

MARINE ~~PROTECTED~~ UNPROTECTED AREAS



The UK's seas urgently need better management and protection

More than a third of UK seas are Marine Protected Areas (over 300,000km²). Like nature reserves and national parks on land, these areas have been set up to protect at-risk species and habitats.

While, on paper, these areas are protected, many continue to be exploited and destroyed. Just 5% of the UK's Marine Protected Areas ban bottom trawling, a method of fishing that can damage the seabed, kill animals and plants and release carbon stored in the seabed.

This report, a result of research and analysis conducted by scientists at the Marine Conservation Society, provides an insight into the pressures faced by the UK's seabed and charts a way forward.

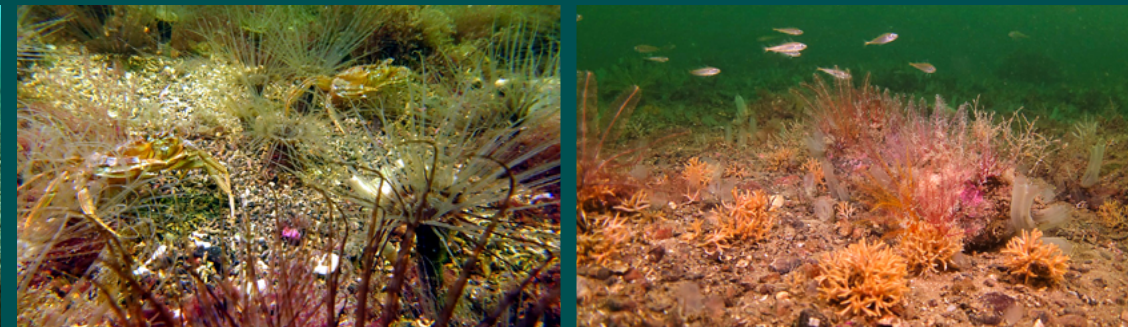
We need an urgent transition towards climate and nature-positive fishing, starting with a ban on bottom trawling in all offshore Marine Protected Areas where the seabed and associated species are meant to be protected. This is to help:

- ✓ Restore marine ecosystems
- ✓ Sustain the fishing industry and food supply
- ✓ Limit climate change

