

Stakeholders often have concerns that establishment of a marine protected area will reduce food security and lower income for fishing communities, or that environmental concerns should be secondary to economic development. However, multiple studies have shown that marine protection increases fish stocks and improves livelihoods.

When managed properly, MPAs can turn around declining fisheries, create jobs and increase prosperity. Identifying and working with communities to develop tangible financial and commercial support initiatives is extremely important in persuading fishing communities that adopting conservation and sustainable fisheries management measures will bring them long-term gains.

Supporting and promoting the marketing of fish caught using sustainable methods within a marine protected area has proven to be a successful model in a number of areas. The creation of innovative markets is also being adopted as a successful approach to addressing non-native species, leading to benefits for fishermen, the environment, and diversifying seafood consumption away from overfished species.



UNITED KINGDOM



Lyme Bay Reserve: Sustainably caught seafood branding and marketing: Reserve Seafood

To help the fishermen that operated within the Lyme Bay Reserve ensure the best possible quality of their sustainably caught seafood, chiller units, insulated fish boxes and ice machines were installed, funded by Blue Marine and the European Fisheries Fund. The catch is immediately iced on the boat, landed that day and stored in chiller units for collection by a dedicated van to transport fish direct to market. The catch is kept fresh from the moment it lands on the deck to the moment it arrives at market offering a guaranteed way to source extremely fresh and sustainable seafood within hours of being caught.

In 2014, Blue Marine created the Reserve Seafood brand, to help market the low-impact sustainable, premium quality, provenanced seafood caught within the Lyme Bay Reserve. The Reserve Seafood brand and the associated market uplift aimed to reward fishermen for their efforts in adhering to environmentally responsible fishing practices and providing valuable data.

The catch is kept fresh from the moment it lands on the deck to the moment it arrives at market



Lyme Bay Reserve Seafood stickers promote sustainably caught seafood

The Reserve Seafood brand represents the very best in locally caught sustainable seafood with three core principles:

- Premium quality with freshness guaranteed using insulated fish boxes, ice making facilities, quay-side chiller and storage units – all designed to optimise freshness and condition at the market.
- Sustainably caught using only low-impact static gear such as pots, static nets, rod and line or hand-dived; caught within limits set by the Lyme Bay Reserve Voluntary Code of Conduct; and no fish are red-rated (Fish to Avoid) by the Marine Conservation Society.
- Provenance assured landed by fishermen from Beer, Axmouth, Lyme Regis and West Bay who support the principles and management of the Lyme Bay Reserve, and support research to ensure their fishing effort causes minimal damage to the environment.



Lyme Bay Reserve fish delivery Dorset Seafood Festival 2021

To provide evidence of the location of capture, Blue Marine provided a phone and vessel tracking App to all participating fishermen in 2016, however this proved challenging due to the sensitivity about data being collected on where fish were being caught, and access to commercially sensitive information, so use of the App was stopped in 2020.

In July 2018, the 4Ports Transport scheme was set up with support from Blue Marine to collect fish from the four ports operating within the Lyme Bay Reserve and transport to Brixham and Plymouth fish markets and other distributors. Blue Marine's early partners in the Reserve Seafood brand initiative, Direct Seafoods, generously donated a van when the partnership ended, and Blue Marine funded van maintenance and employment of a driver

between 2018 - 2022. The scheme proved highly successful, with over 1,940 boxes of seafood transported in the second year of the scheme between July 2019 - June 2020.

The intention had always been for the scheme to be taken over by the fishermen, so to build up a fund that can be used as cash flow to support the scheme when handed over from Blue Marine, an annual fee and charge per box collected through the 4Ports Transport Service was introduced in May 2019. A new Community Interest Company run by the fishermen in the four ports was established in 2022 and Blue Marine gifted the van to the fishermen who have taken on the ongoing costs and running of the operation.

While initial interest and take up of the Reserve Seafood brand was strong, supported by social media, materials such as stickers and the initial partnership with Direct Seafoods, it became increasingly difficult to maintain. Many fishmongers, restaurants and hotel chains as far afield as London, expressed interest in sourcing Lyme Bay Reserve Seafood, but they needed certainty of supply in terms of quantity and species and could not absorb the transport costs. The small day boats that fished within the Reserve are limited by weather when they can go out and so could not guarantee a regular supply of the particular fish that the chefs needed to plan their menus.

Although the Reserve Seafood brand proved challenging to maintain, the chiller and ice facilities ensured that the fishermen's catch was of the best quality and could therefore command the best market price. Together with the initial support for the fish transport service, this investment allowed the Lyme Bay fishermen who supported the Lyme Bay Reserve could continue to operate a viable fishery within the environmental thresholds set by the voluntary Code of Conduct.

