# Policy

# Fisheries Management

October 2024

## Policy headlines

- **Ecosystem based fisheries management approach** that truly places the environment at the core of decision making and ensures all fishing activity occurs within environmental limits.
- **Improve data availability** to ensure all fisheries management decisions are well informed and based on the most up to date scientific evidence including comparative data from no take zones.
- Modernise the fishing industry through use of **digital technology** to improve monitoring, compliance and enforcement whilst increasing transparency and accountability in the supply chain.
- Manage fish stocks and the wider marine environment in a way that is **inclusive of stakeholder views**.
- Bring fisheries into the wider context of marine environmental management through **improved spatial planning** of fishing activities.
- Ensure **adequate resourcing** is available to deliver long term fisheries management and environmental impact mitigation.

## Definitions

**Sustainable development** – Meeting the needs of the present without compromising the ability of future generations to meet their own needs.

**Net Zero** - Scotland's climate change legislation sets a target date for net zero emissions of all greenhouse gases by 2045. Net Zero means the amount of greenhouse gas emissions put into the atmosphere and the amount we're able to take out (through carbon storage) will add up to zero.

**Ecosystem services** - Ecosystem Services are the direct and indirect contributions ecosystems provide for human wellbeing and quality of life. This can be in a practical sense, providing food and water and regulating the climate, as well as cultural aspects such as reducing stress and anxiety. These services provided by ecosystems lead to benefits received by humans in the form of security, goods and materials, health and wellbeing.

**Blue carbon** - Blue carbon refers to carbon dioxide that is absorbed from the atmosphere and stored in the ocean. *Blue* refers to the watery nature of this storage. International agreements aimed at curbing climate change have focused growing attention on coastal blue carbon: carbon stored by saltwater ecosystems in their vegetation and soils. In terms of total area, these ecosystems—salt marshes, mangroves, seagrass meadows—have a small global footprint, but their deep, water-logged soils can bury many times more carbon per acre than even a tropical rainforest.

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Ecosystem based approach - The ecosystem approach is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way.

Marine Spatial Planning - Marine Spatial Planning (MSP) is a public process of analysing and allocating the spatial and temporal distribution of human activities in marine areas to achieve ecological, economic and social objectives that have been specified through a political process. MSP is not an end in itself but a practical way to create and establish a more rational use of marine space and the interactions among its uses, to balance demands for development with the need to protect the environment, and to deliver social and economic outcomes in an open and planned way.

## Scope

The fishing industry plays a significant role in Scotland's maritime identity, with fishing activity spanning over centuries. Historically, fishing was a subsistence activity, but throughout the 19th Century commercial fisheries developed into an industry [1] that, in 2021, contributed £321 million GVA (gross value added) to the Scottish economy [2]. This represents 0.21% of the Scottish economy, and 7% of the marine economy. Fishing ranks as the 6th largest in terms of GVA within the marine economy behind support for oil and gas, marine tourism, aquaculture, seafood processing and ship building respectively.

Scotland has a diverse fishing fleet that targets a wide range of different species including fish species close to the seabed (demersal fisheries), fish in open waters (pelagic fisheries) and shellfish. The Scottish fleet is mostly made up of vessels ten metres and under in length, with over 1,545 fitting these criteria in 2022 [3].

In 2022, 4,177 people were employed on Scottish vessels, which represents 0.2% of the Scottish labour force. This percentage is much higher when you consider employment rates in island communities. For example, in Shetland and Orkney the employment rates are 5% and 2% respectively [3]. In 2021 the largest employer within the marine economy was marine tourism, which also had the second largest GVA [2].

## The Issues

The natural resources that support Scotland's marine industries are in a poor state of health. In 2011, the Scottish Government's Marine Atlas highlighted the poor state of Scotland's seas, which identified human activity contributing to climate change and damage caused by fishing activity as the most widespread and significant pressures [4]. In 2019, the UK Marine Strategy update reported that the UK was failing to meet 11 of the 15 indicators of Good Environmental Status (GES), with commercial fishing identified as one of the key pressures preventing the UK from meeting this target [5]. In addition, reviews of global stock assessments have shown that "85% more stocks than currently recognized have likely collapsed below 10% of maximum historical biomass" which highlights the uncertainty in the data when it comes to determining the sustainability of the industry [6].

