groups, resource farmers and other active farmers. A total of 33,650 women were reported to have benefited from such initiatives.

- **Enhancing local expertise**. The Blue Gold Program promoted local expertise and resource persons by selecting and training resource farmers (nearly 700 in total, of which 71 per cent were women farmers) and farmer trainers (over 200, of which 44 per cent were women). Resource farmers maintain networks and lead collective actions while farmer trainers acted as facilitators in the farmer field schools in the last years of the programme. Furthermore, 100 individuals (62 per cent women) were trained as community animal health workers, including as vaccinators. Their knowledge and skills remained within the polders after the end of the Blue Gold Program.
- **Strengthening linkages to service providers**. Linkages with the Departments of Agricultural Extension, Livestock Services, and Fisheries were developed to facilitate seeking advice and obtaining government services, such as free or subsidized inputs for marginal farmers. Contacts with private-sector service providers – for example, for rental of farm machinery and equipment – were also promoted.

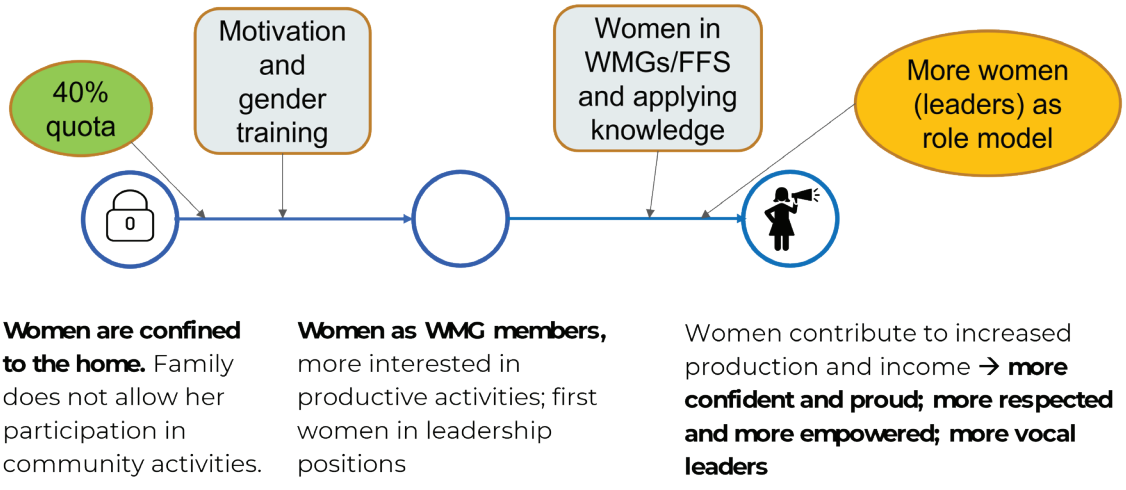
Results

The Blue Gold Program significantly reduced the vulnerability of coastal households constantly threatened by climate change and extreme climate events by improved protection from embankment breaches and flooding. The interventions for integrated management of water and land resources, including more efficient and sustainable land use, combined with strengthening market linkages, were vital for increasing food security and economic development, thereby strengthening climate resilience and local capacity to adapt to and mitigate the impacts of climate change.

The community-based institutions, water management groups and water management associations established and strengthened under the Blue Gold Program now play an important role in the operation and maintenance of the infrastructure. At the time of Cyclone Amphan in 2020, active water management groups and associations arranged to share information on the upcoming cyclone and could quickly mobilize men and women to repair damaged embankments, thus minimizing losses.

By ensuring that women and other disadvantaged groups (landless, wage labourers) were able to participate and benefit from training and obtaining skills for diversified livelihood practices and improved market linkages, the project contributed

Figure 19: Empowerment process in the Blue Gold Program



Source: Blue Gold Program.
Abbreviations: FFS, farmer field school; WMG, water management group.

not only to their economic empowerment but also to their social, physical and political empowerment. Their social status within the household and community as contributing members was raised, their confidence to participate actively in and lead local resource management and market negotiations was improved and household and community food security was enhanced.

Lessons learned

Striving for greater gender equality is an integral component of poverty reduction, but has to be made explicit in programme design, implementation and monitoring. Gender expertise and the commitment of management are crucial.

Feminization of agriculture, that is, the increased role of women in agriculture, requires adjusted extension approaches and women-friendly technologies. The increased role of women in productive activities, next to domestic work, increases their workload, leading to physical and mental stress, and needs to be addressed at the household and community levels (better sharing of domestic work with male household members).

For sustaining gains after project completion, it is important to build the skills and capacity of local women and men, as well as to strengthen their partnerships and networking with local and regional government and private-sector actors.

Further reading

The websites below give more detail on the Blue Gold Program and provide several resources on the programme's gender mainstreaming strategy.

https://www.bluegoldwiki.com/index.php?title=24_Gender_Equality_and_Women%E2%80%99s_Empowerment

http://bluegoldwiki.com/

Gender principle 5: Using a gender-responsive approach to develop skills and knowledge for sustainable livelihoods

The Nature Conservancy, Zanzibar

Advancing restorative seaweed farming for the benefit of farmers and the environment in Zanzibar

Authors:[22] *George Maina, Giulia Besana, Peter Limbu, Tiffany Waters, Mondy Muhando, Robert Jones and Lucy Magembe, The Nature Conservancy*

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A majority of poor coastal women and men depend on their natural environment for their household food, income and energy requirements. With the increasing degradation of coastal and marine ecosystems, these groups face rising insecurity and risks in fulfilling their livelihood needs and often have no choice but to resort to unsustainable practices.

To be effective, coastal conservation and ecosystem regeneration projects should identify groups most dependent on natural resources for their livelihoods, and ensure that capacity building and skills trainings is gender-responsive i.e. addressing the priorities, interests and constraints of these groups.

Objective: Building local capacity for sustainable seaweed farming in Zanzibar that addresses environmental, productivity and quality concerns in seaweed production and contributes to improved livelihoods and the empowerment of women farmers.

Background

The Zanzibar Restorative Seaweed Farming programme, facilitated by TNC, began in 2019 with a scoping study on seaweed farming and production practices in the region and an analysis of the related challenges and opportunities. This was followed by a pilot phase (currently under way) where selected women and men seaweed farmers are being trained in environmentally sustainable seaweed production, with an analysis of its viability as a sustainable livelihood option in the social and physical context of the area. The next phase, planned in 2022, will involve the roll-out of the intervention to more villages in the region.

Outputs and outcomes

Key outputs of the ongoing pilot phase implemented in three villages in Zanzibar so far, include:

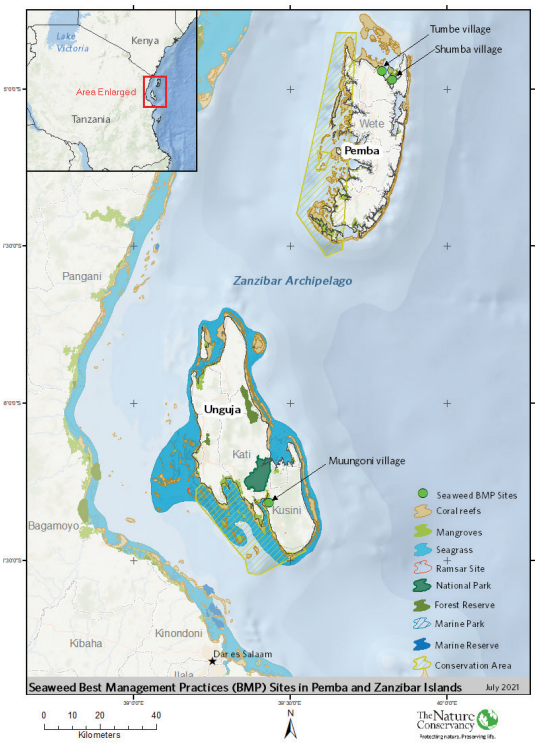
- Development and piloting of the first national seaweed farming best management practices, developed in collaboration with the local government, international conservation experts, the seaweed industry and local farmers, most of whom are women. Training modules covered a variety of topics to improve the productivity of low- and medium-yielding seaweed farms, managed by women farmers.
- Training of 183 farmers (114 women and 69 men) from two villages on Pemba Island and one on Unguja, on the new seaweed best management practices curriculum. Training typically includes a 6 to 12-day combination of classroom and in-water practical sessions with seaweed farmers.
- Seaweed plots belonging to the trained women farmers are being used as demonstration farm sites to model success and build the capacity of other farmers.
- Development of a draft guide on opportunities for increased productivity, traceability and sustainability of seaweed aquaculture in the United Republic of Tanzania, which provides information and guidance for seaweed farmers, conservation practitioners and seaweed buyers on inclusive and sustainable practices within the sector.

Stakeholders and agencies involved

Local village leaders and seaweed farmers on Pemba and Unguja islands, Zanzibar; Nature Conservancy,

22 All authors are affiliated with TNC, a non-profit environmental organization working globally to lead conservation projects. See www.nature.org.

Figure 20: Map of the Zanzibar seaweed project



Credit: TNC, United Republic of Tanzania

Cargill (a global food company which is a major international buyer of red seaweed) and the C-Weed Corporation (a national buyer of red seaweed, based in Zanzibar). National partners include the Zanzibar Institute of Marine Science, the Zanzibar Ministry of Blue Economy and Fisheries and the Ministry of Agriculture, Natural Resources, Livestock and Fisheries.

Context of the intervention: geographic, socioeconomic, gender and governance aspects

The Zanzibar archipelago, made up of Unguja and Pemba islands, is located in the western Indian Ocean, a global biodiversity hotspot and a region with diverse fisheries, extensive mangrove forests and the second-highest coral reef diversity in the world (Wells et al. 2004; UNEP 2009). Over the decades, habitat degradation, unplanned coastal development and increasing fishing pressures from illegal, unreported and unregulated fisheries have combined with climate change and limited governance capacity for natural resources management, to threaten the region's coastal ecosystems and the invaluable services they provide for people and the environment. Seaweed aquaculture being practised as an alternative livelihood to fisheries in the United Republic of Tanzania for over 30 years, on the other hand, has important regenerative potential for the Tanzanian coastlines. It provides benefits such as excess nutrient removal, a habitat for diverse aquatic organisms and carbon capture and storage to mitigate climate change.

Community livelihoods in this region are largely dependent on natural resources, with offshore and onshore fisheries making an important contribution to food security and income and seaweed aquaculture providing a vital alternative livelihood for many women and indigenous people. Seaweed is the second largest foreign export industry in Zanzibar after tourism, accounting for 90 per cent of its marine exports and employing around 25,000 farmers (Msuya 2013). It is mainly used for carrageenan and agar, which are thickening agents used in food products and cosmetics. Although seaweed continues to be in high demand, earnings from seaweed have been falling for some time owing to lower yields attributed to climate change and changing water temperatures.

While offshore fishing in the United Republic of Tanzania is mainly done by men, women glean

intertidal areas for shellfish and sea cucumbers, seasonally fish octopus without gear and engage in seaweed aquaculture to supplement household income. The scope of women's work is significantly limited by their household and caregiving responsibilities, as well as because of cultural and religious norms that restrict their mobility and access to resources and markets. Eighty per cent of seaweed farmers are women and they work mostly as smallholder producers (Msuya 2013). They face ongoing challenges in terms of access to capital, inputs and markets, knowledge of good cultivation, processing and storage practices and fair pay. Seaweed farming does not attract men as the work is time- and labour-consuming and the income earned is relatively low.

Zanzibar has several committees responsible for environmental management at the village level. The Fisheries Act of 2005 provides for co-management of coastal land and water areas through the creation of shehia fisheries committees, formerly known as village fisheries committees. Furthermore, the Environment Act of 2015 provides for the establishment of integrated coastal zone management committees at the local level, drawing on committee members engaged in fisheries management, as well as forest and environmental conservation. This platform facilitates information-sharing and collaboration across sectors that are often isolated at the local level.

Although seaweed farmers must comply with fisheries policies and regulations, there are no clear policies and laws specifically focusing on the seaweed sector, which disadvantages the women who constitute the majority of seaweed farmers in the United Republic of Tanzania. In some areas, seaweed cluster initiatives have been formed to address problems related to seaweed production, profitability and coastal resources management (Msuya 2011). The clusters provide a platform through which seaweed farmers, researchers, government officials and seaweed sellers and exporters meet to discuss and give solutions to issues of concern for the industry (Sasakawa Peace Foundation, n.d.).

Development of context-specific training and guidelines for sustainable seaweed aquaculture

A scoping study conducted by TNC and its partners in 2019 helped to identify current practices and challenges in seaweed farming in the United Republic of Tanzania, as well as opportunities for improving its environmental performance while benefiting the livelihoods of farmers. Importantly, the study also helped to build relationships and understanding with key players in the sector, including government agencies, the seaweed industry and seaweed farmers.

Three main challenges for seaweed farmers were identified by the study: inadequate knowledge of site-appropriate farm methods, use of environmentally unsustainable cultivation techniques, and substandard harvest, post-harvest

Figure 21: Farmers preparing rope used in the "peg and line" method of seaweed farming, Zanzibar
Credit: Roshini, TNC

and storage practices. All these challenges not only lowered the productivity of individual farms and the livelihood security of farmers and affected the economy, but they also delivered negative impacts for the environment, thereby threatening ecosystem resilience.

The above challenges, among others, were considered when developing the guide for best management practices for seaweed farming. The guide (currently under review) also seeks to address some of the constraints faced by women, such as low capacity for investment and leadership, low literacy, restricted mobility, the burdens of domestic work and family care and cultural norms and values regarding women's roles and position in society, all of which limit their time for other work and employment.

The current farmer training and mentorship pilot phase therefore focuses on building capacity and skills for commonly accepted seaweed best farming practices, while also considering existing gender inequalities and gaps. Preliminary village level meetings and training helped to develop, tailor and refine the best approach of leading the classroom and in-water practical training sessions, as well as the mentorship approach, based on the unique needs of each village.

TNC, government extension staff, C-Weed Corporation (a national seaweed buyer and developer) and Cargill (an international seaweed buyer) worked collaboratively to select farmers for the pilot training programme. Priority was given to women farmers from farms with low and medium productivity so as to build their capacity for effective

Figure 22: Women working in groups for better adoption of best management practices
Credit: Mondy Muhando, TNC

Figure 23: Off-bottom cultivation of seaweed in shallow sea, Zanzibar
Credit: C-Weed

adoption of best management practices that could help them achieve higher and more consistent yields. The high productivity farmers (male and female) were also supported to ensure that their high production level is sustained and to serve as champion or model farmers during the mentorship period.

The training sessions were conducted in the villages close to participants' homes to enhance farmer participation and understanding of the best management practices. The training timings and schedule were flexible to allow women participants to attend to their domestic household responsibilities. The combination of tailor-made classroom and practical in-water training allowed farmers to acquire first-hand skills while comparing their traditional methods with the new practices. Written material was in Swahili and accompanied with plenty of visuals for understanding by all the farmers. The presence of multiple partners (TNC, C-Weed, government) in the training provided a direct opportunity and platform for farmers to engage with them actively while giving feedback on the best management practices and the challenges they faced. A robust feedback mechanism integrated within the training programme helped in the continuous adaptation of the practices based on the discussions. Moreover, using seaweed plots[23] belonging to the trainee farmers as demonstration farms instilled a sense of confidence and empowerment in women model farmers and raised their social status in their villages.

23 Seaweed farms can be individually owned or belong to a group or committee of farmers. Given that the sea is public land, "ownership" is informally agreed at the village level. Farmers engaged in the project are using their individually owned plots and are assessed individually.

Balancing longer-term ecosystem benefits with short-term individual benefits for farmers

The scoping study showed that both women and men farmers had limited knowledge of how to identify suitable seaweed farming plots that would contribute to increased productivity and avoid competing with other marine users and fragile ecosystems. The training on best management practices included recommendations for easy ways to measure surface water velocity to ensure farms would be situated in areas with good water flow with appropriate nutrients for better yields. Information was provided on important site conditions, such as proper water depths, water temperature, salinity (situating away from river mouths), substrate (avoiding rocky areas), wind and locating farms next to nearby reefs or inlets that provide protection from waves. The training also recommended situating farms away from areas used for fishing, navigation and recreation, to avoid loss and damage to farms.

The training on best management practices focused on the "off-bottom peg and line" method of farming in shallow waters, which is preferred by women farmers as most of them are unable to swim or handle boats in the deep sea. This method involves tying seed or propagules of seaweed with rope lines to wooden stakes embedded into the sea floor. The use of this method involves cutting down nearby mangroves for wooden stakes, leading to deforestation and higher pressure on near-shore sensitive habitats and fish populations. Sometimes the farms also cover seagrasses or create plastic and other marine debris. The training included information on the benefits of mangroves, corals and seagrass beds for people and the environment and recommended how to avoid damaging these fragile ecosystems by placing farms away from them and not cutting down mangrove trees for wood to use as stakes for tying seaweed. When advising on what not to do, the training tried to offer the farmers feasible alternatives where possible, such as a list of local shrubs and trees that could be used for durable wood instead of mangrove trees, including their relative distances from the seaweed farms.

The training promoted innovations in farm design that could increase production and income for farmers in the short term. An example of this was the double-made loop method of attaching seedlings to the cultivation line. This method has been shown to triple production within the same amount of ocean area and requires less plastic rope, creating a win-win situation for farmers and the environment. A significant amount of time in the training was also devoted to proper farm maintenance and disease prevention, so as to minimize crop damage and loss and reduce livelihood insecurity of women farmers.

Figure 24 Woman farmer harvesting seaweed in Pemba Island
Credit: Roshini, TNC

Understanding the particular health risks and safety issues faced by women seaweed farmers, there was also a training module explaining the risks of certain practices for farmers such as using plastic and fibre-glass boats in deep water, where they are susceptible to strong currents. These boats are usually provided to farmers by local seaweed developers and buying agents but should only be used for transporting the harvested seaweed from near-shore areas. The module also explained the advantages of simple safety practices, such as using boots while farming in near-shore areas to avoid injuries and allergies from hazardous animals and sharp shells in the water. Finally, the training provided recommendations for good post-harvest practices, as inadequate knowledge of drying, sorting, treating and packing can compromise the quality of the seaweed and the price received for it. The latter advice is provided by the national buying agent (C-Weed), which procures most of the seaweed from the farmers for a fair price.

As the training of farmers is ongoing, conclusive data on yield increases from the modified production techniques and on product quality, ecosystem health and increased farmer incomes is not yet available. What is evident is that men and especially women farmers feel empowered by the new information, technology and stakeholder linkages that the training has provided them. The confidence of women farmers was boosted by the fact that they were selected as model farmers to demonstrate improved cultivation practices to the others in their community. They now have new knowledge that they can share with other women and men farmers alike and they are seen as pioneers in sustainable seaweed farming. Now that they have engaged with government, buying agents and researchers as part of their training, all the participating farmers feel more confident in approaching them again and are more confident in their own knowledge and ability.