Seabeds devastated by bottom trawl fishing



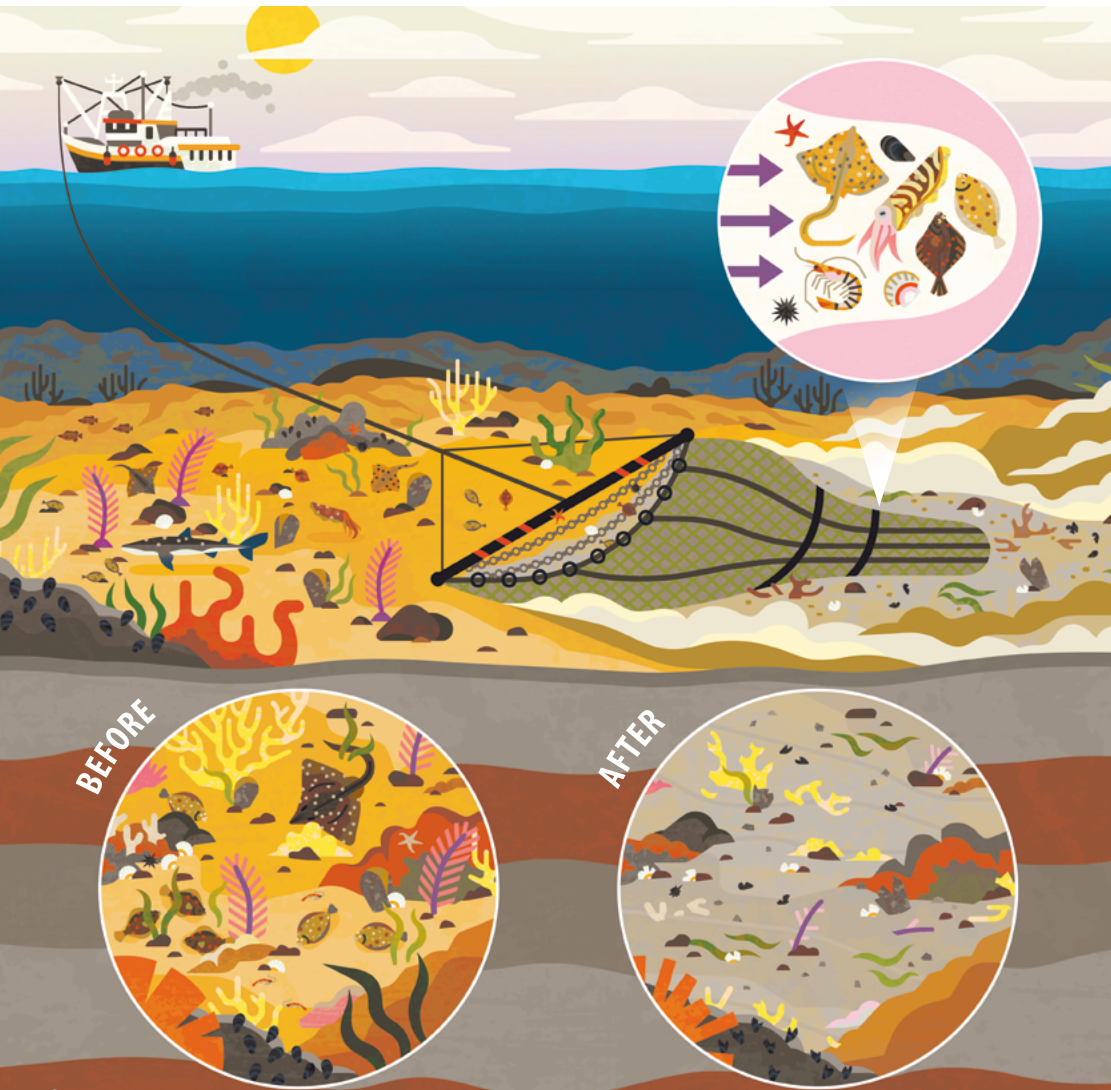
Real world recovery after bottom trawling banned



▲ Photographic evidence of recovery within the shallow water of South Arran Marine Protected Area. We expect similar seabed recovery in offshore areas in deeper waters. © Howard Wood/C.O.A.S.T.

Bottom trawling

Bottom trawling is a method of fishing where heavily weighted nets are dragged across the seabed to sweep up fish and shellfish.



Scallop dredged seabed at Lyme Bay
© Colin Munro Photography

Many once-rich seabeds are now comprised of bare sands, shell and gravel. But they **can** recover.

Within five years of protection from bottom trawling, animals in three UK Marine Protected Areas were found to be larger and more diverse.

In fully protected areas studied around the world, biodiversity increased by 21% on average.

While some slow progress is being made to restrict bottom trawling in protected areas close to shore, there is little or no protection for offshore sand, mud and gravel habitats, where most bottom trawlers operate.

Research findings – hours spent fishing

In UK offshore Marine Protected Areas designed to protect the seabed, beyond 12 nautical miles of the coast:

All but one experienced bottom trawling and dredging between 2015 and 2018.

Areas given protection in 2019 experienced the highest fishing rates of all, with this level of fishing likely to continue without proper management.

Half experienced at least 1,000 hours of bottom trawling since being protected.

Bottom trawl and dredge vessels spent at least 89,894 hours fishing the seabed inside Marine Protected Areas between 2015 and 2018.



Bottom trawling and climate change

Bottom trawling significantly affects our efforts to limit climate change.

93% of the carbon stored in the UK's seafloor is found in muddy and sandy sediments which are mainly offshore, where there are no trawling restrictions. As the seabed is trawled, carbon stored in the seafloor is released into the water, where it may make its way into the atmosphere and contribute to climate change.

The reduction in living seabed habitats from industrial activities such as bottom trawling has compromised the sea's capacity to continue to store carbon. It's estimated that carbon emissions released by bottom trawling across the UK continental shelf between 2016 and 2040 could cost up to £9 billion to mitigate. Banning bottom trawling would not just stop the loss of carbon stores, but also help to build them back up.

