

ENVIRONMENTAL STEWARDSHIP BY SMALL-SCALE FISHERIES

By the Food and Agriculture Organization of the United Nations (FAO)

Small-scale fishers and fish workers as well as their communities and organizations are contributors to safeguarding aquatic resources and environments. Their key role as environmental stewards is well-recognized in the Code of Conduct for Responsible Fisheries and in the Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines). This article contains summarized excerpts from a recent FAO publication of the same name¹. It provides clear definitions of stewardship with regard to the small-scale fisheries sector, as well as some notable examples throughout the world.



Credit: <https://ssf-stewardship.net>

Small-scale fisheries (SSF), including small-scale fishers and fish workers as well as their communities and organizations, are among the world's most effective contributors to safeguarding aquatic resources and environments. Living near, and relying on, freshwater and marine aquatic species and environments, small-scale fisheries are at the heart of environmental conservation and stewardship – of caring for and sustainably using aquatic environments, managing fisheries for sustainable use, protecting and restoring local ecosystems, and working with others for these goals.

The key role played by SSF organizations and fishing communities is well-recognized in the Code of Conduct for Responsible Fisheries and in the

Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines), which notes that “States should recognize the role of small-scale fishing communities and Indigenous Peoples to restore, conserve, protect and co-manage local aquatic and coastal ecosystems”.

The environmental stewardship role of small-scale fisheries is essential to producing healthier fisheries, safeguarding natural resources, conserving biodiversity, ensuring that ecosystems are maintained and restored, and sustaining livelihoods. The diverse benefits of stewardship also include benefits, such as capacity development; poverty and vulnerability reduction; employment and decent work; food security; post-harvest and value chain benefits; improved local engagement and empowerment; a greater role in decision-making and management; reduction of harmful practices; and improved monitoring and assessment. Furthermore, stewardship can improve responses to threats of climate change, and contribute importantly to the United Nations 2030 Agenda for Sustainable

¹ Charles, A., Macnaughton, A. & Hicks, S. 2024. *Environmental stewardship by small-scale fisheries*. FAO, Rome. <https://doi.org/10.4060/cc9342en>. This publication is complemented by the SSF Stewardship website (<https://ssf-stewardship.net>), which provides a wider range of stewardship experiences, with a web page for each of the participating fisher organizations and fishing communities, as well as an interactive global map showcasing the diversity of stewardship locations.

Development, to achieving the Sustainable Development Goals and to implementing the Global Biodiversity Framework.

For small-scale fishers, stewardship is expressed as both a perspective and a practice, a way of engaging with the natural world and the local environment. Values, relationships, culture and spiritual aspects are essential as motivations to take stewardship action along with securing sustainable livelihoods and community well-being. Related motivations include: (i) ensuring resource access, fishing rights and tenure; (ii) countering environmental damage and climate change; and (iii) helping small-scale fisheries to contribute to meeting legal, regulatory and international commitments.

Six types of stewardship

Stewardship appears in six major forms, including activities within fisheries (e.g. sustainable use/harvesting, fishery management, post-harvest activities) and other activities (e.g. physical initiatives to restore ecosystems, such as corals, mangroves and beaches). The forms of stewardship identified are:

Maintaining, restoring and improving local habitat and ecosystems

Actions include protecting biodiversity and marine/coastal/inland habitat, such as cleaning beaches, replanting mangroves or restoring stream beds. Also included are activities that build protection from, or restore areas impacted by climate change, such as flooding, coastal erosion or saltwater incursion. Small-scale fisher organizations and fishing communities may already be empowered or authorized to undertake the necessary stewardship measures, or they may need to gain that authority.



Fishermen in Malaysia planting mangrove seedlings to protect against coastal erosion.

Improving fishing practices and post-harvest practices

Stewardship that focuses on improving fishing practices and post-harvest practices can seek to: (i) reduce the negative impacts of fishing activity (e.g. stopping the use of fishing gear or methods that harm an

aquatic habitat, such as poisons and explosives); and (ii) reduce waste and improve quality in the post-harvest handling of aquatic products.