Lessons learned

Facilitating local mentorship from various local stakeholders (such as researchers and extension agents) to trainee farmers and identifying model farmers to provide peer-to-peer support importantly helped the adoption of best management practices in the ecosystem-based approach to seaweed farming.

Certain best management practices such as the use of the double-made loop technique have good potential for boosting farmer and buyer incomes with a minimal environmental footprint, but they require more time and skill of the farmers, which creates a reluctance to change old methods, especially among the women trainee farmers. The programme staff is trying to improve this by providing farmers with pre-knotted lines using the double-made loop technique, but this may not be sustainable in the long run after the phasing out of programme support. It may be necessary to look at other options such as organizing collective action among the farmer groups, so that women can help each other with this technique. Ultimately, collective producer groups can also strengthen the bargaining position of farmers vis-à-vis market agents and help to boost women's enterprises within the seaweed value chain.

The programme is pioneering a multi-stakeholder collaboration in sustainable seaweed farming in Zanzibar across sectors that involve farmers, research organizations, government departments and national and international buyers. Currently this is providing a wealth of opportunities in capacity-building not only to the farmers but also to local and government researchers and extension agents, and has helped to boost strong mentorship links between producers and other stakeholders for continuing improvements in the seaweed industry. A crucial and challenging role for project partners, however, will be the scale-up and replication of the best management practices during the next phase.

Further reading

The websites listed below provide more information on the Zanzibar restorative seaweed farming programme.

https://www.aquaculturealliance.org/advocate/for-seaweed-farmers-in-zanzibar-a-chance-for-real-growth/

https://www.nature.org/en-us/newsroom/seaweed-farming-tanzania/

https://thefishsite.com/articles/supporting-sustainable-seaweed-farming-for-east-africas-coastal-communities

Gender principle 6: Enhancing inclusive decision-making in community-based organizations

CORDIO, Kenya

Enhancing effective participation of women in beach management units in coral reef dependent communities in Kenya

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Local stakeholders (fishers, seafood processers and traders, boat owners) are increasingly called upon by their regional and national governments to participate in co-management of local coastal and marine resources through formally recognized community-based organisations such as Village Fishery Committees and Beach Management Units. Often, despite membership quotas for women, their participation in these groups is negligible.

These local management bodies have the potential to generate important wins forresilient environment, livelihood security and resource stability in coastal and marine areas, if managed gender-responsively and monitored for inclusive representation.

Objective: To enable long-term effective, equitable and inclusive community-based natural resource management of coral reef areas on the southern coast of Kenya by strengthening meaningful participation of women in local governance institutions.

Background

The interventions described below were implemented by Coastal Oceans Research and Development – Indian Ocean (CORDIO), a Kenyan research and conservation organization, as part of a project entitled "Innovating and sharing knowledge for coastal resilience in eastern Africa". One of the project objectives was to build community resilience to climate change through participatory research and learning on community-based natural resources management.[25] Building on earlier research and understanding of the challenges faced in locally managed marine areas in Kenya, CORDIO targeted specific interventions to enhance the effective participation of women in coastal governance institutions and to ensure that women participate in and benefit from initiatives to promote community-based natural resources management.

Key outcomes and impacts

- In December 2019, a democratic election process in seven Kenyan beach management units[26] in Mkunguni, Mwaembe, Munje, Mwandamo, Funzi, Bodo and Gazi villages took place as a response to concerns among the villagers over the legitimacy of the earlier leadership of the units. Women were encouraged to stand for leadership positions and were elected as vice-secretaries in two of the units and as treasurers in all seven of them. At the end of the elections, the 11 women accounted for almost 30 per cent of the 47 elected leaders.
- After the election, 32 women and 61 men attended an induction course and leadership training to form the executive committee of the seven beach management units. The training was aimed at strengthening the capacity of committee members to deliver on their mandates to enable equitable, efficient and sustainable fisheries management at the grass-roots level. A key output from the training was the development of action plans for improved accountability, transparency and equity in management and financial operations.

24 Both authors are affiliated with CORDIO East Africa, a Kenyan non-profit research and conservation organization focused on marine and coastal ecosystems in the western Indian Ocean region. See https://cordioea.net.

25 Community-based natural resources management aims to create the right incentives and conditions for an identified group of resource users within defined areas to use natural resources sustainably. It promotes conservation through the sustainable use of natural resources, enables communities to generate income that can be used for rural development and promotes democracy and good governance in local institutions (USAID, n.d.).

26 Beach management units form the community basis of fisheries co-management in Kenya, bringing together resource user groups such as fishers, fish traders and processors, boat and gear owners and state actors to share responsibilities in resource management and conservation, as an imperative to improve the livelihoods of people dependent on these resources (Kanyange and others, 2014).

- Members of the Mkunguni beach management unit collaborated with scientists from CORDIO and the Kwale County fisheries office in the development of less destructive fishing gear that could benefit the coral reef ecosystem without compromising fishers' income. A basket trap with an increased mesh size was constructed to reduce the capture of small immature fish and allow larger fish to be caught, which fetched higher market prices. The modified traps were distributed among 16 fishermen on a trial basis, with four traps allocated specifically to women fish traders so they could be assured of accessing catch at a fair price from fishers using the traps.

Stakeholders and agencies involved

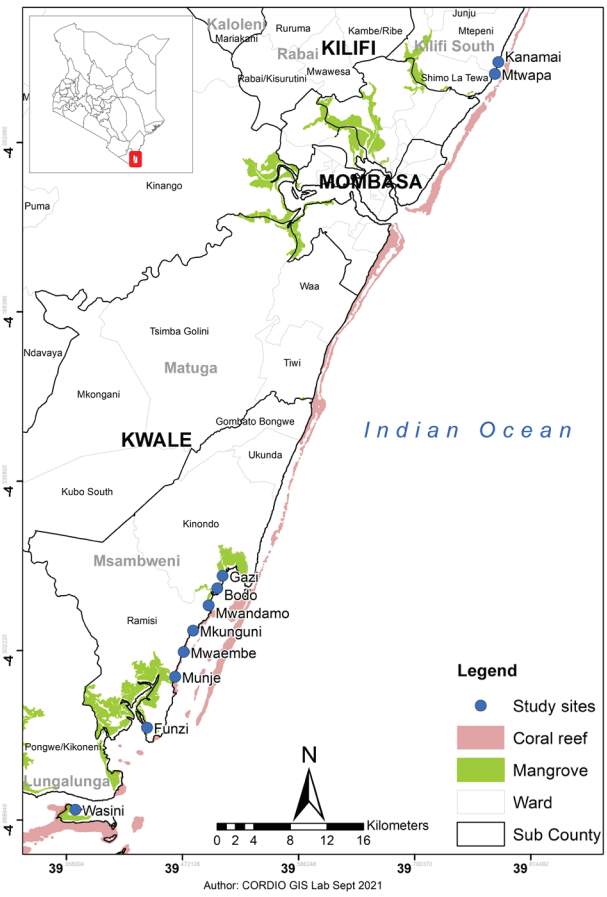
Female and male members of seven beach management units in coastal Kenya; government stakeholders: Kenya Fisheries Service, Kwale and Kilifi County fisheries offices; research and civil-society stakeholders: CORDIO East Africa, Coastal and Marine Resource Development (COMRED); donor: Norwegian Agency for Development Cooperation.

Context of the intervention: geographic, socioeconomic, gender and governance aspects

The southern coast of Kenya includes coastal and marine ecosystems such as mangroves, coral reefs and seagrasses that are critical for their biodiversity and the services they provide for the ecosystem and people. The extensive shoreline is also a turtle nesting area. These fragile ecosystems are increasingly under threat from natural and human-based activities, including climate change and extreme weather conditions, poorly planned coastal development, increasing population, excessive and destructive fishing, land-based pollution and poor governance.

The project sites are located in Kwale County on the south coast of Kenya, which has a much higher poverty rate of 47.4 per cent when compared with

Figure 25: Map showing beach management units that received induction training



Source: CORDIO, East Africa.

Figure 26: Mama karanga in Mkunguni
Credit: Joan Kawaka, CORDIO, East Africa

the national poverty rate of 36.1 per cent. While commercial and subsistence fisheries form the primary source of livelihood of the households, both women and men also rely on tourism, small-scale farming and small business activities for income and livelihood. As overfishing, destructive fishing and depletion of mangrove, seagrass and coral areas are leading to a decline in the quality and quantity of fish stocks, certain marginal groups, including women gleaners, ***mama karangas,***[27] and foot fishers find themselves increasingly at risk of losing their main source of income and food.

Within fishing households, men are mainly involved in capture fishing at sea, in boats and by swimming, while women are mainly involved in the fish trade and processing. In some areas, women also glean shells in the intertidal areas during low tide to use in handicrafts. While both men and women are involved in fish trading, women tend to have smaller businesses that need less capital and involve micro-scale vending and selling of fried fish in local markets. Women and men engage in multiple occupations for their livelihoods, but women are much more restricted in engaging in paid work and employment because of their household and caregiving responsibilities, their lack of ownership of land and property, sociocultural norms restricting certain types of activities and their unpaid work in subsistence farming. Even though beach management unit regulations stipulate one third of executive committee members are to be women, there are not many women in the general membership of the units and consequently their interests and needs in fisheries and coastal resources management tend to be neglected and unrepresented in key decisions and plans.

With the enactment of the Beach Management Unit Regulations of the Fisheries Act of 2007, the Ministry of Livestock and Fisheries Development in Kenya intensified its efforts to promote beach management units as an institutionalized fisheries co-management organization in inland and marine fisheries. Made up of fishers, boat and fishing gear owners, fish traders and processors and government stakeholders, the units have a host of responsibilities including regeneration of fisheries and aquatic environments, alleviating poverty, building the capacity of their members for fisheries and conflict resolution between different users. While there is a need for more documentation on the performance of coastal beach management units, it has generally been observed that most of these units face many challenges in carrying out their responsibilities and are unable to meet their mandates. Undemocratic governance, poor leadership, lack of administrative and management capacity, poor communication with government partners and unsustainable financing are some of the key problems coastal beach management units face.

Participatory assessment to identify concerns and priorities of women and men members of beach management units

CORDIO implemented a stakeholder needs assessment at the start of the project to understand the main challenges faced by women and men members in the functioning of the beach management units and the reasons why earlier initiatives in community-based natural resources management such as maintaining fishing closure areas had succeeded or failed. The study was conducted between October 2018 and March 2019, through questionnaires and focus group discussions with members of seven beach management units in Kwale County.

As the women are hesitant to speak in the presence of men and stay silent during mixed gender discussions, men and women were interviewed separately. The focus group discussions were held with same-sex groups to allow free sharing and

27 Women who sell small amounts of fried fish in the local market.

Figure 27: Beach management unit executive members in induction training
Credit: Lenice Ojwang, CORDIO, East Africa

solutions to those challenges. Feedback on the effectiveness of the training and other climate-smart interventions were also gender disaggregated. Registration forms for participants during training and seminars and project activities incorporated sections specifying whether a participant was male or female. This helped to track gender representation throughout the project activities and allowed action to be taken where representation was skewed.

The assessment identified opportunities and challenges towards implementing gender-sensitive climate-smart initiatives. For example, an important issue identified by men and women was their dissatisfaction and lack of trust in the beach management unit leadership in Kwale County. In addition, women members expressed their concern at being left out of many community-based natural resources management initiatives that were focused only on fishers who were men.

Increasing women's representation and decision-making within coastal beach management units

Members of beach management units were concerned about the legitimacy of the leadership of the units in Kwale County as elections had been delayed by over two years, which they attributed to the lack of financial resources to facilitate the election process. Moreover, representation of women in the general membership of the seven units was low and the 30 per cent mandate of women in the executive committee was unmet. Using this as an opportunity to promote inclusive and good governance at the grass-roots level, CORDIO facilitated sensitization forums, where women who had shown leadership traits were encouraged to compete for positions in the executive committees. The potential women candidates met with peers and mentors who were active in the marine sector and occupied leadership positions. Local leaders such as ward and village administrators spoke to the members of the beach management units about the problems faced by communities that restrict the involvement of women in coastal and marine development and fisheries. As a result of these efforts, women were elected as executive members in all seven of the units, taking

Table 1: Capture size and weight for dominant species using modified basket traps and traditional basket traps

Species	Type of basket trap	Number of fish	Mean total length (cm)	Mean weight (g)	Proportion of juvenile retention (percentage)
S. sutor	Modified basket traps	2004	28.7 ± 3.0	312.6 ± 96.8	20.4
	Traditional basket traps	6164	27.7 ± 3.4	286.6 ± 98.9	25.3
L. mahsena	Modified basket traps	161	27.4 ± 5.9	303.2 ± 138.1	3.1
	Traditional basket traps	512	24.9 ± 3.8	274.5 ± 195.5	17.7
L. borbonicus	Modified basket traps	90	24.5 ± 4.9	230.8 ± 107.3	20.0
	Traditional basket traps	298	20.9 ± 6.1	161.5 ± 115.7	47.7
L. fulviflamma	Modified basket traps	38	19.1 ± 3.8	116.8 ±118.3	15.8
	Traditional basket traps	286	19.2 ± 2.4	110.5 ± 47.6	11.6

Source: CORDIO, East Africa.

Figure 28: Members of the Mkunguni beach management unit with modified basket traps
Credit: Joan Kawaka, CORDIO, East Africa

Figure 29: Mama karanga collecting data on fish catch landings
Credit: Joan Kawaka, CORDIO, East Africa

up positions of responsibility (treasurers and vice-secretaries), from where they closely monitor all aspects of financial management. Women executive members are perceived by the entire membership of the units to be more trustworthy and more likely to uphold good governance practices such as transparency in accounting.

Ensuring that women benefit from community-based natural resources management interventions

Women in coastal Kenya are often left out of interventions related to sustainable fisheries as they do not fish and are mostly involved in the fish trade. However, community-based natural resources management interventions that directly affect the availability of fish, such as no-take zones,[28] seasonal bans on fishing and gear adaptations to reduce the capture of juvenile fish, have a big impact on women's livelihoods, income and food security. Owing to a lack of investment capital, women fish traders can often afford to buy only small or juvenile fish, so they do not necessarily benefit when fish size increases as this leads to increased prices. This matter was considered by CORDIO and government stakeholders when discussing increasing the mesh size of traditional basket traps used by artisanal fishermen in the Mkunguni beach management unit to prevent the capture of juvenile fish.

Discussions were held jointly with both women and men members of the beach management unit, many of whom are related by marriage or blood. Women were recognized as direct beneficiaries who should benefit from fish catch despite not going out fishing, and as a result four fishermen volunteered to regularly sell them the fish they captured. A total of 16 modified basket traps were constructed and given to fishers. Out of these, four traps were assigned to ***mama karangas***, who were given first priority in purchasing fish from the four basket traps. During evaluation of the modified basket trap trials, women reported that they were able to purchase fish easily from the fishermen. Women were also trained in monitoring the fish catch data and are now supporting fish catch data collection by different research organizations, including CORDIO, for which they are paid.

Lessons learned

Projects that aim to increase the coastal and marine areas that are under protection cannot do so effectively or equitably without involving women. Involving different groups of women and men at the conceptualization stage of interventions not only gives a voice to those who were previously sidelined, but also gives different perspectives that may be important for designing sustainable interventions. In this project, historical perspectives of the target community and traditional management approaches were provided by elderly men and women. Shifts that have taken place in resources use and management were identified by the elderly and youth.

28 No-take zones are areas set aside by the government where no extraction of resources is allowed. See https://www.nationalgeographic.org/encyclopedia/no-take-zone/.

To build sustainable community institutions like the beach management units, it is important to gain support for women's participation with the help of men from their kinship relations, family and community. Support and mentoring by influential leaders (women and men) at the local level can also play a big role in encouraging the active participation of women in decision-making. Showcasing best practices in gender equity in coastal and marine conservation through written and visual media can help in networking for scaling up efforts to other parts of the region and financial sustainability.

When building women's capacity for active participation in local coastal management institutions, it is important to recognize that good governance requires financial stability. Members of beach management units, especially women, cannot be expected to spend time and effort in implementing and monitoring coastal and fisheries conservation interventions if they have no alternative sources of income, savings or paid employment. Consequently, interventions in community-based natural resources management must address the issue of financial sustainability and ensure that solutions benefit women and other marginalized groups.

Further reading

The resources below give more background and detail on the project highlighted in the case study.

J.A. Kawaka and others, "Developing locally managed marine areas: lessons learnt from Kenya", ***Ocean and coastal management***, vol. 135, pp. 1–10.

https://www.cordioea.net/wp-content/uploads/2015/08/Kawaka-et-al-2016-LMMAs-in-Kenya.pdf

Website article and video on the "Innovating and sharing knowledge for coastal resilience in eastern Africa" project training events on participatory community-based monitoring and evaluation.

https://cordioea.net/participatory-monitoring/

Gender principle 7: Political mobilization of excluded groups to advocate for their rights

Solidaritas Perempuan, Indonesia

Mobilizing fisherwomen to campaign against unsustainable coastal reclamation in Indonesia

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As maritime countries increasingly use their oceans and seas for commercial and economic growth, there is a rise in the involvement of international actors and in conflicts over use of coastal and marine spaces. Men and women dependent on small-scale fisheries and other coastal resources for their livelihood find themselves increasingly marginalized. Women are often left out of consultations on coastal development as their work is formally unrecognized and undervalued, pushing them further into poverty.

In countries where patriarchy is deeply rooted in customary, family and government structures and decision-making, a feminist focus in political mobilisation and advocacy is essential to encourage gender-just coastal policies and development.

Objective: To strengthen grass-roots advocacy and campaigning against a large coastal reclamation and port development project in South Sulawesi, Indonesia, by developing fisherwomen's critical awareness of their rights through feminist participatory action research.

29 Both authors are affiliated with Solidaritas Perempuan. Formed in 1990, Solidaritas Perempuan supports women's mobilization and provides feminist leadership training across Indonesia. Its vision is to create a democratic social order, based on the principles of justice, ecological awareness and respect for pluralism, with equality in gender relations, in which women and men fairly share access to and control over all resources. See https://www.solidaritasperempuan.org.

Key outputs and outcomes

- Over 120 fisherwomen in two villages in South Sulawesi actively participated in a research project in 2019 to build critical awareness about their rights as women and fishers, and the associated rights violations they were experiencing from non-recognition of their work as fishers and increasing marginalization of their livelihoods by government and commercial coastal and maritime development projects.
- Two evidence-based reports of rights violations experienced by the fisherwomen as a result of the Makassar New Port coastal reclamation project were developed by the research participants, facilitated by the Indonesian feminist rights and advocacy-building organization Solidaritas Perempuan. These reports were shared with members of parliament to demand policy change and disseminated through public and social media campaigns to gather mass support for the cause.
- Fisherwomen participated in one press conference, three radio talk shows and seven public rallies to express their demands to stop the Makassar New Port coastal reclamation project.

