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THE CASE FOR BANNING BOTTOM TRAWLING IN UK MARINE PROTECTED AREAS



ABOUT OCEANA UK

Oceana UK is dedicated to ensuring UK seas get the protection they deserve. We use hard-hitting, sciencebased campaigns, legal challenges and advocacy to achieve measurable progress towards diverse and healthy UK waters, with ocean wildlife thriving alongside communities. Globally, Oceana is the largest international advocacy organisation dedicated solely to ocean conservation, with more than 325 victories that stop overfishing, habitat destruction, oil and plastic pollution, and the killing of threatened species like turtles, whales, and sharks.

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For more information, please contact Alec Taylor, Director of Policy and Research, Oceana UK at ataylor@oceana.org.

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GLOSSARY

Bottom-Towed Fishing:

Any form of fishing, including trawls, towed on or very close to the seabed by one or more vessels, in which any part of the fishing gear is designed and rigged to operate on, and be in contact with, the seabed.

Bottom Trawling: the act of dragging a weighted cone-like net towed on or near the seabed for the purposes of catching fish or shellfish.

Dredging: The act of dragging a rigid structure along, and into, the seabed for the purposes of catching fish or shellfish.

Benthic: Relating to or occurring at the bottom of a body of water.

Demersal: Living near, deposited on, or sinking to the bottom of the sea.

Pelagic: Of, relating to, living on or occurring in the open sea.

Bycatch: The untargeted and unwanted fish and other marine creatures caught by fishing gear while fishing. This is different from discards that represent the proportion of the catch that is thrown away.

Marine Protected Area

(MPA): An area of sea or seabed where activities are managed, restricted or prohibited in order to protect marine life or other aspects of the marine environment. In the UK, this includes:

Highly Protected Marine

Areas (HPMAs): Areas with the highest levels of protection, where all extractive, destructive and depositional uses are prohibited.

Marine Conservation Zones (MCZs): Areas

that protect a range of nationally important, rare or threatened habitats and species in England and Wales.

Special Areas of Conservation with marine components (SACs):

Areas that protect one or more special habitats and/ or species listed in the Habitats Directive.

Special Protection Areas with marine components (SPAs): Areas at sea which protect vulnerable bird species.

Nature conservation MPAs (ncMPAs): A type of marine protected area that can be designated in Scottish territorial

and offshore waters.

Offshore MPAs: MPAs that lie beyond 12 nautical miles from the coast.

Inshore MPAs: MPAs that lie within 12 nautical miles from the coast.

EXECUTIVE SUMMARY

Bottom trawlers and dredgers drag heavy metal gear and nets – that can weigh several tonnes – across the seafloor, indiscriminately hoovering up sea life and severely damaging marine habitats. This decimates nature, weakens ocean resilience, contributes to the climate crisis, and threatens the livelihoods of smallscale fishers. Currently, almost all seabed habitats around the UK are in 'poor status' with bottom trawling identified as the main pressure.



Contrary to the claims of the UK Government, we estimate that 90% of the UK's marine protected areas (MPAs) are open to bottom trawling in some or all of the site, with only 38 of 377 MPAs entirely protected from this destructive activity. As a result. trawling remains rife - we calculate that over 20,000 hours of suspected bottom trawling took place in the UK's offshore MPAs in 2024 alone.



The UK currently has the worst of all worlds: an illusion of protection masking ongoing destruction. This is in large part due to the UK's outdated and reductive approach to MPAs, protecting selected 'features' rather than the site as a whole. This veil of protection might even be doing more harm than good, delivering worse outcomes for nature, while taking up more time and cost to manage. Even after 30-plus years of applying this approach, less than half of designated habitats and species within England's MPA network are in 'favourable condition'.



OF DESIGNATED HABITATS AND SPECIES WITHIN ENGLAND'S MPA NETWORK **ARE IN 'FAVOURABLE CONDITION'**

Banning trawling in MPAs is a winwin-win for nature, climate and the taxpayer. Whole-site protections could generate billions of pounds for the economy in societal benefits: a ban for the UK's offshore seabed MPAs alone could deliver an estimated £2.57-3.5 billion in benefits over 20 years, while being three times cheaper to enforce.

20.000

MPAS IN 2024 ALONE

A ban would also turbocharge nature's recovery, relative to partial protection alone. In Lyme Bay, England, for example, partial protection saw an increase in abundance of marine life of 15% but in areas where the whole site was free of trawling, that figure was 95%.