Credit: FAO/Valerio Crespi

Improving post-harvest practices may not focus on handling of fish, but rather on markets. From 2014, invasive blue crabs had begun to destroy fishing nets in Tunisia and preyed on other important species, impacting the local ecosystem. The Fishers Association for Development and the Environment (Association le Pecheur pour le Developement et l'Environnement) took a novel approach, deciding to market the blue crab, which has since led to a productive and successful new local fishery.

Engaging in fishery management for sustainable use



Credit: Fisherfolk

The Federation of Thai Fisherfolk Association works on educating local fishermen on conservation, how to use friendly fishing equipment, and how to source only from those who abide by rules. Its commercial arm, Fisherfolk, has helped 500 fisher households to increase their income through fair-priced purchases and employment at Fisherfolk's local processing facilities.

Many forms of managing fishing activity to limit human impacts on fishery ecosystems and resources, are stewardship activities which help to ensure the health and sustainability of fishery resources, but also to meet human needs in terms of sustained livelihoods and food production. Such management includes decisions about how and when to fish, the types of fishing allowed, developing and applying management measures to limit overall fishing pressure, limiting the size of catch, and regulating how it is caught, all supported by scientific and/ or traditional and local knowledge and practices. Overall, fishery management has been assessed by fishers as the most prominent form of stewardship.

Stewardship of specific aquatic areas



Sasi laut is a form of traditional institution regulating the management of coastal resources based on the knowledge, norms and value systems of the indigenous peoples of Haruku village, Maluku Province, Indonesia. It prohibits the use of destructive and intensive gear, and defines the seasonal rules of entry, harvest and activities allowed in specific parts of the sea. The regulations are guarded and enforced by an institution known as the kewang, which functions as a local police force.

Developing and implementing measures for managing the uses of specific aquatic areas, generally applying not only to fisheries but also to other uses, helps to maintain or restore ecosystems and protect biodiversity while also enhancing the sustainability and security of livelihoods and food production. This form of stewardship typically uses measures often referred to as area-based management tools and falls within the broader theme of area-based management for both fisheries and environmental management. There are many ways in which fishers and fishing communities take care of specific aquatic areas. Stewardship of aquatic areas includes safeguarding sacred sites, establishing and managing a closed area or a protected area, and implementing other ecosystem conservation measures, typically through ecosystem-based management.

Stewardship of particular aquatic species (such as endangered species)



Newly-hatched hawkbill turtles on Qeshm Island

This form of stewardship involves activities with the primary goal of protecting species that require special conservation and protection action, such as those designated as endangered species. These species – e.g. iconic species such as manatees, whale sharks, turtles, seals, dolphins, sharks and seahorses – may or may not be targeted by small-scale fisheries. This stewardship often relates to supporting local livelihoods that are involved in tourism, such as whale-watching or conducting tours to see turtles nesting on beaches. A good example

is Qeshm Island (the Islamic Republic of Iran), where the communities participate in sea turtle conservation through education, beach patrols and tagging, collecting, transferring and guarding the eggs. This coastal stewardship is complemented by inland initiatives to maintain and restore natural and human-made features of the environment, including sacred fig trees and sacred “tela” wells.

Stewardship through outreach and advocacy

Outreach involves using processes of education and communications to influence public opinion and external decision-makers. It also includes forms of networking and coalition-building through engaging beyond the community or fisher organization *per se*. Advocacy seeks to influence decisions relating to a specific issue or concern, such as efforts to change practices, regulations or governmental policies, to stop an activity that threatens fishery ecosystems, or to safeguard fishing rights and resource access that underlie stewardship practices. Outreach and advocacy are considered forms of stewardship even though they do not involve physical activities, such as planting mangroves or developing a plan for managing a fishery or an aquatic area, since they can represent crucial engagement of fisher organizations and fishing communities to protect their local environment.

For example, Himpunan Nelayan Seluruh Indonesia (HNSI) – the All Indonesian Fishermen Association – is a major non-governmental organization representing fishers. In recent years, the lobster fishery has been facing sustainability challenges resulting from the export of lobster seeds (larvae) to international markets, threatening future lobster stocks and the small-scale fishers who rely on them. As part of its regular work to engage in fisheries and marine environmental conservation policies with the parliament and the Ministry of Marine Affairs and Fisheries of Indonesia, the HNSI has responded to concerns over lobster conservation by working on developing and disseminating policies and rules to address the over-harvesting of lobster seeds, acknowledging that effective government policy forms the basis of law and environmental protection rules.