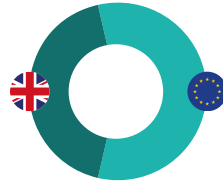
The simplest and most cost-effective restorative approach is to leave the seabed free from disturbance by bottom trawling. It's likely the seabed and the species that rely on it could recover in most Marine Protected Areas, but not if they continue to be trawled.



Continued disturbance of carbon stored in the seabed in these sites could cost the UK nearly £1 billion over the next 25 years.

Who is trawling our protected seabed? And where?

UK fishing boats were responsible for 43% of bottom trawling in offshore Marine Protected Areas between 2015 and 2018. The remaining 57% of fishing was conducted by other EU fleets.



The highest Marine Protected Area fishing rates:

CENTRAL FLADEN (NORTHERN NORTH SEA, EAST OF ORKNEY)

MARGATE AND LONG SANDS (OFF THE KENT COAST)

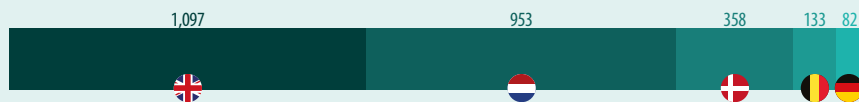
HAISBOROUGH, HAMMOND AND WINTERTON (OFF THE NORFOLK COAST)

These sites experienced fishing activity across almost all of their surface area. UK, Belgian and Dutch fleets were the dominant vessels operating in these areas, respectively.

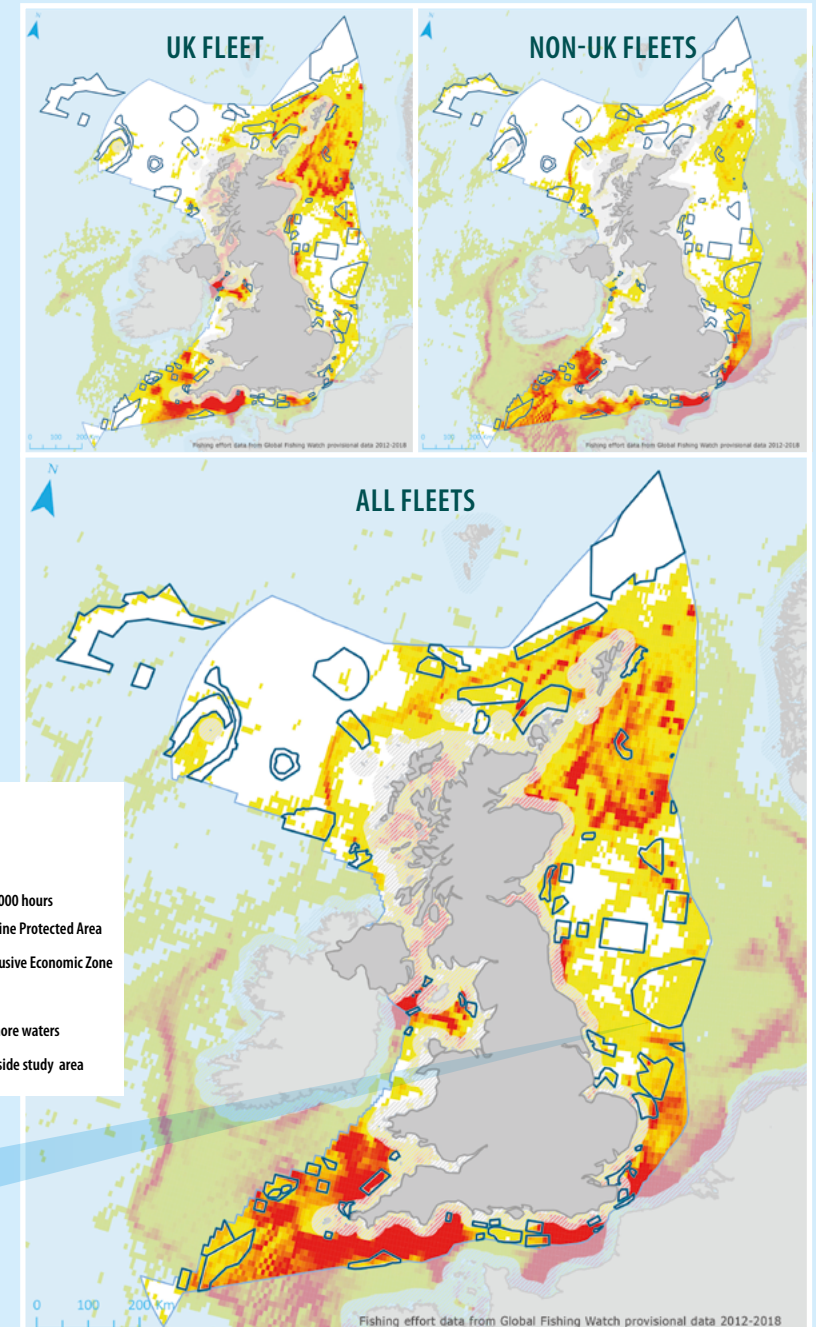
CASE STUDY DOGGER BANK MARINE PROTECTED AREA

