

Fish Forever – community-led solutions to solve coastal overfishing

Coastal ecosystems provide a home for an unparalleled diversity of marine life, mitigate the impacts of climate change, protect coastal shores, and support diverse fisheries that provide livelihoods and food for hundreds of millions of people. Yet these ecosystems are facing unprecedented threats. Through its global coastal fisheries programme Fish Forever, the NGO Rare wants to establish a management paradigm that balances marine conservation with sustainable fishing.

By Courtney E. Cox, Brittany Pashkow, Larrisa Hotra and Rocky Sanchez Tirona

Given their proximity to nature, coastal communities are at the centre of both the cause and the solution to environmental problems. Humans have overfished a third of the world's fisheries, creating a highly destructive feedback loop. Overfishing reduces habitat quality, climate change exacerbates it, and degraded habitats subsequently support fewer fish. Fishers often respond by increasing effort and adopting new and potentially more destructive fishing practices to maintain their catch.

Pioneering a new way to manage coastal fisheries

Fish Forever is a global effort aiming to provide a replicable approach to end overfishing, protect biodiversity, and safeguard the well-being of coastal communities. The programme recognises that combining local-level actions, policies and behaviours is critical to achieving and maintaining long-lasting change and reaching biodiversity targets. As such, our approach ties biodiversity outcomes to local communities' needs and goals. How do we do this? Fish Forever mobilises coastal communities and their leaders to establish and maintain sustainable managed access areas and fully protected reserves (MA+R). Groups of small-scale fishers get exclusive rights to fish and manage their coastal waters. At the same time, fully protected marine reserves allow fish pop-

At the guardhouse along the rocky shoreline, organised communities in Ayoke Island take turns protecting their marine sanctuary from poachers and illegal fishers.

Photo: Rare



A local leader in Mabungalon, Philippines, doing an initial community consultation explaining the Fish Forever programme.

Photo: Jason Houston for Rare

ulations to replenish. Local stakeholders are included in designing, establishing, and enforcing managed access areas. Here, women play a decisive role (see also Box).

Closing the data gap

Information about small-scale fisheries is incredibly limited. So much is still unknown about who is fishing, what and how much is caught, where the catch goes, coastal habitat quality, in-water fish populations, effects of climate change on coastal communities and habitat, and general fishing household socio-economics. These unknowns leave communities and governments without the data needed to make critical decisions about the long-term viability of their fisheries, the ecosystems that support them and the livelihoods that depend on them.

Through partnerships with top-ranking software developers and the world's leading scientists, Rare has developed a suite of tools designed specifically

ly for local decision-makers and programme implementers. These tools streamline and standardise the collection of socioeconomic, ecological, and fisheries data, automate data analysis and simplify complex data with the single goal of putting data into the hands of those who need it through a central, publicly accessible portal (portal.rare.org). The Fish Forever Portal provides access to datasets, maps and visualisations developed from locally collected data, global datasets such as climate and habitat and ecological modelling outputs that describe the way fish move throughout their life and predict fisheries recovery potential over time. Through dedicated staff working closely with local communities, we provide sustained access to understandable and usable data needed to make informed fisheries management decisions. In closing this data gap, the programme directly addresses the Sustainable Fisheries targets of SDG 14.

Fish Forever works in many of the world's marine biodiversity epicentres, including Indonesia, the Philippines, the western Caribbean, Brazil, Mozambique, Micronesia and Palau. Since 2012, the programme has partnered

with over 250 local and national governments and stakeholders to establish MA+R areas and build fisheries management capacity across 1,400 coastal communities. Improved fisheries and livelihoods across these areas benefit approximately 150,000 fishers and 1.6 million community members who are impacted by the fishery (fish buyers, processors, fisher family members, etc.). Fish Forever mobilises these communities to establish legal and functional management and protection across nearly 5.5 million hectares of coastal waters.

Evidence from the first 40 MA+R pilot sites reveals 100 per cent increases in fish biomass in newly managed access areas and 300 per cent increases in fully protected reserves over a three-year period. This demonstrated local management effectiveness has resulted in strong support from local governments and empowered fishers who recognise that their fishing behaviour and involvement in management results in positive outcomes. On the latter, the leaders of these communities have created the “Coastal 500”: the first-ever global network of local governments committed to achieving sustainable fisheries that elevate community prosperity while safeguarding the environment. To date, over 120 mayors and local government leaders have joined this network.