Whole-site protections could generate billions of pounds for the economy in societal benefit as well as being better for nature

The UK's piecemeal approach to managing trawling is out of touch with the rest of the world. Countries from Canada, Peru and Belize to the Philippines, Sweden and Greece, have made it clear trawling has no place in MPAs. The UK's position as a global ocean leader and its commitment to protecting 30% of land and sea by 2030 are on the line. All UK governments must step up to remove this threat from our havens for nature.

THE EXTENT OF BOTTOM **TRAWLING IN UK MARINE PROTECTED AREAS**

Bottom trawling remains highly prevalent in the vast majority of the UK's MPAs. This report estimates that 90% of the UK's MPAs are currently open to bottom trawling in some or all of the site.

In total, there are 377 MPAs in the UK covering 338,729 km² 'or 38%' of UK waters.¹78 of these are 'offshore' MPAs protecting areas of water that are more than 12 nautical miles from the coast and 329 are 'inshore' MPAs extending out to 12 nautical miles from land, with some overlap at the 12 nautical mile mark.

At the time of publication, we estimate that there are effective whole-site bans on all forms of bottom trawling in just 38 of the UK's 377 MPAs. These are covered by whole-site no-take zones, specific MPA byelaws, wider fisheries byelaws, deep sea regulations or other bans. Together, we calculate that this amounts to 45,940km², 'or 13.6%' of the UK MPA network by area (see Annex 1).

The above analysis does not include three Highly Protected Marine Areas (HPMAs) that will also be closed to bottom trawling but which do not yet have management in place; Allonby Bay, North East of Farnes Deep and Dolphin Head. These account for a very small area, less than 0.5% of English waters.² The Scottish Government has also recently consulted on fisheries management measures for 20 sites within its offshore waters, including five sites with proposed whole-site closures that, if taken forward, would expand the number and area of MPAs closed to trawling.³ The outcome of this process is not known at the time of publication.

As a result of this, bottom trawling remains rife in our safe havens for nature. In 2024 alone, 243 commercial fishing vessels equipped with dredges and other bottom trawling gear appeared to spend over 20,000 hours operating in UK offshore MPAs specifically designated for their seabed features.⁴ Overall, 19% of the suspected bottom trawling hours in these sites were carried out by UK flagged vessels, an increase from 6% in 2023, as suspected bottom trawling from both UK-flagged and Irish vessels



increased and that from vessels flagged to most other countries reduced. These figures do not include potential trawling taking place within the UK's inshore MPAs, which would add to the overall extent of trawling taking place in our protected areas.

The majority of UK MPAs remain largely unprotected from bottom trawling activity. This flies in the face of the UK Government's claim⁵ that 60% of English MPAs are protected from bottom trawling and other destructive fishing.



If we don't ban destructive fishing in the areas we've protected for nature, what's the point of those areas?

3 **THE CASE FOR BANNING BOTTOM TRAWLING IN MPAS**



The Nature Case

Decades of research⁶ has documented the harm that bottom trawling and dredging can have on nature by disturbing and destroying sensitive habitats, reducing biodiversity and ultimately destabilising ecosystems, both inside and outside of MPAs. Over time, the impact of this commercial fishing has fundamentally altered the characteristics and productivity of UK seas.⁷ Almost all seabed habitats around the UK are now in poor condition with bottom-towed fishing gear identified as the main pressure.8 This is one of the main reasons that the UK is five years past its legal duty to achieve Good Environmental Status of UK waters, for which "seabed integrity" is one of the key requirements.9

Some of the impacts that could be reduced by removing trawling from our MPAs include:

• Direct damage to seabed

ecosystems.¹⁰ Studies indicate that just a single pass of bottom contact fishing gear can reduce species richness of seabed invertebrates by 19% and diversity by 26%.¹¹ These habitats can take several years, or even decades, to recover following fishing disturbance.

- Smothering of marine life. Bottom trawling resuspends substantial amounts of sediment into the water column, that once resettled can smother large areas of seabed. In North West Spain, the level of sediment resuspension after trawling was six times that of an untrawled state.12
- Underwater noise above levels known to cause disturbance and hearing damage to marine mammals.¹³ Given the extent of trawling that takes place, this could be considered a chronic impact on marine life, especially within large MPAs protecting mobile species such as harbour porpoises.
- Systematic removal and discarding of large quantities of non-target fish. For example, in the European Union, 92% of recorded fisheries discards (animals which are returned to the sea) come from bottom-trawl fisheries.14
- Unnecessary suffering and bycatch of sensitive and endangered species including sharks, rays, cetaceans and seabirds.¹⁵ These animals can get stuck in the nets, be badly injured or killed, and are then thrown back into the sea.