Dogger Bank Marine Protected Area experienced at least 2,623 hours of bottom trawling between 2015 and 2018. The UK and Dutch fleets were responsible for the majority of this type of fishing activity – UK fleet responsible for 42% and Dutch fleet responsible for 36%.

Continued trawling of Dogger Bank could cost the UK economy approximately £200 million over the next 25 years. The Marine Protected Area has the capacity to store the most carbon of all UK sites – equivalent to 31,000 return trips from London to Sydney.



Total of 2,623 fishing hours in Dogger Bank (UK) Marine Protected Area (2015-2018)



NB: Marine protected areas include benthic Special Areas of Conservation (SAC), Marine Conservation Zones (MCZ), and nature conservation Marine Protected Areas (npMPA). Data from Global Fishing Watch.

An opportunity

To date, management measures for Marine Protected Areas have required the agreement of EU member states. From 2021 UK Governments will have powers to fully manage bottom trawling in offshore Marine Protected Areas.

The Fisheries Act 2020 provides the opportunity for the UK Government (for England) and the Scottish, Welsh and Northern Irish Governments to manage fisheries in their offshore Marine Protected Areas.

We have a legal and societal responsibility to safeguard our seas, with Marine Protected Areas making a crucial contribution. As such these 'protected' habitats should be off limits to bottom trawling.



Through decisive action, we can allow our offshore Marine Protected Areas to recover from years of damage. This will:

- ✓ **Conserve seabed species and habitats** with major benefits for the diversity and complexity of lifeforms.
- ✓ **Reduce carbon emissions** by keeping organic carbon locked in the seabed rather than releasing it into the atmosphere, and by protecting species and habitats that capture carbon.
- ✓ **Sustain our food supply** with a rich seabed that boosts fish stocks. Biomass of fish communities in fully protected areas is, on average, six to seven times greater than in adjacent unprotected areas and three to four times greater than in lightly protected areas.
- ✓ **Protect jobs in the fishing industry** and those that rely on it – in areas where no-take zones are large and well established, commercial fish catches at the boundaries of sites are significant and consistent.
- ✓ **Save money** – economic studies[†] of the value of fully protected Marine Protected Areas show considerable returns on investment; every £1 invested returns approximately £20 in benefits. The costs of not protecting our offshore Marine Protected Areas from bottom trawling are estimated to be up to £980 million over 25 years.

Stories of recovery

GEORGES BANK, MAINE, USA

After just five years of protection, the densities of legal-sized scallops reached 9 to 14 times those of scallops in other areas.

Rejuvenated fish stocks swim out of the Marine Protected Areas into fished waters, so fishers can fish less hard, using less fuel and for a shorter time to make the same catch. After banning trawls, 70% of the fishing effort is concentrated within 5km of the boundary.

EDMONDS UNDERWATER PARK, WASHINGTON, USA

Copper rockfish have produced 100 times more eggs than their species counterparts outside of the marine park boundary.