JERSEY: 'JERSEY HAND DIVED' LABELLING SCHEME

In 2021, Blue Marine launched 'Jersey Hand Dived', a label promoting scallops caught locally through hand-diving. The label aims to inform consumers on their choices when purchasing local scallops and boost awareness on the two very different methods used to collect them.

The work started with engagement with local divers, gauging their thoughts on such a label, and asking for their ideas on how it could work best for them. In development of the logo, divers were asked for feedback, often this brought up important points (typically species-specific information such as ensuring the size and shape were correct) and enabled buy-in. Several divers and a fish monger then featured in a promotional video, designed to highlight the launch of the label. When including anyone in promotional material it is

very important to ensure they are completely aware of the context of their inclusion.

Everyone included in the video was given a chance to review prior to publishing, and feedback was used to make changes to ensure everyone was happy with the end product.

The label's communication strategy focused on promoting sustainable capture methods rather than criticising unsustainable ones. Following the launch of the label and in subsequent social media posts, the greatest interaction was gained through posts that provided information on the divers. Local communities appear to appreciate an understanding of the people and faces behind the journey from sea to plate, and this should be taken into consideration when running local seafood promotion schemes.

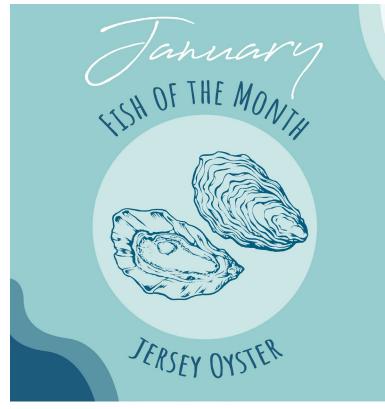


Jersey: Jersea Informational Campaign – 'Fish of the Month'

In 2021, Blue Marine started supporting a local initiative called Jersea.je, an educational platform, started by local photographer Matt Sharp, for the Jersey community to learn about and celebrate the Island's marine environment and the culture associated with it. Blue Marine helped to supplement Jersea with a 'Fish of the Month' initiative to showcase local seafood and connect islanders to local fishers and fishmongers.

Following the release of a high-profile documentary on over-fishing, much of the community were unsure whether to give up eating seafood altogether. In addition to this, as Jersey imports over 90 per cent of the wetfish islanders eat and exports over 60 per cent of its live crab, the need for promoting local, sustainably caught seafood was identified. The campaign aimed to provide a bespoke guide to seasonal, low-impact seafood that could be sourced on-Island, showcasing local sustainability and thus also reducing food miles.

A clear framework should be utilised to establish which seafood can and can't be promoted under the scheme. This enables the ability to justify choices. There are many factors to take into consideration when finding species to promote for consumption, such as fishing methods, stock health and local or historical context. For Fish of the Month, all of these factors are taken into account, in addition to the Marine Conservation Society's Good Fish Guide, where available, which uses a rigorous rating system based on stock status, management and capture method.



Jersea Fish of the Month promotes sustainable choices in season

As part of the Fish of the Month campaign, local chefs, well-known within the community were invited to feature in short seafood preparation and recipe videos. These formed part of the materials used each month to promote a particular fish. It is crucial to ensure that all local fishmongers and fishers are invited to feature in any promotional campaign (where they meet criteria such as low-impact) to maximise engagement and ensure all are provided with an equal opportunity.

Where budget and resource allow, consider creating a package of work for social media campaigns and outsourcing to specialists to maximise impact and effectively utilise team resource.

MEDITERRANEAN

Aeolians: Responsible fishing group and label

In 2016, Blue Marine decided to export the 'Lyme Bay' responsible fishing model to the Aeolian Islands. The project aimed to work with Aeolian fishermen by together creating voluntary codes of conduct which would set out best practices for fishing sustainably.

The first step of the project was to hire a local coordinator on behalf of Blue Marine, to start forging relationships and building rapport with each fisherman, before beginning to organise meetings for open debates. There was scepticism that self-regulation of their fishing efforts would not bring any real improvement to local fish stocks; there weren't any preexisting MPAs in the area, so naturally, many Aeolian fishermen were dubious about the benefits of self-imposed restrictions. Despite initial hesitancy, and numerous discussions later, a handful of fishermen agreed that selfregulation could be the first step towards mutual benefits for themselves and the fish in the long term, particularly for juvenile stocks and future generations.