Banning this harmful form of fishing at least within our protected areas for nature would seem a logical move in the face of these impacts. For example, in Lyme Bay, where bottom trawling has been banned since 2008, the seabed recovery and biodiversity improvements are well documented with much evidence of improved species diversity and species abundance¹⁶ showing that nature recovery really is possible in previously highly exploited areas. In 10 years after closing the MPA to trawling, the number of exploited fish species in the MPA increased by 430% and total exploited fish abundance by 370%.17 Other success stories can be found in Section 5 of this report.

Nature recovery really is possible in previously highly exploited areas

IN 10 YEARS AFTER CLOSING THE MPA TO TRAWLING. THE NUMBER OF EXPLOITED FISH **SPECIES IN LYME BAY MPA INCREASED BY**



The Climate Case

Banning bottom trawling in MPAs would support action to tackle the climate crisis in three major ways:

- Firstly, through halting and reversing damage to carbon-rich seabed habitats.
- Secondly, by reducing the burning of fossil fuels to catch seafood (assuming effort is reduced not simply displaced).
- Thirdly, by ensuring that the habitats and species within MPAs are more resilient to the impacts of climate change.



Marine ecosystems, including seagrass meadows, salt marshes, and muddy and sandy seabeds, play a critical role in carbon storage¹⁸ and sequestration. Seagrass meadows, for example, are among the most powerful carbon sinks in the world and store carbon at rates much higher than tropical rainforests,¹⁹ yet up to 92% of historical seagrass in the UK has been lost.²⁰ Most remaining seagrass beds lie within MPAs.²¹

In terms of storage, an estimated 244 million tonnes of organic carbon is estimated to be in long-term stores across UK seas, with nearly all of this in the top 10cm of the UK seabed and at risk from disturbance by bottom trawling.²² A total of 43%, or 105 million tonnes, of this carbon is within the MPA network, yet no MPAs are legally required to protect this carbon. Banning trawling would have immediate benefits to protecting these carbon stores- a recent study found 30% less organic carbon in deep-sea sediment continuously trawled for shrimp, compared to sediment where trawling had been banned for two months.²³

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Research also estimates that the sediment carbon released by bottom trawling globally is in the region of 1.47 billion tonnes per year²⁴ with the UK the fourth highest damaging country after China, Russia and Italy. It is not yet clear how much of this suspended carbon ends up in the atmosphere.

Bottom trawling is also a fuel-intensive fishing method that often involves large vessels and gear. The overall carbon footprint of bottom-trawl fisheries is estimated to be 2.8 times higher than non-trawl fisheries and is among the highest of all foodstuffs per kilogram of produce.²⁵ As long as overall trawling effort is reduced and not simply displaced, these emissions and impacts could be reduced through removing trawling within MPAs.

Finally, the damage done by bottom trawling also weakens the resilience of marine ecosystems to the impacts of the climate crisis and undermines their ability to adapt.²⁶ This is particularly true for vulnerable marine ecosystems in MPAs, such as deep sea coral reefs, which may be able to survive the threats of future ocean acidification if trawling pressure was removed.27



The Economic Case

Healthy and well-managed MPAs provide numerous services that benefit the economy, including carbon sequestration,²⁸ coastal protection,²⁹ and tourism.³⁰ Banning bottom trawling within MPAs would allow protected ecosystems to recover and significantly enhance the value of this 'natural capital'.

Research from Europe has shown a ban on bottom trawling in MPAs would deliver a £2.81 return on every £1 spent after 13 years.³¹ This equates to a cumulative net economic gain of £7.1 billion over a 20-year period. Although costs initially outweigh the economic gains, these are short lived and are comprehensively outsized by the gains achieved over the mid to long term. Similar results have been shown for the UK, where a whole-site ban on bottom trawling from the UK's offshore MPAs protecting seabed features would potentially deliver a net benefit of between £2.57 billion and £3.5 billion over a 20-year period.32

A reduction in overall trawling effort by removing trawling in MPAs and mitigating displacement impacts could have a net benefit to the industry as well as society. A recent study suggests that this net benefit would be maximised by reducing trawling effort by 34% in aggregate across Europe, with this reduction focused within MPAs.³³ The indiscriminate



THE UK FISHING FLEET CURRENTLY BENEFITS FROM FUEL TAX CONCESSIONS WORTH UP TO





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nature of bottom trawling also impacts the quality and value of the fish caught. The landing price of cod in Öresund where bottom trawling is now banned, is twice the value³⁴ of landing prices in the greater Baltic Sea, primarily due to the difference in the quality of the catches.