In April 2021 an investigation was ordered by the national human rights institution in Indonesia into the rights violations of fisher communities due to the Makassar New Port project as a result of the fisherwomen's political campaigning.

Stakeholder and agencies involved

Community stakeholders: fisherwomen in the villages of Tallo and Cambaya in South Sulawesi; civil-society stakeholder: Solidaritas Perempuan, Indonesia. The research project had financial and networking support from BothENDS, as part of the Global Alliance for Green and Gender Action project. Advocacy and campaigning efforts were directed towards the South Sulawesi Provincial Government as the local government that is responsible for the marine spatial planning in the province and mandated by law to protect the rights of fishers, particularly women; the local parliament of South Sulawesi Province, which released local regulations on the marine spatial planning with the provincial government; PT Pelabuhan Indonesia/Pelindo IV (a State-owned company) as project implementers in

Makassar city; and Royal Boskalis, a Dutch dredging company that was contracted for the reclamation project.

Context of the intervention: geographic, socioeconomic, gender and governance aspects

Indonesia is the world's largest archipelagic country with approximately 17,500 islands and a maritime space of 5.8 million km^2, which far surpasses its terrestrial area of just 1.8 million km^2 (Josse et al. 2019). The large proportion of Indonesia's sovereign territory that is, in fact, water means that the country has a high level of economic dependence on the ocean. The contribution of the coastal- and marine-related activities to the national economy is estimated to be one quarter of Indonesia's gross domestic product (Josse et al. 2019). South Sulawesi is an Indonesian province that has abundant marine and fishery potential, with a strategic location in international transportation routes and trade areas, including the Australian-Indonesia development area, the Philippines east growth area and the Asia-Pacific route (Hardyanti Putri Harsono 2020).

The President of Indonesia, Joko Widodo, has made Indonesia's seas the centre of his economic policy, pushing for marine infrastructure investments and ramping up shipping using Indonesia's sea lanes (Xue 2015). The "blue revolution" (***revolusi biru***), launched in 2010 under his Government, aims to focus the national ocean policy towards a combination of development and conservation. Since then, there has been an emphasis on investment in the development of maritime infrastructure, particularly ports, mining and reclamation projects,[30] as well as the conservation of marine areas for the development of luxury tourism.

This growing agenda of ocean and coastal development for economic growth has led to an increased involvement of international actors and increasing conflicts over the use of coastal and marine spaces. Within this scenario, the more than 6 million small-scale fishers, who generate close to 95 per cent of the total fish catch (Langenheim 2017) and rely mainly on coastal resources for their lives and livelihoods, are finding themselves increasingly marginalized. Within the small fisher population, women are the most disadvantaged as they are not recognized as fishers in the legal framework for fisheries, despite the key role they play in pre- and post-harvest activities and onshore fisheries. Women fishers' contributions to commercial and subsistence fisheries are uncounted in national statistics and they are not invited to consultations on coastal and marine planning as they tend to be seen as helpers to male fishers. Moreover, because of existing patriarchal norms in Indonesian society, men who are invited to a consultation process usually do not let their wives participate as well.

The Makassar New Port in South Sulawesi is a national strategic project that is managed by the State-owned port management company, PT Pelabuhan Indonesia/Pelindo IV, and is set to reclaim around 1,428 ha to create a hub that will connect to the eastern areas of Indonesia (Pelindo IV, Makassar New Port profile). The project began in 2017 and is part of the national marine spatial plan, which was approved with little consultation with fishermen and no consultation with fisherwomen. The project's reclamation activities have seriously limited men and women fishers' access to the sea and the coast and undermined their livelihoods, which rely on offshore and onshore seafood capture, processing and selling. The reclamation is destroying fishing grounds as well as fishing gear, leading to cycles of debt when fishers attempt to replace gear but are unable to repay debts owing to falling incomes from the degraded fishery (Josse et al. 2019). The project also generates pollution on the shoreline and increases mud and coastal erosion, creating particular difficulties for women whose fishing activities take place on the seashore.

30 Reclamation is the process of turning existing ocean space into new coastland, where sand from the seabed is mined, shipped and piled up in a different area to make space for ports, tourist development and real estate, among other uses.

Figure 30: Makassar New Port development
Source: Makassar New Port, 2022, available at https://mksnewport.co.id/public/.

Gendered impacts of the Makassar New Port project

Participatory consultations with women fishers in Makassar revealed that, as financial managers in the family, they are bearing the burden of seeking additional resources as shellfish harvests diminish owing to the reclamation and port development activities. Women are forced to borrow money to replace fishing gear that is destroyed and to cover increased fuel costs of fishing and selling fish as these activities must take place further away. As fishermen's primary sources of income are decreasing and women's (often unpaid) workload in fisheries and domestic tasks is increasing, there is an increase in gender-based violence. There has also been a rise in child marriage for girls, as a way to earn a dowry and relieve the family's financial pressure (Josse et al. 2020). Furthermore, while the corporations involved in the Makassar New Port project are offering jobs to the men, and the government is providing them with compensation for the destruction of their fishing grounds, women are not gaining the same access to alternative jobs or compensation, increasing the political marginalization and lack of recognition that they already face (Josse et al. 2019).

Given their increasing political and socioeconomic marginalization, there is an urgent need for the fisherwomen in South Sulawesi to gain critical awareness of the opportunities and gaps in the legal environment related to their rights as fishers and women and to devise strategies to advocate and campaign for changes in policy and the legal environment. In this context, Solidaritas Perempuan, an Indonesian women's rights organization, is supporting local-level coalition building of the Sulawesi fisherwomen to feed into national-level advocacy campaigns challenging broader neoliberal political agendas that tend to favour external and international stakeholders over small-scale fisher communities. Solidaritas Perempuan supports fisherwomen who play a significant role in the management of coastal areas, so as to promote recognition of their work in the sector and for them to carry out advocacy and campaigning efforts themselves because they have first-hand experience and direct knowledge of their problems and needs.

Using feminist participatory action research to create awareness and organize collective action

Feminism and women's empowerment form the basis of the feminist participatory action research methodology, which is deliberately women-centred and participant-driven in its design and implementation. Based on their lived experiences, the research participants discuss problems and propose solutions, so that the research results become a tool to organize advocacy actions collectively. Solidaritas Perempuan used this approach with the Sulawesi fisherwomen to capture their gendered experiences as women and fishers in Indonesia, together with their perspectives on the development project and how this was affecting their lives and livelihoods. The objective was to gather evidence-based data and documentation to use as building blocks for organizing collective political action at the local and eventually the national scale.

Two local and national Solidaritas Perempuan female staff members and two local female community organizers facilitated the selection of 120 participants from two villages that were most

Figure 31: Fisherwomen harvesting mussels in the dark at low tide in Makassar
Credit: Anging Mammiri, Solidaritas Perempuan

Figure 32: Fisherwomen in Tallo discuss the problems they face from the Makassar New Port development
Credit: Thibault Josse

affected by the Makassar New Port project. Care was taken to include women of different ages, marital status, ethnicity and socioeconomic status, so as to form a representative target group. Over a period of three months, the facilitators lived with the communities and gathered social, economic, cultural and gender data on the women's villages and households, using various qualitative data techniques, including focus group discussions, in-depth interviews, journal-keeping and personal histories.

The focus groups provided a good basis for discussions on gender gaps in coastal and fisheries policies and the problems created for women by the coastal and marine development projects and brainstorming on strategies to address them. Visual information and oral narratives were used with participants who were less literate. Observations of facilitators living among the fishers and individual interviews helped to gather information that was not expressed in group discussions. Specifically for advocacy purposes, the women fishers were facilitated in power mapping, a visual tool used to identify the best individuals to target to promote social and political change and to write stories on the impact of coastal reclamation and the Makassar New Port project on their lives. The mapping, discussions and writing raised women's awareness of the socioeconomic and political context of the problems they were facing, created a sense of solidarity among them and raised their confidence to act collectively to advocate for change. At the end of the feminist participatory action research, the facilitators selected nine fisherwomen from the two villages as leaders, organizers and trainers for the advocacy action. The collected data was analysed by the Solidaritas Perempuan research team and presented in a research report together with an analysis of the government policies.

Results

The feminist participatory action research resulted in increased critical awareness among the fisherwomen in Tallo and Cambaya about the gendered impacts of the reclamation. Whereas they previously normalized their political and socioeconomic marginalization and accepted their increasing work burden as "God imposed duties", they can now identify the injustice of their situation and see it as something that needs to be changed. Initially, the women were shy to speak up in public, but they are now able to discuss their problems in large groups with men and women and even in public media. They are able to explain that their situation is a violation of human rights, as well as gender discrimination. A fisherwoman in Tallo spoke

> "We were not invited to the public consultation. They thought that we can just be represented by our husbands. That was a mistake. As a person, even women, might have an own opinion and perception. Currently, when our families are struggling with declining income because of the projects, wives are the most affected. We are trapped in the debt bondage." (Translation by Solidaritas Perempuan staff)

Figure 33: Fisherwomen in a public rally in Sulawesi
Credit: Anging Mammiri, Solidaritas Perempuan

on the radio about women being left out of public consultations on coastal development:

The feminist participatory action research techniques helped the women to identify the best individuals to target with their advocacy and how to develop collective actions. By identifying common goals, they were able to strategically link up with global and national human rights organizations as well as environmental research and advocacy networks, including Transnational Institute, Save the Coast Alliance and Friends of the Earth. The women have presented written and visual documentation of their experiences to policymakers to demand policy change and to the public to get support. They have engaged in dialogue with the local parliament, been on radio talk shows and participated in rallies with other groups to voice their demands to stop the reclamation project. As a concrete outcome of the fisherwomen's political campaigning, the national human rights body conducted a field investigation on the rights violation brought about by the coastal reclamation activities of the Makassar New Port project.

Lessons learned

In countries such as Indonesia where patriarchy is deeply rooted in customary, family and government structures and decision-making, a feminist focus in political mobilization of fisherwomen is imperative for building advocacy for gender-sensitive and gender-responsive policies. However, this must go hand in hand with building alliances and shared goals with other relevant stakeholder groups (such as fishermen and environmental groups) to make the advocacy more effective and sustainable. This alliance building can also lower the risks of threats and violence against women and human and environmental rights defenders when they are campaigning against big business and political actors.

Participatory action research that links women researchers and legal experts with marginalized women from the coast forms not only a strong basis for gender-sensitive and gender-responsive data collection and analysis, but also helps to build mutually beneficial, strategic alliances for mobilization and advocacy-building at the national, regional and even international levels.

The use of methods such as feminist participatory action research to gather evidence-based information and data on rights violations in local communities needs more time, effort and financing from facilitating organizations compared with pre-formulated survey and interview methods. However, the benefits it brings in capacity-building and empowering of marginalized groups to play a bigger role in sustainable coastal development more than justifies the investment.

Further reading

The report listed below gives additional background on the initiative highlighted in the case study.

Irmak Ertör et al. (2020). Situating small-scale fisheries in the global struggle for agroecology and food sovereignty. Transnational Institute, Association Pleine Mer and Solidaritas Perempuan. pp 17–21.

https://www.tni.org/en/small-scale-fisheries

Gender principle 8: Multi-stakeholder collaboration for gender-equitable sustainable development

Oceanic Global, Barbados

Encouraging local and women's leadership in multi-stakeholder collaboration for sustainable tourism in Barbados

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More governments all over the world are adopting the Blue Economy approach to create greater value for economy, people and environment through sustainable utilisation of ocean resources. Consequently, there is an urgent call for collaboration between multiple sectors and stakeholders to generate shared understanding of problems and agreement around aims, focus, resources and commitment.

Strong women and minority-group leadership and representation in Blue Economy collaborations is essential to ensure outcomes are gender-equitable and sustainable.

Objective: Capitalizing on government/private-sector/civil-society collaboration to support economic recovery of local tourism and fishing businesses hit by climate disasters and the COVID-19 pandemic, by developing a verification system for eco-friendly tourism in Barbados.

Background

Since 2019, Oceanic Global, an international non-profit organization working to educate, raise awareness and foster initiatives for the sustainable use and development of oceans and related ecosystems, has consulted with stakeholders from government, research, civil society and the private sector in Barbados to pilot initiatives in sustainable waste management and sustainable tourism as part of the blue economy approach[31] that the country has adopted. This includes adapting the Oceanic Standard system[32] to pilot BlueSEAL, a sustainability badge verification programme to engage the private hospitality and tourism sector in Barbados, and advising on the effective compliance of hospitality and tourism businesses with the government ban on single-use plastics introduced in April 2020. To roll out the BlueSEAL programme, Oceanic Global and other local civil-society organizations are partnering with the Accelerator Lab for Barbados and the Eastern Caribbean[33] of the United Nations Development Programme (UNDP). The Lab is part of the world's largest and fastest learning networks, built by UNDP, to face development challenges around the world through innovative partnerships and solutions.

Key outputs and outcomes

- As part of the BlueSEAL pilot project in 2019–2020, a survey of local hospitality and tourism businesses was conducted to understand their current practices related to plastic reduction, energy efficiency, engagement with local seafood suppliers and protecting marine biodiversity. The survey results provided gender-disaggregated data on the sector that is mostly absent from previous national surveys and census data.
- Based on responses from the survey, the pilot project engaged with 11 businesses, including 4 hotel and 3 restaurant owners, 1 food truck owner and 3 fish vendors, building their capacity in sustainable tourism practices through relevant curricula and courses. Subsequently, seven tourism businesses were awarded with a BlueSEAL badge for reducing their use of plastics, purchasing seafood from local vendors and verifying four fish vendors as local seafood suppliers.
- Of the 11 participating businesses, 83 per cent were women-led, indicating that women, who make up the majority of wage earners in the tourism industry and half of the wage earners in fisheries, have a vested interest in more equitable

31 The blue economy approach is an evolving development approach centred on creating greater value through sustainable utilization of ocean resources (UNDP, 2020).

32 The Oceanic Standard is a set of research-backed guides and badge verification system, developed by Oceanic Global, which helps industries to minimize their environmental footprint, adopt sustainable operating practices and communicate those practices to consumers and the public.

33 See https://www.bb.undp.org/content/barbados/en/home/accelerator-lab-barbados-and-the-eastern-caribbean.html.

and sustainable plans for economic and climate resilience, as they are worst affected by economic and climate-related crises.

- Engagement of multiple stakeholders, including research organizations, civil-society organizations and private hospitality and tourism businesses within the UNDP Barbados and Eastern Caribbean Accelerator Lab learning network, to facilitate scaling out of sustainable tourism practices in the island nation after the successful pilot initiative.

Stakeholders and agencies involved

Eleven local businesses in hospitality, tourism and fish-vending in Barbados; women-led civil-society organizations: Oceanic Global and local consultancies JustaTAAD[34] and Blue Shell Productions; and UNDP Accelerator Lab for Barbados and the Eastern Caribbean. The pilot initiative is supported by government partners: Barbados National Standards Institution, the Barbados Ministry of Tourism and local tourism agencies, including the Barbados Hotel and Tourism Association and Barbados Tourism Marketing Incorporated. The BlueSEAL programme is also aligned with the Barbados Ministry of Maritime Affairs and the Blue Economy and the Ministry of the Environment in the context of the nation-wide ban on single-use plastics.

Context of the intervention: geographic, socioeconomic, gender and governance aspects

Barbados is the most easterly island nation in the eastern Caribbean, placing it at the front line of hurricanes and storms blowing in from the Atlantic Ocean. The health of the coastal and marine environment in Barbados is threatened by climate variability and change, bringing stronger and more frequent storm surges, coastal degradation, overfishing and insufficient waste management resulting in more pollution than the island is equipped to handle.

The depletion of coastal and marine resources negatively affects the tourism and fishing industries in Barbados, which contribute to a major proportion of foreign earnings for the national economy and provide a large number of local men and women with their main source of livelihood. Both fisheries and tourism are seasonal industries where women and men have specific tasks. In fisheries, the men own the boats and do the fishing at sea while women are responsible mainly for processing and selling fish in markets and stalls. Women constitute around 62 per cent of the labour force in the accommodation and food services sections of the tourism industry (UNDP, UNICEF and UN-Women 2020) but earn only two thirds of the wages of men. There is also a seasonal dip in available employment that affects approximately 7,000 primarily low-income wage workers each year (UNDP, UNICEF and UN-Women 2020), most of whom are women. With the onset of COVID-19, tourism in Barbados has drastically declined, resulting in significant economic losses and an increase in the unemployment rate, especially of women workers.

Barbados has a maritime space that is 400 times its land space, representing a potential opportunity to advance sustainably the economic interests of the country and protect the marine environment at the same time.[35] In recent years, the Government of Barbados has been exploring opportunities to diversify and strengthen its economy and make it more climate resilient through the blue economy approach. To build and implement a long-term set of strategies towards this goal, the national Ministry of Maritime Affairs and the Blue Economy is working with key stakeholders, including UNDP, the Ministry of the Environment and businesses in the fishing, shipping and tourism sectors.

In 2018, the Government of Barbados announced a ban on certain petroleum-based single-use plastics that went into effect on 1 April 1 2020 and there are longer-term goals outlined for the island's economy to become 100 per cent green and carbon neutral by 2030. The COVID-19 pandemic, along with the lack of access to natural resins to supply biodegradable alternatives, however, halted the immediate implementation of the national single-use plastics ban.

34 See https://www.justataad.com.

35 From the website of the Ministry of Maritime Affairs and the Blue Economy. See https://bluconomy.com/about/.

Figure 34: Map of Barbados

Source: https://www.mapsofworld.com/answers/geography/what-are-the-key-facts-of-barbados/#

Historical divide between two key sectors of the blue economy

Despite the importance of tourism and fishing to individual, local and national economies, there has been a historical disconnect and distrust between the tourism and fisheries sectors in Barbados. The island nation is a net importer of fish, mainly due to the limited fish production and high demand by the tourism sector for high-value fish (e.g., lobster and salmon) and limited local harvest volumes of high-value species. Not only is this depleting the foreign exchange reserves, but it is also leading to unsustainable consumption with a very heavy environmental footprint. Currently, hotels and restaurants in Barbados often import seafood products internationally through ports in Miami in the United States and local fishers export their goods internationally, also through Miami. Hospitality businesses responding to the pilot survey explained this by saying they imported seafood to maintain a steady supply of the popular species they need to serve to tourists. Many local seafood vendors have not been able to reliably supply high quantities of the species that large-scale hotels require and instead sell their local varieties of fish (such as flying fish) and seafood to niche markets abroad.