Some of the potential impacts of fishing activity are:

- Overfishing that depletes fish stock levels.
- Bycatch which is the unintentional capture of non-target species.
- Physical damage to marine habitats by certain fishing methods, such as bottom trawling.

• Entanglement of animals in fishing gear.

• Marine litter that can impact animals through entanglement or ingestion.

Scotland's waters contain diverse marine habitats and wildlife that support the fishing industry. Marine habitats, such as seagrass meadows, maerl beds, kelp forests, coral reefs and burrowed mud are essential for maintaining Scotland's diverse inshore marine life, as they provide food, refuge and protection for both the juveniles and adults of many animals, including commercially important species.

The health of these marine habitats, along with their connected species communities, directly influences the quality of the ecosystem services they provide to society, namely: food (i.e. marine life); water quality; carbon storage (i.e. blue carbon); and protection of the coast from erosion and storm damage. Poor maintenance and a failure to protect these habitats from physical damage will not only affect the health of the marine environment and the fishing industry, but also have detrimental knock-on effects throughout society.

### The Solutions

To improve the long-term stability and sustainability of fishing, an ecosystem-based management plan which considers the broader ecological impacts of fishing activities on the wider marine environment must be applied and enforced [7]. This should include a monitoring approach that is broad in scope and takes into account the long-term impact of fishing activity on the marine environment at an ecosystem level, rather than looking at the stock of a single species which has tended to be the case for current fisheries management. Focusing on species in isolation fails to acknowledge the broader environmental impacts and the consequential socio-economic effects on other marine users and rural communities [8].

Ecosystem based management measures could include:

- Diversifying fishing practices and target species to reduce pressure and bycatch
- Innovation in gear type with funding from government to trial gear modifications with cooperation from the industry.
- More regular stock assessments that take into account climate change effects and use the precautionary principle.
- Conservation measures such as seasonal or spatial restrictions for certain gear types or no take zones.
- Industry led initiatives such as the successful Fishing for Litter campaign.

To achieve sustainable fisheries, the Trust believes that all management actions must take account of the most reliable and up-to-date evidence available and demonstrate clear and measurable fisheries conservation objectives. All future decision-making regarding the management of fishing activities must be well-informed, evidence-based and supported by strong, peer reviewed datasets. Where there are data deficiencies and a decision cannot be supported by robust data, the precautionary principle must be applied. Opportunities for piloting, evaluating and adapting new fisheries management approaches should be encouraged.

To improve decision-making, the collection of environmental data needs to increase. Any significant gaps regarding our understanding of habitat and species in terms of their distribution, abundance and health should be addressed. This will be achieved by close collaboration between industry, academic institutes, and government through dedicated research and development groups. Transparency in the data collection and analysis process is essential for

creating trust between all stakeholders and decision-makers. These, and the application of data, will be essential for establishing and guiding sustainable fisheries management. In addition, new technologies that ensure fisheries management measures are being implemented and adhered to should be supported. Remote Electronic Monitoring (REM) is one such technological solution that can be used as a cost-effective tool to support sustainable fishing. It uses cameras, GPS receivers and sensors to monitor what species are being caught and when and where boats are fishing [9].

Effective integration of fishing activity into marine planning requires fisheries to be managed spatially, by setting geographical objectives and management measures that strive to improve the health of the marine environment and create harmony between fishing activities and other marine users, such as finfish aquaculture. To help balance the increasing demands on the marine environment and contribute to marine planning process it will be important to map the most sensitive and vulnerable habitats and species at risk from damaging fishing practices as well as the distribution of effort for different fishing activities.

We must encourage open dialogue between all interested stakeholders, including fishers and coastal communities in future management plans. This will be essential if we are to move forward collectively to protect our natural environment.

Effective, long-term management of Scottish sea fisheries has the potential to deliver benefits that extend beyond the industry. The continued degradation of the marine environment risks the many recreational, cultural and economic services that support the wellbeing and identity of coastal communities, and Scotland as a whole [10]. The Scottish Government must take transformative action to limit and reverse the deterioration of the marine environment. The proposed actions within this policy are wide ranging, but it is the Trust's view that their implementation could create a world-leading fisheries management framework that is both climate and nature friendly, where sustainable development allows both the marine environment and coastal communities to thrive.

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October 2024