Well-managed MPAs have the potential to deliver increased fish and shellfish populations that can be sustainably caught by non-trawling methods. In Lamlash Bay, Scotland, for example, lobsters are now over four times more abundant and king scallop density four times higher in zones where trawling and dredging have been banned compared to adjacent areas.³⁵ There is also evidence that MPAs lead to increased "spillover effects" of fish and shellfish to populations outside of MPAs.^{36, 37} However, whether spillover ultimately influences the profitability of the industry will depend on several factors, including the population status and movement patterns of target species, as well as the status of the fishery and behaviour of the fleet.³⁸ There is also some evidence that while MPAs can lead to increased species spillover, the effects will take a relatively long time period to be relevant.³⁹

Finally, there are significant taxpayer savings to be had from a ban on trawling in MPAs. The UK fishing fleet currently benefits from fuel tax concessions worth up to £1.8 billion a decade.40 Without the current subsidy many of these fleets would actually be deemed unprofitable. Fishing subsidies are considered a key factor in depleting global fish populations⁴¹ and support is largely provided to the most fuel-intensive fishing vessels such as bottom trawlers. By reducing the extent of bottom trawling, via a ban within MPAs, the amount of fuel subsidies provided to this form of fishing could be reduced.

At the same time, enforcing MPAs will also be cheaper with whole-site bans. The Scottish Government recently estimated⁴² that the enforcement costs of banning trawling across their Scottish offshore MPAs will be around three times cheaper to the taxpayer than only partial protection, which would require much more time and effort to monitor.

The Social Justice Case

Seafood caught by bottom trawling, including within MPAs, represents the destruction of a precious public resource for the purposes of generating private profit, particularly for the largest industrial segments of the fishing fleet. This can come at the expense of the much greater number of small-scale fishers struggling to make a decent living, leading to social and economic unrest in coastal communities, usually with loss of revenue and jobs,



In Scotland's Firth of Clyde, along with all Scottish waters out to three nautical miles, bottom trawling was banned in 1889 to protect small-scale communitybased fisheries. A century later, a revoking of this ban resulted in the collapse of inshore fisheries, increased conflict between small-scale and industrial fishers and a loss of economic opportunities for coastal communities.43 However, in the Lyme Bay Reserve where bottom trawling has been banned since 2008, fishers who are part of the working group to support the MPA's management had the highest job satisfaction and income scores and the lowest perceived levels of stress and conflict compared to static and mobile operators outside the MPA.44

The current system for allocating fishing opportunities also allows for quota to be held and traded into the hands of the most powerful and wealthy parts of the fishing industry, including the largest bottom trawlers responsible for much of the damage to the UK's MPAs.^{45,46} Given that much of the bottom trawling within MPAs, particularly further offshore, is done by a relatively small number of larger industrial vessels, reform to this system to support a ban on trawling in MPAs could help drive a shift away from vessels targeting these sites.

Finally, conviction from the UK public is very clear on this issue -8 in 10 UK adults think bottom trawling should be banned in UK MPAs and 64% mistakenly believe it is already banned.⁴⁷ In late 2024 over 200,000 people from across Europe signed a petition that called for an immediate ban on bottom trawl fishing in MPAs, including within the UK.48

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THE CASE FOR WHOLE-SITE BANS OVER FEATURE-BASED APPROACHES

The UK's focus on managing MPAs for specific habitats and species. rather than ecosystem recovery, has driven the UK's nature conservation agenda on land and sea for decades.



A whole-site approach ensures that the entire ecosystem is protected

Most restrictions on human activities in UK MPAs have been designed around protecting these individual 'features' where they currently occur, rather than where they could be if allowed to recover. Substantial amounts of time and money are spent seeking to narrowly define these (often mobile) features, as well as the individual levels of threat to those features from human activities.