Finding local supply chain solutions should ultimately be the most accessible and sustainable option, enhancing the livelihoods of fishers, vendors and hotel and restaurant owners and staff, boosting the local economy and leaving a smaller environmental footprint. The BlueSEAL programme seeks to build trust and strengthen relationships between hotels and restaurants and the local fish vendors to achieve this.

The COVID-19 pandemic acted as a catalyst for operational changes among micro, small and medium-sized enterprises in Barbados, as many people quickly began to seek online and digital solutions for keeping their businesses running and for community-building efforts. Many small-scale fisherfolk, the majority of whom were women, began turning to tools such as WhatsApp to support their business practices. A key component of the BlueSEAL initiative is the use of digital tools and communications strategies to support environmental and economic recovery among local tourism and fishing operations hit by extreme climate events, and more recently by the pandemic.

Building a local, resilient and sustainable blue economy centred on digital connections and multi-stakeholder collaboration

BlueSEAL is a pilot initiative within the larger BlueDIGITAL programme being developed by the UNDP Accelerator Lab for Barbados and the Eastern Caribbean, which applies digital tools and solutions to improve segments of the blue economy ecosystem and value chains for fisherfolk, government, tourism industry partners and the general public as consumers. BlueSEAL is working with government entities and using the Oceanic Standard to create a national digital verification system that recognizes tourism sector partners, such as hotels, restaurants, fish vendors and food truck operators, that are making sustainable choices and building local connections that support climate resilience and sustainable regional economies. The initiative prioritized working with underrepresented micro, small and medium-sized enterprises and initial participants included many women-led partners, whose employment and livelihoods were particularly compromised by the pandemic and climate hazards. With the verification process, the BlueSEAL programme is assisting micro, small and medium-sized enterprises to meet sustainable

Figure 35: Industry panel discussion at the Oceanic Standard launch event in Barbados with representatives of the UNDP Accelerator Lab and local hospitality and civil-society partners
Credit: Cassia Patel, Oceanic Global

business criteria, such as eliminating single-use plastics, improving waste management and engaging with local sustainable seafood suppliers, and to communicate those criteria to other businesses and to potential tourists and consumers.

As part of the BlueSEAL programme development, Oceanic Global partnered with local organizations to host an industry-specific event for hospitality. The aim of the event was to ensure that as the single-use plastic ban goes into effect in Barbados, businesses are equipped for the transition, are provided with the necessary information to source sustainable products locally and do not fall victim to "greenwashing"[36] or false solutions. In addition, to overcome the disconnect between the fishery and hospitality sectors, the BlueSEAL team surveyed local stakeholders in both the hospitality and fishery sectors to unearth any assumptions, prejudices or past experiences that might be hindering the opportunity for collaboration between the parties. Using the results from the survey in 2019, the BlueSEAL team was able to work with businesses in both sectors to identify shared goals as the project further develops local and digital connections to establish stronger and more direct end-to-end sales pipelines for fisherfolk and to enhance tourism sector-based access to local, sustainable seafood products.

Women-led businesses lead in creating shared incentives for sustainable tourism

Among the micro, small and medium-sized enterprises surveyed, a majority of those that were most interested to engage in the BlueSEAL pilot programme were owned by women. All of the enterprises self-identified as having implemented some level of sustainability in their operations. This indicates that women, who constitute a large proportion of the workers in the tourism and fishery industries, are more interested and motivated to create a resilient future for the next generation in the blue economy of Barbados. By creating a collective digital platform that directly includes local women, the valuable contributions made by women entrepreneurs to sustainable development in Barbados can be encouraged, disseminated and promoted. Female leadership across the fishers, fish vendors and hospitality businesses engaged in the pilot programme laid the groundwork for its success in building community linkages and solidarity. They did this through their willingness to take time to share data, answer surveys and go beyond their job requirements, during a difficult time, to support collective goals for sustainable coastal development.

Owing to COVID-19, businesses in the hospitality and tourism industry directly suffered from limited travel and reduced rates of tourism. As such, many businesses were temporarily shut down or had a limited attention span to focus on anything other than their basic operations to maintain business continuity. Through funding provided by the Accelerator Lab, Oceanic Global was able to hire two local female consultants and offer the BlueSEAL programme to micro, small and medium-sized enterprises for free. The enterprises were more willing to join the certification programme when

Figure 31: Fisherwomen harvesting mussels in the dark at low tide in Makassar
Credit: Anging Mammiri, Solidaritas Perempuan

36 Greenwashing is the process of providing misleading information to persuade the public that an organization's products or practices are more environmentally responsible than they actually are.

consultants shared the positive business incentives and benefits that come with recognition through the programme, particularly for early adopters.

Lessons learned

The BlueSEAL pilot demonstrated that women-led projects have more chance to reach the most vulnerable populations in the context of Barbados. The majority of the core team of partners and representatives of leading stakeholders in the project were women and this helped by encouraging women's leadership and empowerment in leading a community movement towards sustainable tourism.

Digital tools and platforms are a vital means of connecting people during crises and can importantly help to boost the livelihoods of small businesses in tourism and fisheries, if they are accessible to women and men equally and used effectively. Verified and trusted platforms, such as BlueDIGITAL, that promote sustainability and better connect supply and demand within the blue economy value chains are vital innovations that can promote sustainable ocean-based livelihoods, if different groups of women and men are able to benefit equally from them.

While there are opportunities for the programme to succeed on a small scale, reducing the tourism industry's dependence on fish and seafood imports will involve tackling broader and more complex questions of building resilience to climate change and effective management of fisheries and coastal and marine environments, which require commitment, funding and action at the global, national and local levels from a variety of stakeholders. Consumer behaviour (of international and local tourists and customers) will also need addressing to enable more sustainable consumption, including greater promotion of locally caught and prepared fish.

Further reading

The resources below give greater background on the initiatives and organizations highlighted in the case study.

Oceanic Global (2020). UNDP Barbados BlueSEAL program.

https://oceanic.global/projects/undp-barbados-blue-seal/

Oceanic Global (2020). The Oceanic Standard.

https://oceanic.global/oceanic-standard/

UNDP Accelerator Lab for Barbados and the Eastern Caribbean (2020).

https://www.bb.undp.org/content/barbados/en/home/accelerator-lab-barbados-and-the-eastern-caribbean/bluedigital.html

Gender principle 9: Leveraging diversity, equity and inclusion in building local resilience to crises

Utthan, India

Boosting social solidarity and empowerment of women in building the local response to the COVID-19 pandemic in coastal villages of Gujarat, India

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Crises in the form of climate-related emergencies and the Covid-19 pandemic hit coastal populations hard and suddenly, leaving the poorest and most vulnerable groups, such as women, elderly and children, worst off and even more vulnerable to poverty and exploitation. Furthermore, the remoteness of many coastal regions also means that their inhabitants are the hardest to be reached by government and international relief efforts during emergencies.

It is therefore crucial to build the resilience of coastal inhabitants and environment by utilising the diversity of local resources and capacities, and to plan interventions in participation with grassroots groups of women and men. In doing so, it is useful to support local civil society organisations who can help identify the most vulnerable groups, and monitor that they receive the support they need.

Objective: To build resilience to the COVID-19 pandemic in coastal villages in Gujarat by utilizing locally available resources, knowledge and networks in planning and implementing emergency relief, thereby boosting social solidarity between village households and the local economy.

Background

Starting from the first national lockdown in India in March 2020, Utthan, a civil-society organization working in rural Gujarat, utilized its strong links with village women's groups, local leaders and institutions to implement a people-to-people social solidarity enterprise model in COVID-19 relief initiatives. This model was based on three main strategies: local procurement of relief materials; using collective action and deliberation with village groups to target relief to the most vulnerable groups; and building alliances with broader stakeholder groups to sustain and strengthen their relief interventions.

Key outputs and outcomes

- Prioritizing local procurement of food grains and other items for COVID-19 relief from women farmers, traders and entrepreneurs, food grains worth Rs 10,12,883 (approximately $13,600) were bought from 61 women farmers, and face masks worth Rs 2,77,500 (approximately $3,700) were bought from 68 women tailors, thus augmenting their incomes during the pandemic.
- In two rapid rural assessment studies, conducted in 2020 and 2021, women and men village leaders and local government bodies were consulted to identify the most marginalized groups (including households made up of single women or daily wage earners and households dependent on migrant income) and the key problems they faced in a crisis. This helped to target relief, including disbursement of food grains, soap, masks and menstrual hygiene products to 7,785 poor rural households across 130 coastal villages. Responding to the food insecurity within these households and with a focus on the nutritional needs of women and girls who tend to eat last and least during crises, 1,956 poor households were helped to set up vegetable gardens. In addition, 3,000 low-income families were assisted to gain access to government entitlements and livelihood schemes to secure food and income support.
- Village youth and women from 55 villages were recruited as volunteers and trained and equipped for COVID-19 prevention and care work in the villages along with government front-line health workers. This work not only built the volunteers' self-confidence and raised their esteem within their village, but also motivated the government health staff to discharge their duties better.
- Livelihood support was targeted to marginal

37 Both authors are associated with Utthan, a non-profit organization that for the past 40 years has worked to initiate gender-sensitive, grass-roots processes of empowerment among the most vulnerable communities in rural Gujarat, India. See www.utthangujarat.org.

fishers, farmers, migrant families and livestock keepers. Fishing nets and weighing scales were provided to 78 artisanal fisherwomen and 32 women fish traders. More than 1,400 women farmers dependent on rain-fed agriculture were given local seed and bio inputs for the monsoon crop and 230 farmers were assisted for the winter crop. About 70 per cent of these families returned double the seed provided to them to the community seed bank. A total of 17 migrant families were helped to set up rope-making units and 15 poor families were helped to sustain their livestock businesses.

- Documentation of its COVID-19 response work and advocacy at the local and national levels helped Utthan to influence donors to fund the development of kitchen gardens and seed input for sowing monsoon crops for food and nutrition security, as part of emergency relief support.
- Utthan became part of Rapid Rural Community Response to COVID-19, comprising a coalition of more than 70 civil-society organizations formed in March 2020 to enable a quick response to the pandemic in rural areas through studies to monitor the rural situation, build learning in civil-society organizations and influence government relief initiatives. The coalition helped to facilitate provision of relief and livelihood support to 16 million people in more than 15 states of India and was featured in 2021 as one of the top 50 last-mile responders in India at the World Economic Forum's COVID Response Alliance for Social Entrepreneurs.

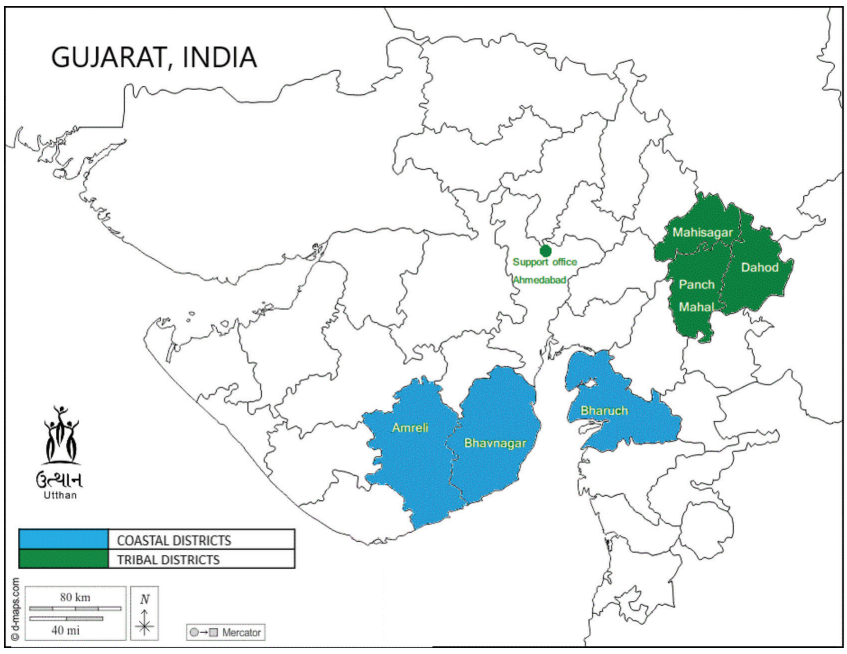
Stakeholders and agencies involved

The relief interventions were planned and implemented by leaders of three women's federations, village committees and youth volunteers in rural Amreli, Bhavnagar and Bharuch Districts, working together with the Utthan team, local government and government primary health centres. The relief efforts were funded by Action Aid, Anarde Foundation, Apcotex Industries Ltd., Azim Premji Foundation, Dream Foundation, EdelGive Foundation, Global Green Grants Fund, GRP Ltd., India Development Service, Indians for Collective Action, Manav Sadhna, Rapid Rural Community Response to COVID-19, Working Group for Women and Land Ownership, Zubaan Foundation and several individuals.

Context of the intervention: geographic, socioeconomic, gender and governance aspects

The western most state in India, Gujarat has the longest coastline of about 1,600 km, comprising two gulfs, the Gulf of Kutch and Gulf of Khambhat, surrounded by the Arabian Sea. The Gulf of Khambhat

Figure 37: **Utthan working areas**



Source: Adapted by Utthan from d-maps.com.

comprises mangroves, estuaries and vast intertidal mud flats, which are known to have rich biodiversity and support a number of endemic flora and fauna. The coastal area in Gujarat is largely drought prone and subject to high erosion, making for a difficult environment for households that reside here and engage in small-scale fisheries and agriculture for food and income. High industrialization, construction of dams, increasing commercial fishing and agriculture, rise in extreme weather events such as cyclones and prolonged droughts have not only accelerated the rate of erosion but also depleted biodiversity and fishing stocks and increased the salinity and pollution of land and water resources, posing further restrictions on the livelihoods of small fishing and farming households.

Coastal Gujarat is one of the most industrialized areas in the country with more than 41 ports and 90 per cent of the state's special economic zones, housing chemical, pharmaceutical, petro chemical, cement and engineering industries. After industry and manufacturing, commercial agriculture and fisheries are major contributors to the state economy (Geevan and Dixit 2012). Boasting one of the strongest economies in the state, however, hides a harsh picture of increasing income inequality and marginalization of artisanal fishers (***pagadiya***s), salt workers and small-scale agricultural farmers, daily wage labourers, livestock herders and migrant labourers. These groups lack basic services such as access to safe water and sanitation, housing, education and health and are engaged in a constant battle to save their land and freshwater resources from the onslaught of polluting industries.

Women in Gujarat are markedly worse off than men across all social and economic categories and statistics for some gender indicators such as child sex ratio, secondary school enrolment and formal employment show that women in Gujarat are worse off than in many other states in India (World Bank, 2016). While the majority of women in the rural coastal areas work in agriculture and fishing, their work is invisible in official statistics and is prone to discriminatory practices in pay, entitlements and working conditions. As a pushback against their institutional and political discrimination, women in Gujarat have been organizing strong collective actions to campaign for their rights to basic services for several decades.

In coastal Gujarat, women's collective action, facilitated by grass-roots organizations like Utthan, has played a significant role in securing access to drinking water, livelihoods, land and property rights, along with safety and security, of women and girls. Building strong local institutions for women's collective action was a key strategy used by Utthan to build grass-roots empowerment. Over the past 25 years of their work with coastal and tribal households, five women's federations with over 12,000 members have grown into strong social institutions working to secure the rights of rural women and other marginalized groups.

The coastal land and waters of Gujarat are governed by national legislation, including the Environment (Protection) Act, 1986, the Water (Prevention and Control of Pollution) Act, 1974, the Coastal Regulation Zone Notification, 1991 and the Biological Diversity Act, 2002. Separate bodies within the state and national governments are the main regulatory authorities for these laws, and as yet there is no decentralized governance of coastal resources involving local coastal communities. This, along with the weak capacity of state and national institutions, has led to poor accountability and transparency in the allocation of rights and responsibilities to various stakeholders, including industries, energy companies and commercial fisheries, leading to many conflicts. Artisanal fishers, small farmers, landless people and wage labourers come out worst off from these conflicts, as their work is largely unrecognized by the official authorities and they are hardly represented in decision-making on coastal development. Women in these groups are the hardest hit because of the lack of land entitlements and fishing permits, patriarchal decision-making structures at the village level and the non-recognition of their valuable contribution to household water and food security and income.

A gendered assessment of the short term impact of the COVID-19 pandemic in coastal areas of Gujarat

Just after the national lockdown of the first wave of COVID-19 infections, Utthan's consultations with village community leaders and local government representatives brought out that the negative effects of the sudden lockdown were being felt most keenly by those who were already on the margins, including small farmers, fishers, landless households and families dependent on daily wages and migrant labour earnings. Field data highlighted that while government intent was good, a huge gap remained in meeting the total need, now magnified with the return of migrants.

While loss of income, hunger and mental stress were experienced by all these groups, the survey revealed that women and girls suffered further distress owing to gender-based discrimination across social, economic, physical and political spheres. Women's unpaid household and care work increased phenomenally, with returning male household members, additional water provisioning for handwashing and hygiene protocol, school closures and tending to sick family members. Women ate last and least as food availability fell, were the last to seek treatment when their health failed and experienced more poverty as lockdown restrictions closed the private trader channels and local markets they mainly used to sell produce. The lack of documents, bank accounts and fishing permits and the absence of land ownership meant that women remained excluded from the Government's COVID-19 relief measures for poor rural households. Women and girls also faced an increase in gender-based violence from male household members, as joblessness increased along with mental stress.

Discussions with women and village leaders led Utthan to decide to implement a people-to-people social solidarity enterprise model in the COVID-19 relief initiatives, based on collective action by village groups, local procurement of relief materials, targeting relief to the most vulnerable groups through community solidarity and building alliances with various stakeholder groups.

Rural community-centred, gender-responsive approach in relief procurement and distribution

The food grain rations for relief were purchased from local farmers and traders, giving priority to women, who would otherwise have resorted to selling their

Figure 38: Women farmers in Gujarat demonstrating seed sowing to other women who received kitchen garden relief kits during the COVID-19 pandemic
Credit: Utthan, Gujarat, India

Figure 39: Distribution centre for COVID-19 relief kits containing food and essentials in a coastal village, Gujarat
Credit: Utthan, Gujarat, India

produce at lower rates out of their desperation to get cash. The process of purchasing grains from individual farmers instead of grocery stores was more time-consuming, but it helped to connect people in need of grains with those who wanted to sell some. The payment to women, who were mostly not landowners who had put their sweat into tilling "their" land, was deposited into their bank accounts. This ensured that women had direct access to their earnings. Women's enterprises were also prioritized when procuring face masks, soap and other essential items for the COVID-19 relief kits. Households with a homestead were supported with a kitchen garden kit, including seeds, compost and tools to grow vegetables. Kitchen gardening improved nutrition and food security, while saving on the purchase of vegetables. Each of the supported households shared the excess vegetable produce with three or four families, so that the initial support to 1,956 households led to supplemental nutrition for nearly 8,000 households over a year. Nearly 80 per cent of the households continued gardening in the following seasons, implying that there would be continued benefits and shared their vegetable produce with several other vulnerable families, including women-headed households. Most of these women farmers felt more satisfied about selling their grain locally, as it helped needy people in their village. Moreover, they saved on transport costs and the drudgery of travelling during lockdown.