The lessons learned, good practices and ingredients for success

A set of “good practices” or “ingredients for success” in environmental stewardship have been identified across direct stewardship (through physical, management, planning and advocacy activities) and in enabling and supporting activities. Good practices collectively involve paying attention to local, social, economic, cultural, ecological and biophysical factors, as well as current realities of capacity, institutions, policy and legal frameworks, and governance.

Seven specific areas of good practices are as follows:

- **Values and ethics**

The success of SSF stewardship depends largely on the underlying values, goals and motivations of society. These vary with the culture, history and economy surrounding fisheries. Fishers stress that successful stewardship requires following underlying values to ensure the fishery is maintained for future generations.

- **Local leadership and responsibility**

Small-scale fisher organizations and fishing communities, in assessing what has made environmental stewardship successful and what aspects would be important to sustain the benefits into the future, placed local leadership as a crucial factor of success.

- **Diverse knowledge and perspectives**

Fishers highlight the importance of knowledge as a factor of success in stewardship – consistent with its recognized importance to effective fishery management and policy. The use of all sources of such knowledge is needed for effective conservation, including traditional ecological knowledge, indigenous knowledge, fisher knowledge and “local knowledge”.

- **Cohesion and trust in the community and organization**

The nature or structure of the community or organization plays an important role in the success of stewardship. This includes the nature of the institutions involved (e.g. levels of participation, leadership), the nature and local history of engagement, the social fabric (e.g. social cohesion) and the social structure (e.g. role of women, inclusiveness). Fishing communities have significant potential to draw on their own institutional arrangements.

- **Empowerment and capacity to participate in decision-making and management**

Empowerment provides the capacity to seek out and implement local solutions to safeguard environments and livelihoods, to take leadership in building knowledge and to facilitate better community engagement in broader stewardship initiatives, e.g. carried out jointly by small-scale

fisheries together with governments, local non-governmental organizations and scientists.

- **Appropriate partnerships and external support**

While the stewardship role of small-scale fisheries does not always require government support, there are situations in which suitable practical, financial and policy support can effectively support stewardship. However, government support must be compatible with the values and goals of fishers, and care is needed that governmental conservation actions are not detrimental to small-scale fishers

- **Supportive government policy and legislation**

Small-scale fisheries often indicate problems in obtaining government support for stewardship efforts, such as financial support, resources and infrastructure, or lack of recognition or reinforcement of fishers’ rights, tenure and access. Positive government support for fisher stewardship can come through policy measures that extend beyond the fishery to include a strong connection with sustainable economies and communities, or that help in enabling fishery organizations and communities to better engage with scientific agencies and governmental institutions.

The path forward for small-scale fisheries stewardship

In small-scale fisheries around the world, fishing communities and organizations are actively involved in a wide range of environmental conservation and stewardship activities. This has been strongly demonstrated through the many stewardship experiences generously shared by small-scale fisher organizations and fishing communities, both in the FAO publication “Environmental stewardship by small-scale fisheries”, and in the SSF Stewardship website (<https://ssfstewardship.net>). Together, those experiences expand the global understanding of SSF stewardship, providing valuable ideas for fishing communities and fisher organizations and for policymakers, educators, NGOs and others.

The environmental stewardship role of small-scale fisheries is essential to safeguarding natural resources, local livelihoods and the well-being of local fishing communities, as well as contributing greatly to biodiversity conservation and to ensuring that aquatic (and coastal) ecosystems are maintained and restored. Superficially, stewardship initiatives in small-scale fisheries may seem “small” or “local”, but when thousands of these initiatives, around the world, are considered together, the results are profound – benefiting the environment and the economy broadly. This reinforces the message of the Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines) by highlighting the role of small-scale fisheries in responsible fishing and the responsibility of governments to offer them support. Indeed, given its widespread nature, SSF stewardship contributes importantly to the United Nations 2030 Agenda for Sustainable Development, to achieving the Sustainable Development Goals and to implementing the Global Biodiversity Framework.