The fishermen of Stromboli and Salina Islands signed up to responsible fishing 'codes of conduct', voluntarily reducing their gear and fishing pressure, in return for insulated fish boxes and ice machines to improve the quality and value of their catch. Blue Marine hopes that these coastal communities will see the value of marine protection for both fishing and tourism and push for the authorities to protect their precious marine resources. So far, 90 per cent of fishermen have signed up.

The creation of the Responsible Fishing Group (RFG) was an important factor in unifying all members under one common belief and forging a new local identity for the group. A responsible fishing logo was created for them, so that consumers might easily identify those following sustainable fishing practices when at market.

Insulated fish boxes provided to fishermen who adopt the voluntary code of conduct



The second stage of the project involved the principles of incentive and reward. Blue Marine donated around 75 insulated fish boxes (of varying sizes) and three ice machines to fishermen from the RFG, to help improve the quality of their daily catch, as well as to encourage local support of small-scale fisheries. Each box was labelled with the RFG logo and a boat registration number, to further help identify the provenance and traceability of each catch.

The duties and co-financing for managing the use of the ice machines vary from site to site, but generally the fishermen have to cover the yearly maintenance, while Blue Marine finances the starting installation and annual insurance. The supply services of the ice machines (water and electricity) are managed by Blue Marine and local municipalities/private owners. A detailed MoU has been written and signed by all the parties involved, in order to ensure the machines can be maintained in good working order and when funding from Blue Marine comes to an end, costs will be covered through direct fishermen contributions.

Despite reading like a win-win situation for the fishermen and conservationists, working with people so used to their decades-old traditions and fishing practices could never be without disagreement. Inevitable dispute occurred when one small group of fishermen decided they wanted to leave the RFG but keep access to the ice machine and fish boxes. The group was also openly very critical when Blue Marine started to speak out about MPAs as a necessary step in safeguarding local fish stocks in the long term. Unfortunately, in this case, negotiations with the group failed, and the resources were returned and repurposed to another group of (RFG positive) fishermen. Although disappointing, setbacks like this are unavoidable; especially when some fishermen approach the RFG only for the positive return (fish tubes, ice machines, involvement in small-scale fishery meetings, education courses), but without any real interest in investing in a marine biodiversity project.



Today, the project includes ten people in Stromboli (almost all fishers) and 13 in Salina, including two women. Although the total number of members is less than before (23 against the initial 33), the group is more solid and united in their mission.

The Aeolian RFG sponsors all local Blue Marine education initiatives:

- Four secondary school courses on marine biology and fisheries
- Education courses in all Aeolian primary schools, explaining how to interact with marine turtles in trouble and provide aid while nesting on beaches
- The creation of a children's guidebook about the sea and the threats it faces (climate change, invasive species, damage to habitats)
- Four summer school courses for university graduates focussing on underwater monitoring techniques for Posidonia oceania meadows

In 2022, the RFG supported the 'Forgotten Fish' project, aiming to:

- Promote a new fish supply chain out of the Aeolian archipelago based on sustainable fishing practices
- Encourage consumers and chefs to choose sustainable fish by promoting species which have excellent nutritional properties and tastes, despite not being regularly served
- Give new trade opportunities to the responsible Aeolian small-scale fishing economy during the winter season.

This Aeolian responsible fishing scheme has been exported to two other Italian MPAs: Torre Guaceto in Apulia, and Isole Egadi, Sicily. In the former, local fishermen have improved their methods thanks to adoption of voluntary codes of conduct. Insulated fish tubes and 11 fish benches for direct selling have been distributed; the benches are equipped with information panels and QR codes offering consumers data like the fishing zones, date of catch, fish species, equipment used etc. The MPA currently has ten individuals authorised to fish inside the area. In Sicily, fishermen are also committed to codes of conduct, and have their own 'Sustainable Fishery Label' which involves local stakeholders (restaurant owners and chefs) and the public. A total of about 30 fishermen and 10 restaurants are participating in the project.

Aeolians Pesca Responsabile poster - Where does the fish on my plate come from? - Is it the best season to eat this fish? - Is the fish a suitable size to eat? The Aeolian Responsible fishermen from Salina and Stromboli have signed up to a voluntary responsible fishing code of conduct, in order to promote low-impact fishing and to respect the natural life cycles of local fish species. insulated boxes have been provided to keep fish fresh, improve quality and add value. ice machines in Salina and Stromboli are to be installed to improve quality of catch in hot Aeolian weather. HOW CAN YOU SUPPORT Responsible Fishing? Our awareness of what we eat promotes sustainability: Ask for locally caught fish Encourage the sale of locally caught fish in restaurants HELP RESTORE THE ARTISANAL AEOLIAN FISHERY know where your fish comes from. Knowledge is power