Building alliances with different stakeholder groups for effective interventions

A culture of establishing strong dialogue and a feedback mechanism with the government was encouraged at all stages of the relief intervention. At the start, public disclosure of the vulnerable households selected for relief distribution was made

by the village leaders and the Utthan team to local government workers, helping to ensure transparency in disbursing public funds. The process of making and distributing the relief kits was made much easier and effective through collaboration between village leaders, young people and Utthan and local government staff.

Linkages with government health units in the second wave of COVID-19, when there was a spike in infections and deaths in rural areas, allowed the provision of timely support to prevent and treat COVID-19 infections. Nearly 550 COVID-19 response groups were formed, which included government front-line health workers and local women and men volunteers. They advised villagers on infection prevention and care, strategies for home and village isolation and the correct use of diagnostic equipment. Banners and pamphlets helped to build villagers' awareness on the importance of vaccination and to curb vaccine hesitancy.

Data on gaps in access to food rations under government relief distribution schemes, which was provided by Utthan and village leaders to relevant government officials, helped several vulnerable households to gain the benefits to which they were entitled. Regular monitoring of the relief interventions by Utthan's field team and women and men village leaders helped to track the usefulness of the support and assess the further needs of the most vulnerable people. For example, becoming aware of the alarming rise in gender-based violence during the pandemic, the three women's federations provided counsel and support to 350 women and girls from April 2020 to July 2021.

Figure 40: Training in appropriate behaviour for COVID-19 and the correct use of diagnostic equipment, Mahuva block, Bhavnagar district
Credit: Utthan, Gujarat, India

Figure 41: An elderly woman in a coastal village being provided food rations by a Utthan youth volunteer during the COVID-19 pandemic
Credit: Utthan, Gujarat, India

Prioritizing the most vulnerable when directing relief and livelihood support

Vulnerable families were identified with the support of village leaders, women's federation members and local government representatives. Indicators used for assessing vulnerability included house type, control over private or public resources, impact on livelihood, families with disabled and non- earning members and women-headed households.

Women members of coastal village groups also brainstormed on improving income-generation within existing work and alternative income-generating opportunities. As a result, some women's groups started small businesses that needed little investment and could be done at home with products that could be sold or utilized locally. These included poultry rearing and cotton-rope making. Fisherwomen asked for nets to conduct business locally when bigger markets were closed during lockdown. The new nets helped to increase household income as catch sizes increased and the women also saved on time spent in repairing nets. Women engaged in small-scale fish trading requested weighing scales so they could weigh their product more accurately, thus preventing loss in income. Remarkably, women who received the weighing scales shared them with a larger group of women by sitting next to a woman in the fish market

Figure 42: Fish trader using a weighing scale to sell dried fish at a roadside stall
Credit: Utthan, Gujarat, India

who did not have a scale. In this way, what started out as support for 32 women to increase their income is now benefitting nearly double the number of women.

Lessons learned

In India, the impact of the second wave of COVID-19 infections in April 2021 hit rural communities much harder than the first wave in 2020. Whereas the first wave mainly resulted in the loss of employment and livelihoods of villagers and restricted collective action and group work owing to sudden lockdown restrictions, the second wave brought on a serious health emergency with several active COVID-19 cases and deaths in each village. Owing to poor awareness, fear and misinformation about the virus and its spread and cure, many villagers did not follow COVID-19 prevention protocols, feared to report infections in their family and hesitated to take the vaccine when it was available. The rural government and health infrastructure was unable to deal with the surge in illnesses and deaths, which worsened as a result of the lack of testing kits, delays in test results and vaccine shortage. Women were worst affected during both waves, but the second wave further increased the burden of their domestic and caregiving duties and intensified gender-based violence within their families owing to insecurity, stress and fear.

Despite these challenges, strong women leadership and women's groups at the village and district levels were important catalysts in preparing, implementing and monitoring the COVID-19 relief interventions in an inclusive way, targeting those who are often worst hit during a crisis and making sure that help was given to people who needed it the most. Regular monitoring and consultation with local women and youth representatives helped to assess and respond to evolving needs as the pandemic progressed. This included teaming up with government front-line health workers to respond to the health emergency during the second infection wave, providing counselling for women and girls suffering from gender-based violence and providing livelihood support and kitchen gardening kits as the pandemic restrictions affected markets, employment and income.

Working for over four decades with marginalized groups in Gujarat, grass-roots-based organizations like Utthan play a vital role in facilitating effective collaboration between community leaders, national civil-society networks, government stakeholders and donors. In this way, they catalyse a more effective, efficient, sustainable and equitable disaster response and management.

Further reading

The resources listed below give more detail on the initiatives highlighted in the case study.

A case study from Utthan in ***Seeding Hope***, a publication about the extraordinary efforts of ordinary people during the COVID-19 pandemic,pp. 6–8. https://vikalpsangam.org/wp-content/uploads/2021/05/Seeding-Hope_EWOP_Vol4_Mar2021.pdf

Web article on the Rapid Rural Community Response to COVID-19 network. https://idronline.org/responding-to-the-second-wave-of-covid-19-in-rural-india

Short video on the kitchen gardens supported by Utthan during the COVID-19 pandemic. https://swachhindia.ndtv.com/video-details-page/women-in-gujarat-grow-kitchen-gardens-to-ensure-food-security-during-covid-19-pandemic-559972/

Short video on Utthan's post-pandemic support to ***pagadiya*** (foot-fisher) women of coastal Bhavnagar, Gujarat.
https://www.facebook.com/watch/?v=234924061376912

Gender principle 10: Sustaining empowerment and ecosystem benefits in the long-term

TRY Oyster Women's Association, The Gambia

Recognizing women shellfish harvesters' work and amplifying its value through rights-based fisheries co-management: the case of TRY Oyster Women's Association, The Gambia

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Sustaining coastal and marine ecosystem management activities after the phase out of projects and funding support is a challenge faced by governments and natural-resource dependant user groups all over the world.

In this context rights-based, co-management approaches have the potential to empower poor women, men and youth in coastal areas to sustain benefits for their households, larger community and environment, as long as they are accompanied by gender- responsive strategies that build their social, human and natural capital. For this, it is very important to learn what specific interventions within projects can empower and strengthen these groups to continue and even amplify ecosystem management practices in the long-term.

Objective: Leveraging rights-based fisheries co-management and peer learning processes to sustain and scale up environmental stewardship, sustainable fisheries livelihoods and empowerment of socioeconomically marginalized women shellfish harvesters in The Gambia and Ghana.

Background

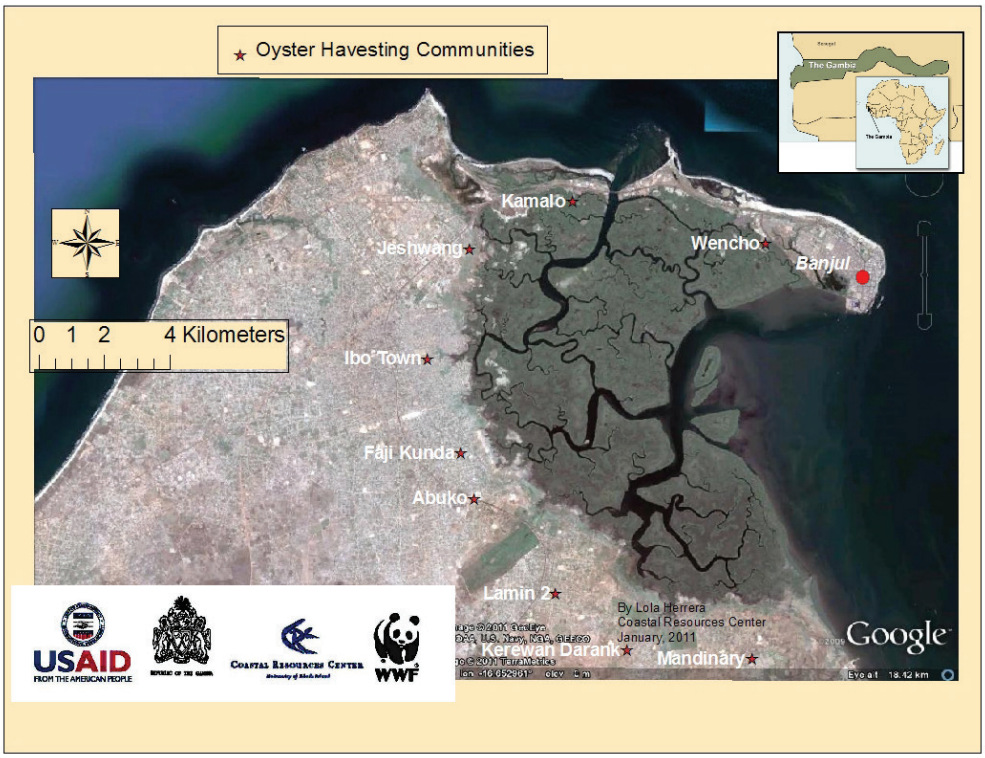
In 2012, TRY Oyster Women's Association of The Gambia became the first women's organization in sub-Saharan Africa to be delegated management responsibility and exclusive use rights to a specific fishery by a national government through the Cockle and Oyster Fishery Co-Management Plan for the Tanbi Special Management Area in The Gambia (University of Rhode Island 2014). Developed through participatory consultation with women oyster harvesters, under the Gambia-Senegal Sustainable Fisheries Project (2009–2014), this plan empowered more than 500 socioeconomically vulnerable women oyster harvesters to responsibly manage and secure their livelihoods from shellfish resources in partnership with the government. In the decade since, TRY has sought to share its experience to promote learning, overcome challenges and improve and scale up participatory, ecosystem- and rights-based fisheries co-management for women shellfish harvesters.

Key outcomes and impact from their actions:

- **Sustained implementation of key management measures and governance practices by women oyster harvesting communities over the past seven years with minimal support.** These practices include maintaining eight-month closed seasons for oyster harvesting each year, use of less destructive harvesting gear and techniques, regular election and replacement of community and national level TRY officers respecting term limits, and monitoring illegal activities and engaging government authorities to pursue enforcement. Even during political crisis and breakdown of government due to The Gambia's December 2016 presidential election ending a 21-year rule, institutionalized co-management by TRY provided for uninterrupted stewardship of public resources that might otherwise have been destroyed during this period.
- **Replication of the rights-based co-management approach with women oyster harvesters in Ghana.** In December 2020, the Fisheries Commission (under the Ministry of Fisheries and Aquaculture Development) in Ghana approved the Densu Delta community-based fisheries management plan delegating exclusive rights to use the oyster fishery resources in this area to more than 150 women and 10 men of the Densu Oyster Pickers Association (DOPA). TRY provided peer-to-peer technical assistance in this effort to a local non-governmental organization, Development Action Association, and DOPA as part of the sustainable fisheries management project in Ghana.

- **Building social, economic and natural capital for the oyster harvesters and their wider communities.** Since starting with a small group of 40 oyster harvesters in one community in The Gambia in 2007, more than 650 women members of TRY and DOPA in The Gambia and Ghana have benefited from a combination of training and participatory action research on leadership, organizational development, co-management, oyster biology, shellfish aquaculture, mangrove replanting, improved hygiene and handling, processing, branding, marketing, literacy and microfinance, among other topics. These activities greatly contributed to creating solidarity among the women of isolated oyster harvesting groups who had never previously worked together. The activities also helped to build the women's confidence in themselves, the value of their work and the realization that their voices count in decision-making (University of Rhode Island 2014).
- **Women members of TRY and DOPA have benefited from increased prices of oysters per kilogram** as co-management practices and capacity-building aimed at improvements in the value chain resulted in bigger oysters and improved hygiene, handling and marketing. In The Gambia, the young daughters and sons of women oyster harvesters are benefiting from training in oyster biology and water quality testing, enabling their involvement in important co-management responsibilities such as monitoring water quality and the oyster harvest at landing sites, which the local fisheries authorities are unable to fulfil.
- **Members of both TRY and DOPA have planted and nurtured more than 50 ha of mangroves in their areas,** contributing to ecosystem regeneration and services for the wider society. In Ghana for example, DOPA, with support from the Development Action Association under the sustainable fisheries management project, planted 20,000 red mangrove seedlings, restoring nearly 15 ha of depleted mangrove sites in the Densu Delta. By 2021, the replanted mangroves were thriving and were reported to be under less threat from cutting than wild areas, as people wished to avoid cutting what someone else had planted.
- **Tools for scaling up good practices regionally with strong community-ownership.** TRY is a partner in the women shellfishers and food security project (2020–2022), which builds on the

Figure 43: Map of Tanbi Wetlands showing location of wild oyster harvesting villages



Credit: TRY Oyster Women's Association, The Gambia

success of The Gambian and Ghanaian women's experiences to develop a toolkit to enhance and support the scaling up of the participatory, ecosystem- and rights-based co-management approach for sustainable livelihoods, food security and management of wetlands and mangrove ecosystems in West Africa.

Stakeholders and agencies involved

Community stakeholders: TRY Oyster Women's Association(The Gambia) and Densu Oyster Pickers Association (Ghana); government stakeholders: Ministry of Fisheries and Water Resources, National Environment Agency, Department of Parks and Wildlife Management and Department of Forestry of The Gambia; and Fisheries Commission of the Ministry of Fisheries and Aquaculture Development of Ghana; research and civil-society stakeholders: University of Rhode Island, World Agroforestry Centre and World Wide Fund for Nature International, Development Action Association, University of Cape Coast and University of Ghana; and donors: United States Agency for International Development (USAID), European Union, FAO, UNDP, Global Environment Facility, Banesto Foundation of Spain, Great Institute, Swansea University, and British High Commission.

Context of the intervention: geographic, socioeconomic, gender and governance aspects

The Gambia has an Atlantic Ocean coastline of 80 km centred around The Gambia River with the 6,304 ha Tanbi Wetlands National Park. The Tanbi is an estuarine and intertidal forested wetland, primarily of low mangrove forest. Its functions include coastal stabilization, fish breeding and oyster and cockle production, recreation and carbon capture and storage. In 2007, the park was designated a Ramsar Site[38] of global biological diversity significance. The West African mangrove oyster (***Crassostrea gasar*** and ***Crassostrea tulipa***) and the blood ark cockle (***Senilia senilis***) are the two primary shellfish species of economic importance. The Tanbi is highly vulnerable to climate change, and particularly to sea level rise because it is 2 m below sea level and surrounded by peri-urban development (World Wide Fund for Nature-West Africa Marine Program Office 2012).

Households living around the Tanbi Wetlands are diverse, including some that are not dependent on Tanbi resources and some that directly or indirectly rely on the wetland resources. For the latter, rice cultivation, vegetable growing and wild oyster and cockle collection by the women and shrimp fishing and mangrove cutting for fuel wood and construction purposes by the men are the main activities (The Gambia Ministry of Fisheries, Water Resources and National Assembly Matters 2012). Women from the poorest communities harvest and sell fresh and cooked oysters and cockles on the roadside and in local markets in The Gambia, earning only a little money for their difficult and dangerous work. Aged between 25 and 45, these women are often the sole income providers for their households and have worked as shellfish harvesters their entire lives, learning the profession from their mothers and grandmothers. In western Gambia, these women are mostly of the Jola tribe. Oyster harvesting is seasonal from March to June, leaving the women financially insecure and often facing debt in the off-season between July and February (UNDP 2013).

The policy, legal and management framework for fisheries in The Gambia was revised in 2007 to incorporate authority for co-management, leading to the Fisheries Act of 2007 and the associated Fisheries Regulations of 2008, which allow for decentralized fisheries co-management and allocation of property rights over fishery resources. The formation of the TRY Oyster Women's Association in 2007 at a time when the Government of The Gambia was formalizing its commitment to best practices for the sustainable management of natural resources and biodiversity conservation, and the designation of the Tanbi Wetlands National Park as a Ramsar Site in 2007 were key enabling conditions for developing the cockle and oyster fishery co-management plan (University of Rhode Island 2014).

38 A wetland site designated to be of international importance under the Convention on Wetlands of International Importance especially as Waterfowl Habitat, as amended by the Paris Protocol of 1982, an intergovernmental environmental treaty established in 1971 by the United Nations Educational, Scientific and Cultural Organization, which came into force in 1976. See https://www.ramsar.org.

Figure 44: TRY women oyster harvesters launching a canoe
Credit: TRY Oyster Women's Association, The Gambia

Strategies that catalysed the empowerment of marginalized women shell fishers and amplified the value of their work

Engaging youth from oyster harvesting households to strengthen women shellfishers work and fill gaps in local government capacity

With the formation of the new TRY generation, youth members of the women oyster harvester households are being trained and deployed to collect and document water quality and harvest data, which is needed for informed decision-making in the management of shell fisheries. This helps the largely illiterate and innumerate women with decision-making in the co-management plan, as data collected by these young people is essentially collected by, with and for the resource users. This makes the data more trusted and accessible for their own understanding and use in the management process, rather than just extracted for government reporting. These data are also essential to document and bring visibility to the economic, environmental and social value of the oyster fishery and the work of women harvesters, where almost no official documentation exists. The TRY youth are also expected to play a dynamic role as champions of improved processing, branding and marketing, as well as in advocacy on the need for government agencies to be more accountable on enforcement and other issues of concern to TRY members, through their use of social media platforms.

Peer learning and technical assistance for local capacity-building

Peer exchanges among previously isolated oyster harvesting communities within The Gambia and exchange visits to neighbouring Senegal oyster communities were a key strategy employed in the co-management planning process. This proved to be a highly effective approach for team building, inspiring a shared vision and transferring technical and leadership skills and confidence. When the opportunity to develop a co-management plan with women oyster harvesters in Ghana's Densu Estuary was identified, TRY provided mentorship and technical assistance on a host of topics to DOPA members through study tours, learning visits and a train-the-trainer workshop. The topics included participatory rural appraisal, women's empowerment, governance and resource management practices, post-harvest improvements and value addition for oysters.