Overcoming barriers to adopting rights-based fisheries management

Fish Forever applies insights from behavioural science throughout the entire MA+R process to shape norms, encourage sustainable behaviours and cultivate pride in positive actions. The programme focuses on four key fisher activities that lead to critical actions for effective fisheries management and are limited or absent in most small-scale fishing communities: registering as a fisher, participating in local management efforts, reporting catch and complying with fishing regulations. Weaving behavioural science insights into our approach helps galvanise fishing communities to adopt more responsible fishing behaviours and sustain them, empowering them to become responsible stewards of their environment and the local biodiversity for future generations. Fish Forever develops tools to remove barriers preventing fishers from registering and reporting, to build inclusive local management bodies that enable participation and to provide access to data complying.

Another fundamental challenge for coastal communities is lack of financial security. Fish Forever identifies mechanisms to improve

Eulalia Baptista and Martha Norales, members of coastal fishing communities in Mozambique and Honduras, respectively, were recently honoured for their pioneering efforts with coastal fisheries by the 2021 Women’s World Summit Foundation (WWSF). WWSF’s prize honours “women and women’s groups around the world who are exhibiting exceptional creativity, courage, and commitment for improving the quality of life in rural communities”. Eulalia is a founding member of the Fisheries Community Council (CCP) in Mozambique, the sitting President of the General Assembly of the CCP, and a community leader in adopting Fish Forever’s digital fisheries data collection app, OurFish. Martha has been a powerful ally of Fish Forever, providing continued momentum behind the growth of savings clubs and financial literacy for Honduras’s coastal fishing communities. She launched a new bank, a “bank of hope”, so that the community can set dates for financial goals and dreams.

By actively tracking women’s participation and contributions to the sector, we can see to it that they are recognised, supported and encouraged as decision-makers in their families and communities.

catch value, including access to markets and post-processing methods that diversify product types or extend the life of the product, builds financial literacy and delivers financial services such as savings clubs, insurance and credit opportunities where fishers are able to use their income to build financial security. These measures improve fishing communities’ ability to retain income from responsible fishing and provide financial mechanisms to guard against shocks and uncertainty that could derail sustainable fishing practices.

The legal pathways undertaken to establish MA+R areas look different across all Fish Forever countries, and political will isn’t always present. Building the enabling environment for community rights-based management and communicating to local leaders the significant contributions small-scale fishers make to global challenges like biodiversity loss and sustainable development are ever-present obstacles. The commitment and actions of the Coastal 500 network of local leaders and replication of successful MA+R areas in nearby geographies offers fishing communities important motivators to overcoming barriers.

What’s next?

By linking critical habitat protection with a community’s exclusive fishing rights, clear incentives are built to replace destructive competition with effective coordination, where communities receive measurable benefits from protecting and managing their local fisheries. This work supports healthier coastal habitats, creates resilience to climate change, and challenges policy-makers to rethink how coastal ecosystems are prioritised and protected.

Our focus in the coming years is to strengthen fisheries management bodies’ capacities to

manage their MA+R areas and ensure their effectiveness. Simultaneously, we are working to scale our programme and coordination capacity to meet the growing demand for coastal fisheries reform by embedding and institutionalising our approach through government and partners. To do this, we are training more local partners in programme implementation, building capacity to produce and use the best available science to make informed decisions, and setting up financial mechanisms to ensure sustained support of fisheries management groups. Ultimately, this effort is about building a new paradigm for marine resource management and protecting our oceans so that people and nature thrive.

Courtney E. Cox is Senior Director of Rare. She leads the central science team in developing strategies for applying science in programme implementation and has a background in marine ecology and fisheries. Rare is a not-for-profit environmental organisation headquartered in Arlington, Virginia, USA. Its stated mission is to help communities adopt sustainable behaviours towards their natural environment and resources.

Brittany Pashkow manages programme data at Rare and develops tools that simplify the way spatial data is visualised. Her background is in fisheries management and geospatial analysis.

Larrisa Hotra is Rare’s lead conservation writer with 15 years of experience in strategic planning, writing, cause-related communication, marketing and advocacy.

Rocky Sanchez Tirona is Managing Director of Fish Forever. She leads the programme across eight countries and has a background in marketing and behaviour change communications.

Contact: ccox@rare.org