SAINT LUCIA, CARIBBEAN

Catch densities increased between 46 and 90% within five years outside a network of fully protected areas.

Warming waters and reduced oxygen killed most pink abalone in 2010 but the larger, highly reproductive abalone that survived in the nearby fully protected area replenished the abalone stocks for the entire region.



TSITSIKAMMA NATIONAL PARK, SOUTH AFRICA

The density of commercially important fish is around 42 times higher within one of oldest fully protected Marine Protected Areas in the world than in the nearby fishing grounds.



NEW ZEALAND

One snapper fishery is benefiting from 14 times more fish in fully protected areas than in fished areas, making egg production an estimated 18 times higher than outside the protected area.

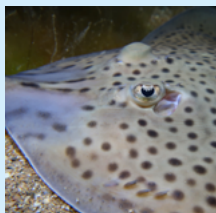


ENGLAND, SCOTLAND, WALES AND ISLE OF MAN



Within inshore Marine Protected Areas around the Isle of Arran and Lyme Bay, carbon storing habitats, and animals like sponges, corals, squirts and hydroids now thrive on the seabed where dredgers and trawlers once operated.

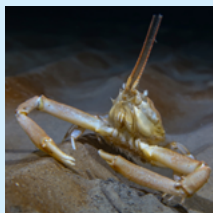
Around the Isle of Man, Lundy, Skomer and the Isle of Arran, numbers of scallops and lobsters have increased in inshore Marine Protected Areas closed to dredges.



© Georgie Bull



© Mark Kirkland



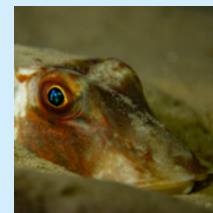
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The way forward

The UK urgently needs effectively managed Marine Protected Areas to help recover marine species and habitats, support sustainable fishing and combat climate change.

Now is the time to begin a transition towards a complete ban on bottom trawling in offshore Marine Protected Areas designated to protect seabed species and habitats. This transition can only happen by working with local communities and all who benefit from marine resources.

These measures can be introduced through the use of permit conditions on the general fishing licence and the introduction of remote electronic (real-time) monitoring with cameras on vessels to help monitor catches and support compliance with management measures.

The government's carbon accounting process should consider the UK's seabed sediments as both a potential source of carbon emissions or as a valuable carbon sink.



Approaches will differ in the countries of the UK...

SCOTLAND



Proposed fisheries management measures for offshore Marine Protected Areas should be updated by the Scottish Government to deliver a 'whole-site' approach to seabed protection. An independent commission should be established to enable transformation of Scotland's Marine Protected Area network and help ensure that a third of Scotland's seas are highly or fully protected by 2030.

ENGLAND



The 'whole-site' approach to management of Marine Protected Areas should be applied, in line with the Government's 25 Year Environment Plan commitment. The Marine Management Organisation can then use its new powers to close offshore Marine Protected Areas to bottom trawling, restoring ecosystems across the entire network of sites.

WALES



The designation of offshore Marine Conservation Zones for important seabed species and habitats is pending. Following designation, the Welsh Government will need to introduce strict management measures within these sites that will prevent damage to the seabed and associated species.

To date, agreeing fisheries management measures for offshore Marine Protected Areas through an EU consultation and evidence gathering process has been complicated by changing dynamics between other EU member states and the UK.

Now, with the powers provided by the Fisheries Act 2020, the UK Governments can act more independently to recover our seas and combat climate change. **There is no time to lose.**

This report is the culmination of extensive research and in-depth analysis conducted by scientists at the Marine Conservation Society.

Using data from peer-reviewed scientific literature and Global Fishing Watch, the work provides a valuable insight into the pressures faced by the UK's seabed even where it is, on paper, protected.

For more information about the context, methodology and findings of this work, please see our detailed report at: www.mcsuk.org

For insights into how fully we are protecting and managing our marine environment from seabed trawling in English seas, visit: mpa-reality-check.org

For details in Scotland: www.savescottishseas.org

Want to know more?
Please contact us: info@mcsuk.org

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