Figure 45: Members of the Densu Oyster Pickers Association training for market processing
Credit: TRY Oyster Women's Association, The Gambia

Scaling up best practices in community-based co-management from The Gambia to Ghana

The Densu Estuary in Ghana, like the Tanbi in The Gambia, is a Ramsar Site of global biodiversity significance. Although Ghana's legal enabling environment, the Fisheries Act of 2002, was not as explicit as the Gambia's act on co-management, delegation of fisheries use and property rights, it's provisions were broadly worded enough to allow for such an environment. In Ghana, oyster harvesters were not already organized into an officially recognized association and they did that as part of the co-management planning process. The key

inspiration taken from The Gambia's experience was the vision and the confidence it engendered among the women to seek recognition and support from the broader local community for their work and their desire to responsibly manage common shellfish resources, and then, to act collectively to take proactive voluntary measures to improve the management of shellfish resources in the Densu, involving government but not waiting for them to take the initiative. This resulted in three years of effective implementation of the co-management plan, including an annual five-month closed season and mangrove replanting, before the Fisheries Commission finally formally approved the plan following its approval of a new national fisheries co-management policy framework in December 2020. Like in The Gambia, consistent implementation is driven by the results that resource users perceive in terms of the harvest and their decision-making power to practise adaptive management. DOPA members in Ghana were also equipped and trained in water quality testing to generate the data they need to inform management decisions. Like in The Gambia, the government does not have the capacity to provide those services and there is very little data on water quality, landed harvests and shellfish stocks.

Participatory management of integrated programmes combining local and scientific knowledge

Through extensive stakeholder consultations, a set of integrated programmes were put in place that delivered concrete, short-term benefits and visible progress towards medium- and long-term benefits for the oyster harvesters, so they could accept the trade-offs needed for sustainable resources management. Women have consistently

Figure 46: Training of youth for water quality testing of shellfishery harvesting sites
Credit: TRY, The Gambia

implemented ecosystem management measures such as the annual closed season of five to eight months for oyster harvesting, use of less destructive harvesting gear and regeneration of mangrove forests. This is because the loss in income has been mitigated by gains in oyster market price through value chain addition, improvements in basic needs through health, microfinance and literacy interventions and capacity-building of women and youth in livelihood diversification and business skills. All these initiatives together enhanced the economic, physical, social and political empowerment of the oyster harvesting women.

Lessons learned

Improving shellfisheries, where women are the primary harvesters and value chain actors, through rights- and ecosystem-based co-management approaches can be an effective entry point for empowering women through broader recognition and validation of their valuable work. One of the reasons this worked in The Gambia and Ghana is because it created a win-win situation for the women, as well as for local and state actors involved. Granting fishery-use rights to women harvesters and improving the value chain did not directly threaten an existing power or economic base with high economic stakes, as can be the case with male dominated or export-oriented fisheries.

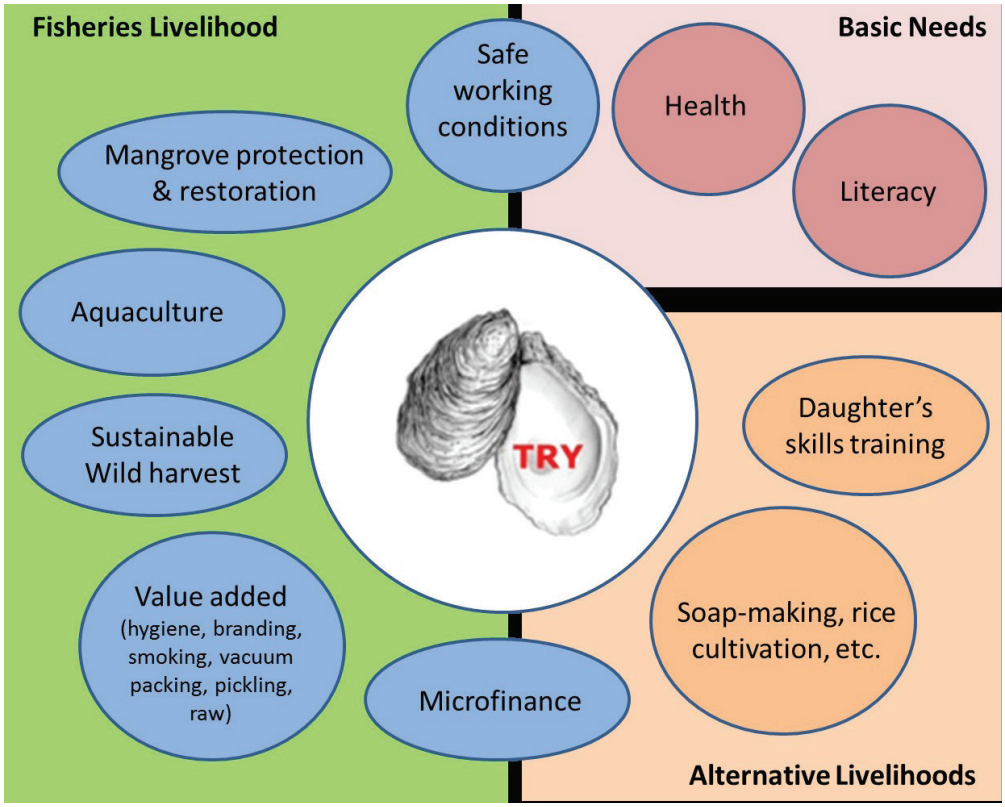
The shellfishery industry was not originally included in the strategies, management plans or monitoring schemes of the Ministries of Fisheries of either The Gambia or Ghana because of the low economic returns and limited government resources. The women oyster harvesting communities were vulnerable, marginalized and without a voice. Through rights-based co-management, TRY and DOPA members are empowered to be better able to manage their respective country's shellfish resources and associated ecosystems, at very little cost to the government, while also improving their own livelihoods.

An important challenge faced by the oyster harvesters is the weak capacity of the Department of Fisheries in The Gambia and the Fisheries Commission in Ghana to play their co-management role, especially in terms of data collection and reporting, enforcement and funding support. Youth engagement with these government agencies can provide important assistance if commitments on joint activities, such

as data collection, are realized. More consistent actions such as sanctions recently levied by The Gambian authorities on Chinese vessels docked in the Tanbi Wetlands for illegal oyster harvesting, after it was brought to their attention by TRY, would also strengthen the co-management relationship.

Creating peer-to-peer learning and networked communities of practice can be a powerful and effective approach for implementing, improving, replicating, scaling up and sustaining women's shellfish co-management, thus contributing to the empowerment of their households and well-being of their ecosystem. TRY is working with partners in the women's shellfisheries and food security project to document and provide tools for more widespread application of this strategy across the West Africa subregion. However, while there has been a strong demand for scaling up best co-management practices and planning in The Gambia to include more oyster communities further up The Gambia River, on the north bank and in the shared Allahein River Estuary with southern Senegal, it has been very challenging to find adequate resources for the required community outreach and training.

Figure 47: TRY integrated livelihood approach



Source: Gambia-Senegal Sustainable Fisheries final report.

Further reading

The resources listed below give more detail on the projects and plans highlighted in the case study.

Gambia, Ministry of Fisheries, Water Resources and National Assembly Matters (2012). Cockle and Oyster Fishery Co-Management Plan for the Tanbi Special Management Area, The Gambia.

https://www.crc.uri.edu/download/Oyster_Plan_Jan_2012_508_Signatures.pdf

Ghana, Ministry of Fisheries and Aquaculture Development, Fisheries Commission (2020). Densu Delta Community-based Fisheries Management Plan, Greater Accra Region, Ghana.

https://www.crc.uri.edu/download/GH2014_ACT139_MOFAD_FC_FIN508.pdf

UNDP (2013). TRY Oyster Women's Association, The Gambia. Equator Initiative Case Study Series.

https://sgp.undp.org/resources-155/award-winning-projects/399-try-oyster-women-s-association/file.html

University of Rhode Island (2014). Gambia-Senegal Sustainable Fisheries Project Final Report.

https://www.crc.uri.edu/download/BAN09_finalreport_508.pdf

University of Rhode Island (2020). USAID Women Shellfishers and Food Security Project factsheet.

https://www.crc.uri.edu/download/WSFS2020_01_CRC_FIN508.pdf

Credit: Anamika Amani

Chapter V. Coping with crises: coastal communities and the COVID-19 pandemic

The COVID-19 pandemic has affected lives and livelihoods in coastal communities in abrupt and often irreparable ways, with repercussions felt throughout broader economies, environments and social processes. While most people's lives and work have been negatively affected by the pandemic regardless of geographical location, the sudden halts in international tourism and the international seafood trade meant abrupt unemployment for over half of the residents of coastal areas and small island States whose livelihoods are based on these industries and other highly seasonal and resource dependent activities (FAO 2021; Spalding et al. 2020). Furthermore, many coastal communities are confronting COVID-19 while also facing other overlapping climate-induced, health and environmental crises, such as dengue and cholera, flooding, monsoons, hurricanes, earthquakes, volcanoes and wildfires (Campbell et al. 2021; Steenbergen et al. 2020; Walters et al. 2021; Navarro et al. 2020; Rahman et al. 2021). Inhabitants of remote coastal areas are also among the hardest to be reached in emergency relief efforts.

Within front-line coastal communities, women and girls are thus far among the most vulnerable to the impacts of COVID-19, climate change and disasters, because during crises, existing gender inequalities and gender discrimination, including deep-rooted gendered divisions of labour (paid and unpaid) are exacerbated across every sphere, from health to the economy, individual security and social protection (Briceño-Lagos and Monfort 2021; Walters et al. 2021; Rosser et al. 2021). Rates of violence against women and girls also rose to unprecedented levels in coastal areas and in communities worldwide within the first few months of initial lockdown measures (United Nations 2020).

Despite these challenges and with few exceptions, women are also playing a disproportionate role in relief efforts worldwide as, during disasters such as the ongoing pandemic, they tend to take on the majority of paid and unpaid care work, including household chores, dependant care and the education of children when schools are closed (Mangubhai 2020; Briceño-Lagos and Monfort 2021). Women represent a majority (70 per cent) of the health-care workforce, which demonstrates that their leadership and contributions are critical to curbing infection rates and enabling resilience and recovery, both in the broader community and at home.

As the pandemic continues and more people are aware of the structural inequalities that leave women and girls with more burdens and more exposure to gender-based discrimination and violence, women and girls are still being left behind in recovery efforts (UN-Women 2021). Evidence from past health and environmental crises demonstrates that gender-responsive policies improve health and economic outcomes for everyone (Rosser et al. 2021), and yet, to date, less than 9 per cent of pandemic health recovery policies worldwide have a gender focus (Global Health 5050 et al. 2021).

This chapter focuses on the gender-differentiated impacts of COVID-19 experienced in coastal communities and highlights how coastal vulnerability increases when gender, empowerment and equity issues are not central to crisis response and recovery efforts. Based on information gathered from individual case studies in terms of disaster preparedness, COVID-19 impacts, mitigation measures and lessons learned, these examples may guide future gender-responsive crisis recovery and preparedness efforts to lessen coastal vulnerability and strengthen integrated coastal and marine management.

Coastal vulnerability, climate disasters and COVID-19 impacts

Coastal vulnerability is an assessment of the physical, ecological and socioeconomic susceptibility of a coastal area influenced by erosive or destructive (natural and human-made) threats (Anfuso et al. 2021; De Serio et al. 2018). Low-lying coastal environments are very sensitive to changes in both natural and anthropogenic processes and, most often, there are multifaceted hazards that increase coastal vulnerability. Cyclones, storm surges, tsunamis and the floods and landslides of monsoon seasons are examples of natural phenomena that increase coastal vulnerability, and many of these extreme meteorological events and geophysical hazards are intensifying and becoming more frequent owing to climate change. Urbanization, population growth and maritime construction activities alter coastal ecosystems, affecting water, drainage and vegetation dynamics. Coastal regions are the first area of contact for ocean-based pollution from oil spills and marine litter, and the last collection points of land-based water pollution and plastic waste. Tropical coastal vulnerability is also intensified with increasing prevalence of dengue, diarrhoea, cholera and other water- and mosquito-vectored diseases. The overall impact of hazards is not only influenced by their intensity, but also by socioeconomic factors influencing the exposure of individuals and their ability to recover (Pedroza-Gutiérrez et al. 2021). At the onset of the COVID-19 pandemic, many households in coastal regions already had high levels of vulnerability and were in recovery mode from the impacts of previous multifaceted hazards that had occurred in the past three years, such as hurricanes Irma and Maria in the Caribbean (Bowen 2021).

In the immediate period after the initial outbreak of COVID-19, there were some positive impacts on coastal and marine environments, such as the rapid decrease in atmospheric pollutants, low environmental noise levels and cleaner beaches (Laffoley et al. 2021). There have also been some negative trends, such as decreased recycling rates and increases in plastic pollution (Ormaza-González et al. 2021), disruptions to blue economy projects and reduced funding to manage marine protected areas (Hockings et al. 2020; Phua et al. 2021). The physical distancing and quarantine measures, curfews and border closures have also had uneven and detrimental impacts on local wage-worker economies, gender equality and citizen security. Economic activities related to marine and coastal environments, such as fishing, aquaculture and coastal tourism, were severely affected and in many places almost completely disappeared for a period of several weeks or months. As a result, many coastal residents faced an abrupt loss of cash income, difficulties in accessing food and shifting pressures on particular resources and habitats (FAO 2021).

Discussions and information from case study authors provided details on how the pandemic affected marginal women and men in coastal areas around the world.

Impacts on livelihoods of coastal resources-dependent groups

Negative impacts on fisheries and aquaculture included the closure of some fisheries, market disruptions and increased illegal and unregulated fishing (see Mexico case study above) (Bennett et al. 2020). COVID-19 exacerbated the vulnerabilities of women and marginalized groups. For example, migrant fishers in India and other regions were stranded on cramped vessels and unable to return home, fish processing factories (in which most workers are women) were forced to close owing to infected workers and, worldwide, most small-scale fishers and fish processors (men and women) were not considered essential workers and did not receive any social welfare provisions. In Kenya, COVID-19 travel restrictions and curfews meant that ***mama karanga*** (women who sell cooked fish after the catch at dusk) had little time to sell fish, resulting in spoiled products and economic losses, while in The Gambia and Ghana the shutdown of key marketplaces at the start of the pandemic left women oyster harvesters

with no place to sell their products. In March 2021, shellfisheries co-management rules that required rotation in the use of wild oyster harvesting sites were not enforced, resulting in rapid overharvesting by male and female community members who had lost their jobs or returned home and the degradation of mangroves as a result of this increased pressure. The women harvesters fear this will compromise the future oyster population and harvests (affecting future household incomes).

Coastal communities have also suffered economically owing to international travel restrictions, as tourism activities in populated and well-known beaches has decreased significantly since the outbreak of COVID-19. Even as international tourism restarts, recessions and consumer uncertainty and distrust about air travel continue to suppress new demand for international coastal tourism services. In many coastal and marine tourist areas, hotel occupancy remains extremely low at 10–35 per cent capacity in peak seasons (Pedroza-Gutiérrez et al. 2021). In Barbados, 62 per cent of wage workers in the tourism industry are local women, most of whom lost their jobs temporarily or permanently owing to shutdowns and travel restrictions. At the same time, as local lockdown measures have loosened in some regions, national and local tourism to less populated beaches and coastal stretches of small municipalities has increased somewhat, potentially affecting COVID-19 transmission and coastal vulnerability in those areas (Armenio et al. 2021; Rogerson and Rogerson 2020; Sohn et al. 2021).

Gender-differentiated health and mental health impacts

The health impacts of COVID-19 in coastal communities have been different for men and women, because they have different exposures to health risks (based on everyday habits like use of alcohol and narcotics and time spent outdoors, indoors, at sea and near polluted wetlands, etc.), have more or less likelihood of seeking health care (due to social and cultural norms) and receive different benefits from and access to the health resources available in local contexts (Hay et al. 2019). Women in coastal areas of Bangladesh and India, for example, often postpone testing and treatment for COVID-19, even when they have symptoms, citing enhanced burdens of work as primary caregivers and lactating mothers and fear for their safety in isolation centres. Moreover, women's health in these regions is underprioritized at the household level owing to the economic hardships from job losses of both men and women.

The pandemic has also led to drastic increases in gender-based discrimination and violence, from household to international levels (UN-Women 2021). In Indonesia, at the national level government agencies established systematic handling

Figure 48: Fishermen working collectively to haul boat in after catch after catch, during Covid-19 restrictions in Kerala - India
Source: Anamika Amani, GWA

protocols for cases of gender-based violence and migrant trafficking (UN-Women 2021). In some coastal areas, however, women's groups noted politicians using COVID-19 relief aid to gain votes in upcoming elections. Some groups that are critical of coastal development projects were denied aid and coastal residents experienced unequal and discriminatory distribution of COVID-19 relief. In many low lying coastal regions in South Asia, multifaceted coastal hazards, such as Cyclones Tauktae and Amphan, which were experienced simultaneously with COVID-19, increased the socioeconomic and psychosocial impacts, leading to more gender-based violence and discrimination and increasing the humanitarian needs of the most vulnerable groups. At the household level, authors of several case studies noted specific examples of increased violence against women and girls in their communities or within their own homes, ranging from increased intermarital quarrelling to abusing, beating, sexual violence and higher incidences of girl child marriages.

Decisively, COVID-19, like other natural or manmade disasters, heightened the risks of or exacerbated underlying psychological and emotional problems among affected individuals (Mamun et al. 2021). Existing gender divisions within societies can create substantial differences in how men and women cope, physically and mentally, with the effects and impacts of disasters (Ritchie et al. 2015; WHO 2005). Across the case studies in this report, authors emphasized the toll that mental health issues have had on women and men since the onset of COVID-19 and called attention to the fact that stress, anxiety, depression and addiction issues increased and remain elevated as debts, lack of income and added unpaid work and care obligations continue.

Gender-responsive management and recovery in coastal areas

Government, humanitarian and societal responses to COVID-19 have varied worldwide, from region to region, and current practices can prompt important warnings for future preparedness, recovery and resilience to the multifaceted hazards that continue to face coastal inhabitants. There have been some positive initiatives and outcomes demonstrating community solidarity and environmental recovery, but these are mostly outweighed by the pandemic's short and long-term effects on gender equity, economic hardships and food security and livelihood security on coastal areas (Bennett and others, 2020). While many coastal women, men, boys and girls have a long social memory of prior disaster experiences, COVID-19 presents new challenges and threats, and some opportunities, over previous preparedness and recovery strategies (Rahman et al. 2021). In some cases, the COVID-19 crisis can be seen as a social driver of change, accelerating trends such as digitalization and shifts to remote work.

Digital technologies are, in some regions, able to enrich and diversify coastal people's engagement in planning processes (McKinley et al. 2021). In several regions in Asia and Africa and in Pacific and Caribbean Island nations, coastal women entrepreneurs with access to smart phones have been able to use social networking groups such as WhatsApp to sell fish, handicrafts and food products and to share and access relevant information related to surviving the pandemic. In some regions, however, the pandemic has deepened digital divides between rich and poor, urban and rural, women and men, and old and young, making it difficult for certain groups to recover from the shocks they have faced to their income, career, health and education, among other things (Aziz et al. 2020; Turianskyi 2020). Digital tools must be evaluated with careful consideration of socioeconomic, gender and age gaps in digital access and use (i.e., digital divides) before, during and after crises to ensure that digitization does not reinforce or exacerbate existing inequalities present in wider coastal management processes.