Notwithstanding the fact that this approach to MPAs in the UK and Europe is not typical of the rest of the world, it undermines the status of MPAs as part of the wider marine environment. It also restrains the features themselves from recovering from their current state and limits the true potential of the MPA network to contribute to the UK's nature, climate, economic and social justice goals more broadly. It is a highly static, reductive and increasingly outdated approach in a dynamic marine environment which is facing the nature and climate crisis. It also goes against the International Union for Conservation of Nature (IUCN)'s position that no industrial fishing, where nets are dragged or towed across the seafloor or through the water column, should take place in protected areas.49

By contrast, a whole-site approach to the management and enforcement of bottom trawling and other activities within MPAs, whereby the health of the whole site is the starting point, means that the full mosaic of habitats, species and supporting processes in the site all gain protection and have time and space to truly recover. Whole site MPAs do not automatically mean HPMAs:

whole-site bans can be implemented within the UK's existing feature-based system regardless of designation type - more important is the philosophical shift in the treatment of MPAs in the UK as the vital organs of a healthy marine environment, with a true emphasis on recovery rather than preservation of the status quo.

Benefits of a whole-site approach relative to partial protection:

Resilience and adaptation: A whole-site approach will improve the health, resilience and adaptive capacity of MPAs, whereas the UK's fragmented approach does not encourage management targeted to the recovery of ecosystem structure and function as a whole.⁵⁰ Within Lyme Bay, for example, total abundance of taxa over seven years increased by just 15% in a partially protected MPA, compared to 95% in an MPA fully protected from bottom trawling,⁵¹ with greater resilience to storm damage and other climatedriven impacts.⁵² In many other areas of the world, a whole-site approach also provided stronger benefits than partial protection.53

Habitat recovery: A whole-site ban to trawling would be a true recovery measure, providing a more stable environment allowing species to repopulate, and habitats to rebuild, as well as allowing the overall health of the area to improve.54 Within a feature-led approach, harmful activities in other parts of the MPA could damage interconnected features that may not be directly targeted for protection. The benefits of partial protection are therefore often fragmented.

Connectivity: A whole-site approach ensures that the entire ecosystem is protected and able to function as a whole. Partial protection in an MPA may leave some habitats exposed to damaging activities, which can disrupt ecological connectivity. Indeed, the risks of partial protection include potential displacement of fishing activity within the site, with no likely overall improvement in condition. This was used as justification for

the closure of the Dogger Bank SAC to bottom trawling in 2022, the supporting assessment for which stated that the option of only partially closing the site would "increase impacts from bottom-towed fishing in the open areas increasing the risk of undermining the conservation objectives of the Dogger Bank SAC."55

Simplicity: A whole-site approach to MPA management is easier and cheaper to enforce and monitor, with a clearer objective allowing simpler compliance checks. Authorities can monitor a whole MPA without the requirement to assess complicated partial restrictions or vessel movements around features, with different areas within a site often having different management measures in place for each feature.

Clarity: MPAs in the UK are confusing and misleading to the general public who expect that "protected" means protected. Indeed, polling by Oceana UK has found that nearly two-thirds of those asked thought that bottom trawling is already banned in MPAs.56 A ban on bottom trawling on a wholesite basis in MPAs has the potential to be much better understood by a wider range of stakeholders, including fishers themselves.

Within Lyme Bay total abundance of taxa over seven years increased by just 15% in a partially protected MPA, compared to 95% in an MPA fully protected from bottom trawling



A recent study of over 123 global **MPAs concluded** that minimally protected **MPAs** can actually deliver detrimental ecological outcomes relative to no protection

5 THE UK'S **ILLUSION OF** PROTECTION

UNDER THE CURRENT SYSTEM OF FEATURE-BASED PROTECTION. ONLY



Partial protections ultimately deliver partial outcomes, and indeed offer an illusion of protection for the public. After over 30 years of designating MPAs in UK waters under the current system of feature-based protection, only 44% of the designated features within England's MPA network are in favourable condition.57

There is increasing evidence that partially protected MPAs, particularly those with poor management and enforcement, do not enhance the ecosystem to a greater degree than unprotected sites. A recent study of over 123 global MPAs concluded that minimally protected MPAs can actually deliver detrimental ecological outcomes relative to no protection, and had significantly lower fish density than even areas outside of MPAs.⁵⁸ This may be because these sites often become trawling hotspots due to their perceived importance but lack of protection, with trawling

intensity within European and UK MPAs previously shown to be 1.4 times higher than unprotected areas.59 A further study in Australia found no social or ecological benefits for partially protected areas relative to those that were unprotected,60 while work from the Caribbean found that multi-use MPAs actually showed declines in biomass.61

Further evidence from other sites shows that the majority of featurebased MPAs had no more fish, invertebrates, or algae than open areas, were poorly understood by coastal users, were not more attractive than open areas, and were not perceived to have better marine life than open areas.⁶² The authors argue that partially protected areas act as red herrings in marine conservation because they create an illusion of protection and consume scarce conservation resources yet provide little or no social or ecological gain over unprotected areas.