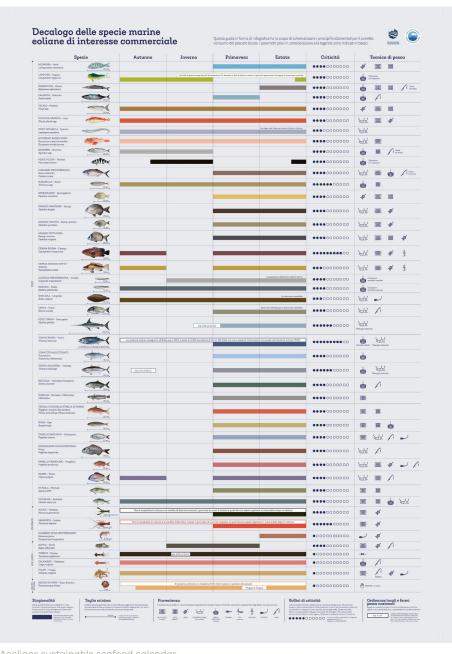
Follow the Responsible Fishery projects supported by Blue Marine Foundation and by Aeolian Preservation Fund www.bluemarinefoundation.com - www.aeolianpreservationfund.com

Aeolians: Sustainable seafood calendar

Blue Marine developed a calendar showing all commonly consumed Aeolian seafood species, for display as a poster or leaflet. The calendar has images of 44 species, alongside both Latin and common names, and size limits for each. Under each image is the season when these species should be consumed, its level of

sustainability/endangerment, and the best fishing method for catching them (long-lines, static nets, pots etc.).

The calendar is displayed in hotels, restaurants, fish markets, harbours, shops and marinas and continues to be an excellent asset. It served well during a culinary event held at local resort, Capo Faro, where examples of unusual, sustainable, local fish were served to members of the whole community.



Aeolians sustainable seafood calendar

Turkey: Creating markets for lionfish and invasive species

The issue of invasive species is one which is occurring increasingly and worryingly more often throughout the Mediterranean and Eastern Europe. Several species make their way up from the Red Sea via the Suez Canal, thriving in the warmer waters climate change has created. The issue is so advanced that researchers predict around five per cent of all marine species in the Mediterranean are now nonnative; that's approximately 986 in total.

Small-scale fisheries around MPAs in Turkey started to report higher catches of invasive species than native. Some of these, like the rabbitfish, were immediately targeted for the market as demand already existed. The lionfish, a species which was arguably more prevalent and more destructive to the marine environment as a result of their predatory nature, were targeted less (possibly due to fishers and consumers not being confident in dealing with their venomous spines). The government tried to fix this by providing small subsidies, approximately 50 pence, for each lionfish caught and destroyed, but quickly found it would be far more effective to create a market for lionfish fillets in supermarkets and restaurants instead. Indeed, this is not such a second-rate option: lionfish meat is already a delicacy in parts of the world, as well as being a healthier option due to its high omega-3 and low heavy metals content.

Creating a seafood market for invasive lionfish has helped reduce numbers of these voracious predators in Turkey



A local fish processing plant was identified, and then offered to process the fish pro bono and distribute the products to market. All the profits went back to the fishermen. Furthermore, a collaboration with local celebrity chefs and high-end restaurants have started to popularise lionfish and encouraged consumers to choose It both for its environmental and culinary benefits. As of 2022, the programme is progressing well and there is growing demand for lionfish. One challenge is that buyers want consistent sizes of fish and high volume. For this reason, refrigerated storage hubs are being installed, where fish can be sorted and stored until the volume is high enough to sell.



Celebrity chefs and high-end restaurants have started to popularise

As of 2022, the programme is progressing well and there is growing demand for lionfish

Another significant invasive species prevalent in Turkish waters is the pufferfish, which destroys nets and has no food value due to its toxic flesh. A project is underway to isolate the toxin from the pufferfish and use it to produce certain pharmaceuticals. This has the potential to invigorate the fishing community, by both tackling an invasive species and establishing an industry around biopharmaceuticals. AKD has commissioned research to develop nets that are able to catch pufferfish without being damaged, which if successful, could help fishermen catch pufferfish more effectively without loss or damage to their property. Blue Marine is considering establishment of a revolving fund to give out loans to help cover initial gear purchase costs, which would be repaid with increased profits from selling pufferfish. Furthermore, Blue Marine might implement a sinking fund that would create a market for pufferfish in preparation of the drug getting approved in order to help fishermen to integrate pufferfish into their catch.

Creating innovative markets for invasive species benefits the fishermen, the environment, and diversifies seafood consumption – moving consumers away from species such as grouper and tuna.









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