Policymakers and project managers responding to the pandemic and planning for sustainable recovery in coastal areas need to integrate mechanisms that prioritize the distinct needs of the most vulnerable groups. For example, disaster preparedness and response, including evacuation centre and isolation centre management, need to adequately consider women's specific needs (e.g., pregnant women, menstruating girls, lactating mothers and women with disabilities) and must address immediate threats to women's security (Briceño-Lagos and Monfort 2021). The need for collecting gender-disaggregated data to enable relief and recovery policies and interventions to address the specific vulnerabilities, agency and priorities of different women and men and boys and girls effectively has never been more urgent. The case study from India shows how an active civil-society network can fill gaps in this regard, by mobilizing their partners in

remote rural and coastal areas to conduct rapid appraisals of gendered impacts of the pandemic on vulnerable households and using this to inform government strategies for disaster planning and relief distribution. Such initiatives are few and far between, however. Information shared by case study authors indicated that most national COVID-19 policy responses have been rather gender-insensitive, for example, nation-wide lockdowns without considering differences in local transmission rates, morbidity or mortality, and policies that lack special measures to ease hardships for vulnerable groups. These gender-blind policies reduce the effectiveness of disease control measures, threaten progress made in women's empowerment and deepen gender inequities already pervasive in coastal areas.

Information shared by case study authors also showed that investing in the empowerment of disadvantaged groups and in the collective actions of previously isolated groups has lessened the negative impacts of the pandemic in some coastal areas and ecosystems. Examples include:

- In The Gambia, women oyster harvesters who were given exclusive user rights to shellfisheries in the Tanbi Wetlands managed to keep to the eight-month annual closed season as part of the co-management plan of the oyster and cockle fisheries, even during COVID-19.
- In Kenya, coastal women from the Munje beach management unit and non-members who had participated in learning exchanges with nearby coastal villages for mangrove conservation, utilized the pandemic lockdown to start planting mangrove seedlings, with a goal to establish a mangrove nursery for future economic and ecosystem regeneration.
- In Bangladesh, women who had participated in farmer field schools for homestead farming, as part of the Blue Gold Program, were able to cope with the disruption in market supply of fresh produce by consuming their home-grown produce. These and other women who had participated in skills training as part of the project, also made joint decisions with their husbands on how to cope with the pandemic and faced less domestic violence compared with other households.
- In India, Utthan, a local grass-roots organization, established a village-level, gender-responsive approach to relief procurement and distribution spearheaded by women and youth volunteers from village groups in coastal Gujarat, which allowed them to ensure that help was given to the most vulnerable groups, who are worst hit during crises. The assessment helped to target relief distribution, including disbursement of food grains, soap, masks and menstrual hygiene products to 7,785 poor rural households in 130 coastal villages.
- In north-western Mexico, a women-led team at CEDO established a transparent and inclusive coastal governance and spatial planning process to ensure meaningful stakeholder participation of small-scale, traditional fishers, women and the most vulnerable groups, from problem identification to evaluation of outcomes and future planning. During the pandemic, women members of the intercommunity fishers group also took on additional leadership roles to assist in COVID-19 testing, relief and prevention measures within their fishing cooperative and communities.

In conclusion, case studies in this report included gender-responsive coastal and marine management projects that were directly impacted by COVID-19. Based on the report's case studies, the areas where coastal management actively includes gender, empowerment and equity issues, women and men coped and fared relatively better during the pandemic than other areas without such measures. Coping with multifaceted crises in coastal regions also includes heavy reliance on women and their paid and unpaid care work within households and the community. Especially in coastal areas where official disaster protocol is not gender-responsive or sensitive, successful COVID-19 relief and recovery has depended on the effectiveness of local social networks and collective action coalitions, often built by women and youth, that maintained assistance to vulnerable groups throughout the seemingly unsurmountable and multifaceted challenges over the past more than 18 months. Future efforts to lessen coastal vulnerability must recognize and leverage the distinct needs and leadership capabilities of women, as well as those of men, girls and boys. Long-term goals in integrated coastal and marine management are more achievable when all women and men whose livelihoods depend on coastal and marine resources can access, manage and benefit equally from these resources and from policy interventions, during times of calm and in times of crisis.


Credit: Blue Gold Program

Chapter VI. Key findings and recommendations

The collective call for gender responsiveness and mainstreaming across the environment and development agendas has never been stronger than in the past decade. Explicit goals and actions towards gender equality and empowerment of women are included in the 2030 Agenda for Sustainable Development, the Paris Agreement under the United Nations Framework Convention on Climate Change and the call for action from the 2017 United Nations Conference to Support the Implementation of Sustainable Development Goal 14. In addition, the United Nations Decade of Ocean Science for Sustainable Development (2021–2030) encourages widespread adoption of participative, integrated and sustainable approaches to marine and coastal science and to planning and development. The blue economy, ecosystem-based management and similar integrative approaches necessitate gender analysis and responsiveness as critical components of sustainable planning in order to understand the drivers of unsustainable behaviours and to deliver more benefits to ocean and coastal ecosystems and people, leaving no one behind.

The case studies in this report make evident the wealth of knowledge and agency among different groups of women and men living and working in coastal and marine areas. To ensure the well-being of all life that depends on healthy oceans, seas and coasts, projects and policies need to uncover, value and make use of these diverse sets of local knowledge and agency. Gender mainstreaming is a process that continues to evolve as power and social relations change with globalization, migration, technical innovations, climate change, economic and health crises and other wider phenomena. Data collection, management approaches and technology need to adapt and evolve with these changes, with collaboration from diverse stakeholders from multiple sectors and levels. Ultimately, for equitable, efficient and truly sustainable development of coastal and marine environments it is very important that all stakeholders, and especially women from local to global levels, have an equal place at the table for planning and implementing Sustainable Development Goal 14 (Life below water) and its 10 targets. It is also crucial that they get an equal piece of the pie from their efforts.

Each of the 10 case studies in this report include lessons learned and recommendations from the integration of specific gender mainstreaming principles in particular contexts of coastal and marine ecosystem management. These are briefly summarized in the table below.

Some overarching findings and recommendations from the 10 case studies and the literature review conducted for this report are presented below.

Table 2: Summary of findings and recommendations from the case studies

Gender principle	Findings	Recommendations
1. Data that reveals the invisible work of unrecognized stakeholders	The work and contributions of women, informal workers and indigenous groups make significant and countable contributions to food security and livelihoods, but their contributions are routinely ignored or underestimated in ocean and marine resources management and policy. This oversight affects the sustainable use of ocean resources.	• Collect, analyse and disseminate gender-disaggregated data in fisheries, coastal conservation and climate change adaptation • Link the data from the local to the national level • Use the data to develop targeted knowledge products for different stakeholder groups (policy recommendations, case studies)
2. Creating spaces for the unheard to speak and be listened to	In many coastal areas and small island States, deeply embedded patriarchal norms and biases make it difficult for women and certain other groups to be seen and heard in public meetings or in consultations for development planning.	• Create safe and inclusive spaces for different groups of women and men to voice their concerns, access relevant information and build their capacity • These could be separate to start with and then graduate towards mixed groups for improved gender dynamics
3. Validating and utilizing different capacities and knowledge of women and men	From their different household, community and work responsibilities, local women and men possess specific knowledge and capacities in how they use and manage their coastal and marine environment.	• Facilitate the organization of marginal user groups, so they can participate more effectively in coastal conservation and fisheries policies and in consultations for co-management • Utilize strong women leadership at various levels to encourage and empower more women to participate in integrated coastal and marine planning and implementation
4. Ensuring that project-generated resources and innovations benefit all	Social relationships and power dynamics in a community often change as a result of introducing new technology and management approaches to natural resources management. These changes affect women and men differently and often create unintended negative outcomes that may undermine the sustainability and equity goals of development programmes.	• Projects that bring new technology into coastal and marine environments must ensure that the most socioeconomically disadvantaged groups of women and men, such as landless or women-headed households, also benefit or gain from innovations in sustainable fisheries, aquaculture, crops and natural resources management

Gender principle	Findings	Recommendations
5. Using a gender-responsive approach to develop skills and knowledge for sustainable livelihoods	A majority of poor coastal women and men depend on their natural environment for food, income, water and energy requirements and ecosystem resilience. With the increasing degradation of coastal and marine ecosystems, these groups face rising insecurity and risks in fulfilling their livelihood needs and often have no choice but to resort to unsustainable practices.	• To be effective, coastal conservation and ecosystem regeneration projects should identify the groups that are most dependent on natural resources for their livelihoods and ensure that capacity-building and skills training are gender-responsive – that is, address their priorities, interests and constraints
6. Enhancing inclusive decision-making in community-based organizations	Local stakeholders are increasingly being called upon by their regional and national governments to participate in co-management of local coastal and marine resources through formally recognized community-based organizations such as village fishery committees and beach management units. Despite membership quotas for women, their participation in these groups is negligible.	• Gain support for women's participation from men from their clan/tribe, family and the wider community • Support and mentoring by influential leaders (women and men) at the local level can play a big role in encouraging active participation of women in decision-making
7. Political mobilization of excluded groups to advocate for their rights	Maritime countries are increasingly using their oceans and seas for commercial and economic growth. As these regions see an increase in the involvement of international actors, local fishermen, and especially women, are often left out of consultations on coastal development, creating social conflicts and often leading to a worsening cycle of poverty and violence.	• In countries where patriarchy is deeply rooted in customary, family and government structures and decision-making, a feminist focus in political mobilization of women is essential for advocacy building for gender-just policies and development • However, to make the advocacy more effective and sustainable it is important to build alliances with other relevant stakeholder groups (such as fishermen and environmental activist groups)
8. Multi-stakeholder collaboration for gender-equitable sustainable development	As more governments all over the world are adopting the blue economy approach, there is an urgent call for collaboration between multiple sectors and stakeholders to generate shared understanding of problems and agreement around aims, focus, resources and commitment.	• Strong women and minority-group leadership and representation in blue economy collaborations is essential to ensure outcomes are gender-equitable • Digital tools can promote more inclusive and active social networking among marginalized groups

Gender principle	Findings	Recommendations
9. Leveraging diversity, equity and inclusion in building local resilience to crises	Coastal communities and marine environments are doubly vulnerable to crises. They are the first area of contact of cyclones and storm surges and the last collection points of land-based pollution and plastic waste. The remoteness of many coastal regions also means that their inhabitants are the hardest to reach by relief efforts during emergencies.	• Utilize the diversity of local resources and capacities to fill gaps in relief and plan interventions in participation with grass-roots groups • Identify the poorest and most vulnerable groups, such as women, the elderly and children, and ensure they are included in relief and recovery efforts
10. Sustaining empowerment and ecosystem benefits in the long term	Sustaining coastal and marine ecosystem management activities after the phase out of projects and funding support is a challenge faced by governments and natural resources dependent coastal user groups all over the world. Even in co-management approaches, poor capacity for data collection and reporting and enforcement, and lack of funding support, may lead to lapses in proper management.	• Learn what specific interventions within projects can empower and strengthen marginal coastal women and men to continue and even amplify ecosystem management practices in the long term Find sustainable financing mechanisms to promote these interventions

Finding 1

Blue economy and ecosystem-based management approaches have the potential to break silos between gender and marine and coastal resources management policies and programmes and to create big wins for diverse stakeholders at all levels (UNEP 2011)

The integrated nature of the blue economy and ecosystem-based management approaches, including social and gender equity objectives, provides rich ground for bringing together multiple stakeholders (government, academia, civil society, the private sector and local coastal communities) at various levels (regional, international, national and local) to exchange relevant information and learn from each other and to find inclusive, long-term solutions to achieve the 2030 Agenda for Sustainable Development. However, siloes or isolation between the different sectors –- especially between gender-focused and technical ministries and organizations – often mean that this opportunity for learning and capacity-building is barely used, which undermines the sustainability and equity of interventions (Torre et al. 2019).

Recommendations

Context specific and tailor-made gender training

Using gender experts with experience in coastal and marine areas, conduct a needs assessment of different stakeholders prior to developing capacity-building modules for gender mainstreaming and target training to those most likely to use it. Gender sensitization training, for example, should be targeted to staff of local partner institutions, community organizations and community leaders and tailored to the particular context of coastal management that they are involved in, such as fisheries (including shellfisheries) co-management (The Gambia and Ghana, and Kenya case studies). Context-specific gender analysis and its practical implications for data collection, project management and policy should be targeted to project field staff and communications teams, project managers and policymakers respectively.

Peer-to-peer learning networks on gender mainstreaming in integrated coastal management

Establish peer-to-peer networks of managers and researchers to exchange information on effective gender mainstreaming practices and the challenges encountered, with mentorship from gender experts and practitioners who have experience of integrating a gender approach in the coastal and marine context. This can be done through on-site learning exchange visits as well as online discussions and platforms (Bangladesh and The Gambia and Ghana case studies).

Finding 2

Women's leadership at multiple levels can promote more gender-responsive outcomes in ecosystem-based management and the blue economy

Women and cultural minorities, including qualified ocean and marine scientists, are largely underrepresented in governance, management and decision-making processes in marine and coastal areas (Giakoumi et al. 2021). Gender, diversity and generational balance in leadership for ecosystem-based management can improve the sustainability and equity of project and policy interventions.

The case studies from Barbados, The Gambia and Ghana, India and Mexico show how qualified, dynamic women scientists, managers, executive heads and community leaders encourage and inspire more women to participate in coastal resource management and governance and bring more diverse knowledge and skills into planning and management. In this way, they foster more inclusive, equitable and sustainable outcomes and impact for coastal people and the environment.

Recommendations

Gender-responsive recruitment policy for high-level management positions in ecosystem-based management projects

Hiring and retaining women in leadership positions can enrich management and research and provide new perspectives when analysing problems and when tailoring solutions, as they have different types of knowledge, observations, experiences and interpretations (World Bank 2015; Klugman et al. 2014). Women's participation also leads to a different kind of leadership that can facilitate the navigation of difficult policy issues in complex multi-stakeholder platforms (UNEP 2015). Moreover, these leaders can also play an important role in mentoring early career women, especially from underrepresented groups, and non-binary professionals in marine and coastal science and management.

Document good practices of how women and underrepresented groups contribute to sustainable ocean and coastal stewardship

Documenting good practices of how women and underrepresented groups contribute to sustainable ocean and coastal stewardship could be in the form of reports such as the present one and the 2019 UNEP and GWA report, as well as websites with profiles of women researchers, students, entrepreneurs, trainers and managers making valuable contributions to ocean and coastal sciences and management. These reports and web resources should cover examples from the local to the international scale, in oceanography, meteorology, fisheries, coastal and marine conservation, coastal water, sanitation and hygiene and sexual and reproductive health, maritime trade and even navigation.

Regional and international advocacy events to increase gender and diversity in marine and coastal science and management

Advocacy events can showcase the valuable contributions of women, youth and indigenous women and men to ocean science and management. A good example of this was the event "Healers of our ocean: Asia Pacific women leading action to achieve SDG14"[39] organized during the 2017 Ocean Conference in New York (UNEP and GWA 2019). Since then, similar events showcasing women's contributions in inclusive and integrated ocean, seas and coastal management have been held at the twenty-third session of the Conference of the Parties to the United Nations Framework Convention on Climate Change, in 2017, the World Oceans Day in 2019 and, recently, as part of the United Nations Decade of Ocean Science. Most of

39 See https://www.sprep.org/pacific-voyage-un-ocean-conference-2017/ocean-healers.

these events have been organized in North America and Europe, however, which has limited participation from developing countries. Such events should be organized in Asia, Africa, Latin America, the Caribbean, the Middle East and North Africa, from where there is as yet less information on gender mainstreaming in coastal and marine management.

Skills training for women, men and youth of underrepresented groups to take leadership roles in ecosystem-based management

To enhance networking and advocacy skills of community-based organizations and representatives of marginalized groups, ecosystem-based management projects could provide leadership, public speaking, advocacy and environmental awareness training for local women, men and youth engaged in coastal and marine management activities (Kenya and The Gambia and Ghana case studies).

Finding 3

Systematic collection, analysis, documentation and dissemination of gender-disaggregated data is barely integrated into the design and implementation of coastal and marine ecosystem-based management projects, resulting in absent or piecemeal information on how interventions are addressing gender and power relations and affecting them

Lack of qualitative and quantitative gendered data is recognized as a major impediment to environmentally sustainable and socially just coastal and marine management (UNEP 2016; Harper and Kleiber 2019). The gender data gap could be significantly reduced with contributions from the growing number of projects and programmes addressing gender in building coastal climate resilience, coastal and marine conservation and regeneration, and improving coastal livelihoods and food security. For this to be possible, the systematic collection, analysis, documentation and dissemination of gender data needs to be explicitly factored into the project design and budgets so that time, capacity and financial and human resources needed for it are made available. With donor and political commitment for gender mainstreaming, as in the Fiji case study and Blue Gold program in Bangladesh, valuable qualitative and quantitative gender-disaggregated data can be developed to guide programme implementation and to share with diverse stakeholders in national and international forums.

Recommendations

Integration of activities for gender-disaggregated data within the project cycle

Projects and programmes in coastal and marine management should make collection, analysis, documentation and dissemination of sex- and gender-disaggregated data an explicit objective in project formulation, with indicators to monitor progress, and ensure that sufficient expertise and financial and human resources are made available for the activity (Fiji and Bangladesh case studies).

Link project data with policy commitments to gender

An increasing number of national ministries and international commitments have gender-sensitive and gender-responsive mandates related to small-scale fisheries, food security, building climate resilience, marine litter and water and sanitation. When coastal and marine projects and programmes can link to these mandates with the relevant data (policy briefs, statistics and recommendations), the scope and effectiveness for dissemination and integration into policy is greatly enhanced (Fiji case study).

Involving local organizations in gender data collection increases the reliability of data and promotes sustainability of ecosystem management

When local men and women, and especially disadvantaged groups, are trained and involved in data collection on resources use and management, not only is the information more reliable, but it also encourages utilization of local knowledge and resources, increases ownership of local people in ecosystem management and sustains these practices when the projects stop and funding diminishes (Mexico and The Gambia and Ghana case studies).

Figure 51: Women from local community groups in Yap during a Women's Learning Exchange
Source: TNC

Finding 4

Gender mainstreaming in coastal and marine management is not a linear process and there are multiple paths to implement it

The case studies in this report demonstrate different paths taken by projects, studies and organizations to help empower excluded groups and achieve more socially just outcomes in coastal and marine areas. Some cases show outcomes of stand-alone actions, such as a national survey of indigenous women fishers' contributions to small-scale fisheries in Fiji or the bringing together of local women's groups in workshops on climate action in the Federated States of Micronesia, or gender-responsive training for seaweed farmers in the United Republic of Tanzania. Other case studies, such as those from Bangladesh and The Gambia and Ghana, show how existing gender-responsive policies in shellfisheries and water management catalysed a combination of various gender strategies that together promoted more equitable access to resources for poor wild oyster harvesters and landless households and helped to enhance their decision-making in resource co-management groups with the local government. This finding, shared across multiple case studies, also underlines the interconnectedness of the listed gender principles and demonstrates how they strengthen the process of gender mainstreaming when used in combination rather than as isolated actions.