Understanding and addressing potential fisheries displacement

The creation of MPAs or an increase in management restrictions within a site is often met with protestations about conflicts with fisheries. One of the key arguments against banning bottom trawling in MPAs is that it will simply displace fishing, leading to a shift in effort outside MPAs and a worse overall impact on marine wildlife'. This was recently used as justification by the Scottish Government in support of partial protection options for a number of offshore MPAs, rather than whole-site bans to demersal gear.63

Displacement is not an inevitable consequence of strong MPA management. We acknowledge that the impacts of fishing displacement as a result of bringing in bottom trawling

restrictions are difficult to predict

and measure, and can be regionally and species-specific. It is also the case, however, that UK governments have, to date, not taken a consistent or proactive approach to addressing and managing displacement effects.⁶⁴

There is an urgent need for the UK to be more proactive in managing and mitigating any potential displacement impacts of new MPA management measures, rather than stepping back and assuming such displacement will simply occur. Where displacement of fisheries is taking place, then management options should be introduced to avoid, reduce or mitigate the environmental and socioeconomic impacts of displacement. This could include financial support for fishers to move to less impactful gear, the reallocation of existing subsidies towards more sustainable fishing methods, or the removal or reallocation of historically underused licences or quota.



Finally, there is a risk that as long as these MPAs are not protected from destructive fishing, bottom trawling could be displaced into MPAs by the expansion of offshore wind and other human activities. It is therefore critical that as well as bringing in MPA management measures, fishing is better integrated into marine planning frameworks to consider and avoid displacement of fisheries as a whole, not just in relation to MPAs. Nature must not be the loser as we drive to a cleaner and greener energy future.

Displacement is not an inevitable consequence of strong MPA management

6 **SUCCESS STORIES** - SHOWING WHAT'S **POSSIBLE**

The UK's approach to managing trawling and other destructive fishing in its MPAs is increasingly at odds with the rest of the world.

Many other countries have a much clearer position in line with the IUCN's view that trawling has no place in MPAs.

For example, Belize instituted a complete and permanent ban on all forms of trawling in all its waters in 2010, including its MPAs;65 the Philippines protected 266,000 km2 of territorial waters in 2018;66 Canada prohibited bottom trawling in all federal MPAs in 2019;⁶⁷ and Peru passed a law in 2023 to protect the first five nautical miles at sea, allowing only ancestral and artisanal fishing practices.⁶⁸ In Europe, countries such as Greece⁶⁹ and Sweden⁷⁰ have already committed to banning trawling from their MPA networks, with more likely to follow.

Closer to home, there have been isolated but inspiring examples showing what can be achieved even by relatively minor restrictions to trawling. Areas such as Lyme Bay and Sussex Bay offer beacons of hope, while recent closures to larger areas such as the Dogger Bank SAC show that proper protection can be done in the offshore area.

Lyme Bay MPA, England A remarkable seabed recovery with collaborative management

In 2008, dredging and bottom trawling was banned in 80 square miles of Lyme Bay. The area under protection was later expanded to 120 square miles - the UK's first and largest example of an ambitious, whole-site approach to marine protection. Little changed for four years, but then the seabed started to coming to life.

As a result of the ban, the number of different fish species inside the controlled zone is now more than four times greater than found outside the MPA's boundaries.⁷¹ In terms of overall abundance, there are over three times more fish to be found within the MPA than in similar areas outside it. The MPA also experienced a 65% rise in 'functional richness' - a key measure of ecosystem diversity.72 Seabed recovery has seen pink sea fans regrowing, scallop numbers increasing, species such as black bream returning to the area, and an increased resilience to storms.⁷³ Local fishers using static methods have benefited from better catches of valuable fish like shellfish and lobster,⁷⁴ and those who were part of the Working Group reported the highest job satisfaction and income scores compared to operators outside the reserve.75

Lyme Bay is living evidence that, with the right action, recovery is possible and protecting marine ecosystems benefits not only the environment but also the communities who rely on it.

Cabo Pulmo National Park, Mexico Dramatic recovery of fish populations at depleted sites



Sussex Bay, England An inspirational rewilding project for one of the country's most diverse ecosystems



Cabo Pulmo National Park (CPNP) in the Gulf of California, Mexico, was created in 1995 as a result of widespread support from the local community, including a total ban on bottom-towed gear. In line with findings from Lyme Bay, little changed in the first four years after the establishment of the reserve and there were no significant differences in fish biomass between CPNP and other marine protected areas or open access areas in the Gulf of California. However, by 2009, 10 years after its establishment, total fish biomass had increased by 463% and the biomass of top predators and carnivores, a key indicator of coral reef health, increased by 11 and 4 times respectively. Research demonstrated that the coral reef ecosystem at CPNP is uniquely healthy compared to other marine protected areas in the Gulf of California, and concluded that "full, complete recovery of a degraded fish community is possible (when placed in the right area and governed correctly)".70

The recovery of fish biomass inside CPNP has resulted in significant economic benefits, indicating that community-managed marine reserves that include trawling bans are a viable solution to unsustainable coastal development and fisheries collapse in the Gulf of California and elsewhere.

Extensive, dense kelp beds once stretched 25 miles along the West Sussex coast and at least 2.5 miles out to sea, but by the late 1980s, 96% of these marine forests had disappeared as a result of bottom trawling, storm damage, and the dumping of sediment by dredging boats.⁷⁷ Local fishing businesses saw catches of crab, lobster and other seafood plummet, and Sussex's diving community observed emptiness where once there had been rich, dense forests of kelp.

In early 2021, a byelaw was approved to prohibit bottom trawling along the entire Sussex coast, to help habitats regenerate and improve fisheries.⁷⁸ This protected around 117 square miles of the seabed, allowing the area to 'rewild' and the once vast kelp forests to regenerate. Although this was not a measure specific to an MPA, it did encompass the whole of the Selsey Bill and the Hounds MCZ, and illustrates an approach to managing activities across multiple habitats.

Since the ban took effect, there have already been many signs of recovery, with pioneer seaweed species moving in. Local divers report the mussel beds are expanding dramatically – up to a kilometre wide – which helps to stabilise the seaweed.⁷⁹ Marine life is also returning including stingrays, seahorses and bluefin tuna. Divers are seeing new kelp growth on offshore wrecks, and more being washed up on the beaches. Meanwhile, lobster catches are on the up, and fishers are reporting a richer diversity in their nets. In time, it is also expected that the regeneration will offer storm surge protection, carbon sequestration and nature-based tourism benefits.

We have arguably the worst of all worlds: an illusion of protection masking ongoing destruction

CONCLUSIONS AND CALL TO ACTION

All UK governments should follow Belize, the Philippines, Canada, Peru, Sweden and many others in banning bottom trawling from their MPA networks and other wildlife hotspots.

There is no single, globally used, definition for an MPA. Generally, it describes areas of the ocean set aside for long-term conservation where human activities are legally restricted or prohibited in order to protect a vulnerable species or habitat. Whatever the definition and designation, the world's leading conservation agency, the IUCN, states that industrial bottom trawling is not compatible with wellmanaged MPAs.

Despite this, we estimate that 90% of UK MPAs are currently subjected to bottom trawling activity, with effective whole-site bottom-trawl bans in just 38 of the UK's 377 MPAs, and over 20,000 hours of suspected bottom trawling in our offshore MPAs alone in 2024. We have arguably the worst of all worlds: an illusion of protection masking ongoing destruction. This means nearly all UK MPAs currently remain largely unprotected from bottom trawling activity. This veil of protection might be doing more harm than good, delivering worse outcomes for nature, while taking more time and cost to enforce.

Banning bottom trawling in UK MPAs is a policy for the many, not the few. The UK can ban bottom trawling within MPAs using the management powers we have, not by designating a set of new sites. The UK's philosophy of treating these areas as static sites open to trawling unless proven otherwise, instead of starting from a whole-site approach, needs thorough re-examination. It is high time we use MPAs to prioritise the long-term recovery and resilience of nature over the short-term profits of industrial fisheries who never have to pay the cost of their damage.

Finally, conviction from the UK public is clear: 8 in 10 UK adults think bottom trawling should be banned in UK MPAs and 64% believe it is already banned. As countries around the world step up to ban destructive fishing from their MPAs and deliver against their '30x30' commitments, the UK risks being overtaken by other countries taking steps to properly protect their MPA networks from this industrial threat. This is an ocean credibility issue for all UK governments: there is no time to waste.