Recommendation

Proceed step-by-step with gender mainstreaming

Gender mainstreaming in coastal and marine management should be founded on valid knowledge and understanding of gender and power relations and how these are influenced by the specific ecological and socioeconomic context of the interventions. This can allow for prioritization of the most important gender actions and activities that can decrease coastal vulnerability within specific socioeconomic, environmental and policy contexts. It is better to manage the most critical elements effectively than to become paralysed by trying to manage everything at the same time.

Finding 5

Most studies and interventions on gender mainstreaming in fisheries and coastal resources management focus explicitly on women, which provides an incomplete picture and insufficient means to address inequality

The focus on women has largely been a response to the little knowledge that exists on women's roles within these sectors (Pravalprukskul and Resurreccion 2018) as well as their limited involvement in decision-making and resources management at the local level. The focus on women, however, does not sufficiently address gender, power and decision-making dynamics unless the roles of men and male members within households and the larger society, including the aged, ethnic minorities and differently abled are also analysed through a gender lens. As many case studies in this report demonstrate, when women beneficiaries spend more time in resources management interventions (training, meetings, field exchange visits), this is added on to their normal work in household and caregiving tasks, leaving them with little or no time for other gainful activities (Bangladesh, Indonesia, Mexico, Federated States of Micronesia and United Republic of Tanzania case studies). They often also face increased risk of violence from male family and community members who may fear loss of their power status as women become more empowered. These risks are further increased during times of crisis when men and women face job loss and income and food insecurity. The negative impacts

of excluding masculinity and the vulnerability of men in studies on fisheries and coastal resource management also requires attention[40] (Allison 2013; Mangubhai 2020)

Recommendations

Engage men in gender sensitization

Once women's needs and interests have been prioritized through women-only discussion groups, it is important to engage male household and community members in gender sensitization activities that highlight the importance of joint decision-making and sharing tasks and responsibilities, and how this benefits women, men and children.

Develop joint activities for women and men that benefit both

Where possible, women and men from the same family, kinship and village groups could be involved in joint activities that benefit their livelihoods as well as ecosystem management (see examples of farmer field schools in Bangladesh for landless women and men, and youth in The Gambia and Ghana being involved in water-quality testing and site patrolling for shellfisheries co-management).

Studies to understand and address vulnerabilities of coastal and maritime men

The study of masculinities, the vulnerability of men and the engagement of men in transformative action in the fisheries, aquaculture, tourism and marine conservation sectors is still limited. Encouraging more studies in these areas (Allison 2013; Smolak 2014) is key to understanding and addressing overall gender relations and inequalities in coastal areas, through targeted action and messaging for women and men separately and also as a mixed group.

40 A group of scholars have focused on the negative impacts of risk-taking behaviours associated with "maritime masculinities" (Allison, 2013). For example, condomless sex with female sex workers and alcohol use have been found to be common among fishermen in Africa, South Asia and South-east Asia, such that fishermen have a high prevalence of HIV comparable to other at-risk groups such as truck drivers. This also increases the risk of transmission to their regular partners (Smolak, 2014).

Finding 6

Most projects and policies in coastal and marine ecosystem management address economic empowerment of marginal women and men, but very few go beyond this domain to transform inequitable gender roles and social norms in the long term

Coastal and marine management programmes often address direct livelihood concerns of poor men and women through improving their incomes or creating alternative employment in the short term, but fewer programmes ensure that these benefits will be sustained in the long term after projects and related funding are phased out. This is especially the case when economic activities lead to increased time burdens and hardship for women and when crises lead to worsening gender and power relations owing to unexpected loss of products, assets and equipment, or the disruption of supply and market chains. To sustain benefits to coastal people and the environment in the long term, it is important for interventions to directly address social and political empowerment of these women and men. This can be done through activities designed to increase their agency and capacity to participate in decision-making on natural resources management and to advocate for change in discriminatory social norms and policies at the local and national levels (Kenya and Indonesia case studies).

Recommendations

Ensure implemented activities do not increase time burdens and hardship of women

Assess time and labour constraints of intended beneficiaries during project formulation. Hold training events and meetings at times convenient for women, compensate poor women and men appropriately for the time they spend in project activities and develop innovations that save women labour and time (Zanzibar case study). Sometimes, involving women and men of a family together in training can improve sharing of household tasks between male and female family members (Bangladesh case study).

Partnerships between government research and civil society to build social capital and local leadership for transformative change

The case studies from Bangladesh, Kenya and The Gambia and Ghana show that national government legitimation of local management of fisheries, including shellfisheries, and water that recognizes and stipulates the participation of women and other marginal groups, is an important enabling factor for equitable and sustainable coastal and marine management. However, support from research and civil-society organizations is also vitally needed to translate gender-responsive policies into practice and for implementing and monitoring processes that build social, physical and political empowerment of local women, men and youth. These strategies typically go beyond income-generation to address needs in water, sanitation and hygiene, health, food security, microfinance and vocational training, and need more time, human resources and sustainable financing mechanisms.

While projects are typically time-bound they can support processes that build gender-transformative change in societies and communities by developing collaborations with local government bodies, civil-society organizations and community-based organizations. The partnership can be mutually beneficial in that the civil-society and community-based organizations can help projects to identify the most vulnerable groups that are dependent on coastal resources and to mobilize them for ecosystem-based management, which fills the gaps in local government capacities, while the project can provide funding, training and networking support to the community organizations and local government bodies to strengthen their capacity.

Facilitate participatory understanding of underlying inequalities and identify strategies to address societal discriminatory norms

Through documentation and dissemination, research projects can raise recognition and valuation of the contributions of marginal women and men to coastal resources management among a broad group of stakeholders (Fiji case study). Projects can also educate and build the awareness of these groups about their rights and facilitate their linkage to broader advocacy and activist networks to advocate for their rights to sustainable livelihoods and a healthy environment (Indonesia case study).

Finding 7

Gender-based violence is exacerbated by the frequent crises that coastal areas and inhabitants face, severely undermining social and gender-equity outcomes of ecosystem-based management interventions

The increased incidence of gender-based violence in coastal areas during and in the aftermath of natural disasters, extreme climate events and the recent COVID-19 pandemic is well documented in literature (Castañeda Camey et al. 2020; Secretariat of the United Nations Framework Convention on Climate Change 2019; UN-Women 2014 2021) and was also evident from case studies in this report (Federated States of Micronesia, India, Indonesia). Abrupt loss of employment and income and food security, coupled with the breakdown in basic services such as water, sanitation and hygiene, health and education during crises, increases the unpaid work and domestic burden of women and girls and puts them at an increased risk of physical and mental violence and harassment. In such situations, the confidence and ability of women and girls to fully participate in economic, social and political activities and to take care of their personal and family well-being is severely limited, dealing a blow to their empowerment and to sustainable coastal rehabilitation and recovery efforts. It is essential to prevent gender-based violence as part of gender mainstreaming efforts in coastal and fisheries resource management.

Recommendations

Integrate gender-based violence into gender-sensitization training for local government and community-based organizations involved in coastal and marine management

Projects should identify and work with any existing community networks and programmes that address gender-based violence. Training should include activities that highlight the substantial differences in how men and women deal with the effects and impacts of disasters, including psychosocial impacts, and include opportunities to discuss how these differences can lead to or prevent discrimination, harassment and violence.

The training should be conducted in a gender-sensitive and phased manner, firstly giving vulnerable groups, such as women of different ages and persons with disabilities, the chance to share their problems and needs, and then engaging women and men together in finding effective solutions to the problem.

Engage male leaders and local role models in awareness-raising for gender equality

Gender sensitization activities to prevent violence against women and girls will be more effective when respected individuals (teachers, doctors, religious leaders, local government officials) and male leaders participate in them and advocate and demonstrate good practices through their own example.

Include measures within project activities to combat and monitor violence against women

These could include village-level awareness campaigns; training for women and also men to recognize and address rights violations through formal institutions and procedures; establishing women's and youth groups to monitor and intervene in cases of domestic violence and child abuse; collecting data on reported violence during disasters through impact surveillance systems; and linking women with professional mentors who can provide appropriate legal advice.

Figure 52: Tunusuru women at their mangrove nursery bed
Source: Joan Kawaka, CORDIO, East Africa


Credit_Roshini_TNC

Chapter VII. Resources and tools

1. Gender and fishery-based livelihoods

Kate Barclay and others, eds., Pacific Handbook for Gender Equity and Social Inclusion in Coastal Fisheries and Aquaculture, 2nd ed. (Noumea, New Caledonia, Pacific Community 2021).

https://coastfish.spc.int/en/component/content/article/494

This handbook is designed to give practical guidance on improving gender and social inclusion in coastal fisheries and aquaculture for staff working in fisheries agencies in Pacific Island countries and territories. It consists of eight stand-alone modules, which cover themes highly relevant to national fishery practitioners such as policy, coastal fisheries management and livelihoods. Illustrative case studies, practical tips, checklists and links to overarching international and regional commitments are an integral part of the handbook.

Blue Action Fund, Gender Guide: Gender-Responsive Guidance for Coastal Conservation and Sustainable Fisheries Projects (2020).

https://www.blueactionfund.org/wp-content/uploads/2020/10/200826_BlueAction_Gender_Guide.pdf

The Blue Action Fund Gender Guide aims to provide practical instructions for designing, implementing, monitoring and evaluating gender-responsive projects in marine and coastal resources management. Targeted at stakeholders involved in Blue Action-funded programmes and activities across Africa, Asia and the Pacific and Latin America, it is a useful resource for the larger community of practitioners involved in similar projects across the globe.

2. Gender and coastal resources management

Sérgio Rosendo and others, eds., Toolkit for LMMA Establishment: a Case Study of Our Sea Our Life's Approach to Community-based Marine Conservation in Northern Mozambique (London, Zoological Society of London, and Pemba, Associação do Meio Ambiente, 2020).

https://www.zsl.org/sites/default/files/Toolkit%20ENG%20FINAL%20300620.pdf (English version)

https://www.zsl.org/sites/default/files/Toolkit%20PT%20FINAL%20300620.pdf (Portuguese version)

This toolkit has been designed to provide guidance for organizations that wish to support local communities in Mozambique to manage their own marine resources. It assumes that such organizations are familiar with the Mozambican administrative system, including the procedures to support government authorities to implement natural resources management projects. The toolkit is available in English and Portuguese.

Mangroves for the Future, Stockholm Environment Institute and Southeast Asian Fisheries Development Center, Gender Analysis Toolkit for Coastal Management Practitioners (Thailand 2018).

http://www.mangrovesforthefuture.org/knowledge-hub/e-library/?documentId=19157#

The toolkit aims to help coastal and fishery management practitioners develop baseline knowledge around gender dimensions related to coastal and natural resources use, livelihood development and ecosystem management. Although the toolkit was specifically designed for the context of South and South-East Asia, the direction it provides around key instruments, concepts and themes for qualitative gender analysis in coastal ecosystem-dependent communities will be useful for coastal projects around the world.

PROBLUE, administered by The World Bank, "Gender, marginalized people and marine spatial planning: improve livelihoods, empower marginalized groups, bridge the inequality gap Knowledge Factsheet Series No. 1 (2021).

https://thedocs.worldbank.org/en/c/07a75947c7996ec919b6ba698041f06e-0320012021/original/World-Bank-2021-PROBLUE-Gender-and-Social-Inslucion-MSP-Factsheet-Oct-22-2021.pdf

The factsheet advocates for the inclusion of marginalized groups (youth, elderly adults, small-scale fishermen and fisherwomen, indigenous peoples, migrants and women and girls) in marine spatial planning, considering these are the people who rely on marine resources for their livelihoods and incomes. The document looks at untapped opportunities for women's empowerment in marine services, the significance of gender in organizing coastal activities and closing the gender inequality gap and provides key statistics on how the blue economy can be affected with an increase in gender equality.

3. Gender, marine litter and plastic waste management

UNEP, NEGLECTED: Environmental Justice Impacts of Marine Litter and Plastic Pollution (Nairobi 2021).

https://wedocs.unep.org/bitstream/handle/20.500.11822/35417/EJIPP.pdf

This report describes the ways in which plastic pollution and marine litter affect both the marine environment and human communities. In particular, the report uses an environmental justice framework to describe ways in which vulnerable communities, including waste pickers, women and men who work with waste streams and those who live near waste disposal sites, disproportionately bear the consequences of environmental degradation caused by plastics pollution from production to waste

UNEP, Coordinating Body on the Seas of East Asia and Stockholm Environment Institute, Marine Plastic Litter in East Asian Seas: Gender, Human Rights and Economic Dimensions (Bangkok, UNEP 2019).

https://www.sea-circular.org/wp-content/uploads/2019/11/SEI_SEA-circular-1.pdf

This report provides insights on the gender, human rights and economic dimensions of marine plastic litter, an as yet underexplored subject, to inform project design and activities and to ensure a fair, equitable and ethically sound course of action, which leads to more effective, appropriate and sustainable outcomes in the longer term. The analysis highlights initial findings and existing knowledge gaps and provides recommendations for more equitable decision-making, while recognizing the need to strengthen the evidence base on issues discussed.

4. Gender and integrated water resources management in coastal areas

Online course on gender and integrated water resources management, developed by Cap-Net, Global Water Partnership and Gender and Water Alliance (2021).

https://cap-net.org/genderiwrm/

Guided by the *Why Gender Matters in IWRM: a Tutorial for Water Managers* training manual, this course aims to improve practitioners' understanding of the benefits of integrating gender meaningfully through integrated water management practices. Providing examples of tools and practical ways forward, as well as real-life case studies, the course explains ways to fully integrate women and vulnerable participants and the potential negative impacts of ignoring gender components when planning for water and sanitation, climate resilient measures and inclusive participation in the water sector.

Master Manual for Training of Trainers: Building Knowledge, Skills, and Capacity to Implement Gender-responsive SDGs, Gender and Water Alliance and #Women2030 (2018).

http://genderandwater.org/en/women2030/capacity-building

Available in English, Spanish and Bangla versions, this manual aims to build the knowledge, skills and capacity of civil-society organizations to foster change towards a gender-responsive implementation of the Sustainable Development Goals. It is a guideline and flexible tool for the training of trainers, made up of five modules. Apart from focusing on key Goals, the manual also addresses other areas for institutional capacity-building, including understanding gender and related concepts, training and organizational skills and advocacy. The five core Goals covered in the manual are Goal 5 (Gender equality), Goal 6 (Clean water and sanitation), Goal 7 (Affordable and clean energy), Goal 13 (Climate action) and Goal 15 (Life on land).

5. Gender and building resilience to crises (climate change, COVID-19 pandemic)

FAO, "The impact of COVID-19 on fisheries and aquaculture food systems: possible responses", Information paper, November 2020 (Rome 2021).

https://www.fao.org/3/cb2537en/CB2537EN.pdf

This paper aims to provide updated information on the impact of the COVID-19 pandemic on the fisheries and aquaculture sector. It has a dedicated section on vulnerable groups, health and safety, working conditions and gender and some sex- and gender-disaggregated data. Relying on information from interviews, secondary sources and publicly available data, the paper looks at the measures taken to inform on the ongoing impact on the above sector and responses from aquatic food providers and governments to counteract the negative impacts on aquatic food value chains.

UN-Women, Standing Up to the Challenge: Response to the COVID-19 Pandemic in Asia and the Pacific (Bangkok 2020).

https://asiapacific.unwomen.org/en/digital-library/publications/2021/02/standing-up-to-the-challenge-response-to-the-covid-19-pandemic-in-asia-and-the-pacific

This report presents some highlights from the first year of the pandemic. It traces what UN-Women, in partnership with national, international and grass-roots networks, did to secure access to emergency hygiene and other supplies, sustain essential services for escalating violence against women and girls, integrate gender into international and national crisis response strategies and make women's economic empowerment a means for resilience and recovery.

UNDP, Gender-responsive National Communications Toolkit (New York 2015).

https://unfccc.int/files/gender_and_climate_change/application/pdf/undp_gender_responsive_national_communications_toolkit.pdf

The toolkit provides suggestions and guidance on integrating gender issues into national communications related to climate change. It seeks to make the process of reporting more transparent in terms of who is involved, whose views are represented, gender-differentiated risks and the types of support men and women need to influence climate adaptation, mitigation, policymaking and reporting. It can also be used to build capacity for gender analysis of key climate change issues that are reported on in national communications. The toolkit includes an extensive list of additional resources and toolkits on the subject of gender mainstreaming in climate change.

6. Studies and tools on masculinities and men's engagement for gender equality

A. Glinski and others, Gender Equity and Male Engagement: It Only Works when Everyone Plays (Washington, D.C., International Center for Research on Women 2018).

https://www.cartierphilanthropy.org/uploads/media/5acb7ba53fb8f/icrw-maleengagementbrief-webready-v5-150dpi.pdf

This report provides a historical overview of the nearly 40-year-old male engagement field, as well as guidance for stakeholders on how to support the funding, design and implementation of programming that engages men and boys in transforming gender norms. The insights are drawn from published and grey literature, key informant interviews and a convening of global experts on male engagement programming for gender equity and women's empowerment.

S. Cavill, J. Mott and P. Tyndale-Biscoe, "Men and boys in sanitation", in Community-Led Total Sanitation (CLTS) Knowledge Hub Learning Brief No. 6 (Brighton, Institute of Development Studies 2018).

https://sanitationlearninghub.org/resource/men-and-boys-in-sanitation/

Discussions of gender in sanitation and hygiene often focus on the roles and positions of or impacts on women and girls, who bear the greatest burden of work related to water, sanitation and hygiene. Efforts to improve sanitation and hygiene and change social norms need to actively engage men and boys in the most effective or transformative way. This learning brief outlines the findings of a review that focused on men and boys: the problems they cause and experience, how to engage them (or not) and how to mobilize them as allies in the transformation of sanitation and hygiene outcomes.

"Maritime masculinities, and why they matter for management", presentation by Edward Allison, School of International Development, University of East Anglia, United Kingdom.

https://genderaquafish.files.wordpress.com/2013/08/04-allison-mare-maritime-masculinities.pdf

A relevant brief, arguing for better understanding of psychosocial risk-coping strategies of fishermen and men at sea, including men's vulnerabilities. This area is relatively less researched in coastal and marine research with a gender focus, but needs to be addressed for engaging men in gender transformative actions in integrated coastal management.


Credit - Anamika Amrali

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