ANNEX 1

LIST OF MPAS WITH EFFECTIVE WHOLE-SITE PROTECTIONS TO BOTTOM TRAWLING

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We consider a site to be effectively protected when all forms of bottom trawling and dredging are legally prohibited from the whole of the site. We estimate this to be the case for the following sites. We exclude three HPMAs that do not yet have management measures in place. A number of further MPAs offer partial protections to some or all forms of bottom-towed fishing gear, in some cases up to 90% of the site, but are not included in these calculations.

Area Name	Size (KM ²)	Designation
Runswick Bay	68.0	MCZ
Holderness Inshore	309.0	MCZ
Lizard Point	141.0	SAC
Dogger Bank	12331.0	SAC
Wight-Barfleur Reef	1373.4	SAC
East of Haig Fras	400.0	MCZ
Selsey Bill and the Hounds	16.0	MCZ
South Dorset	193.0	MCZ
Lundy	3.0	MCZ
Skomer	13.0	MCZ
Hatton Bank	15694.0	SAC
North West Rockall Bank	4365.0	SAC
East Rockall Bank	3695.0	SAC
Lyme Bay	206.0	MPA
Darwin Mounds	1380.0	SAC
East Mingulay	26.0	SAC
Loch Creran	12.0	SAC
Loch Laxford	12.0	SAC
Loch Sunart and Sound of Jura	741.0	NC MPA
Noss Head and Sinclair Bay	8.0	MPA
Sanday	110.0	SAC
St Kilda	3995.0	SPA/SAC
Treshnish Isles	25.0	SPA/SAC
Wyre and Rousay Sounds	16.0	NC MPA
Loch Carron	23.0	NC MPA
Lochs Duich, Long and Alsh	37.0	NC MPA
Lochs Duich, Long and Alsh Reefs	12.0	SAC
Red Rocks and Longay	12.0	NC MPA
Red Bay	9.7	SAC
Carlingford Lough	3.2	MCZ
Outer Belfast Lough	2.5	MCZ
Strangford Lough	164.8	MCZ
Murlough	119.0	SAC
The Maidens	74.7	SAC
Rathlin	90.6	SAC/SPA/MCZ
Waterfoot	0.8	MCZ
Skerries and Causeway	108.7	SAC
Strangford Lough	150.0	MCZ
Total MPA area closed to trawling	45,940 km ²	
Total UK MPA area	338,729 km ²	
% of UK MPA area closed to trawling	13.56%	

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ANNEX 2

METHODOLOGY: USING GLOBAL FISHING WATCH DATA TO IDENTIFY POTENTIAL BOTTOM TRAWLING ACTIVITY

The analysis used to calculate the number of hours of suspected bottom trawling in UK MPAs focused on the UK's 63 offshore benthic MPAs. These sites are located beyond 12 nautical miles from our coast, and are designated specifically for the importance of their seabed features. This analysis utilises Global Fishing Watch (GFW) data on fishing vessels that appeared to have fishing activity between January 1 and December 31 2024 within at least one of the UK offshore benthic MPAs.

For this analysis, Oceana's Illegal Fishing and Transparency team used data from GFW, an independent non-profit founded by Oceana in partnership with Google and SkyTruth. Oceana identified satellite tracks within MPAs that indicated industrial fishing (based on GFW algorithms, machine learning, and a random manual inspection of the data by the Oceana analyst team) and then narrowed the dataset down to vessels that were registered as carrying bottom-trawl or dredging gear as at least one of their gear types. This matching process is external to GFW, since the information from GFW does not currently distinguish between 'bottom' and 'midwater' trawlers. This process used the unique Maritime Mobile Service Identity (MMSI) and the matching Common Fleet Register (CFR) and International Maritime Organization (IMO) identifiers from the apparent fishing activity data and vessel information data pulled from GFW, and then used these CFR and IMO numbers to externally match these vessels to the appropriate registries (the European Fleet Registry and the UK Registry). Please note that the Norwegian Registry does not provide adequately specific gear codes to identify bottom-towed gear. Therefore, no Norwegian vessels are included in these total calculations.

GFW uses data about a vessel's identity, type, location, speed, direction and more that is broadcast using the Automatic Identification System (AIS) and collected via satellites and terrestrial receivers. GFW analyses AIS data collected from vessels that research has identified as known or possible commercial fishing vessels, and applies a fishing presence algorithm to determine "apparent fishing activity" based on changes in vessel speed and direction. The algorithm classifies each AIS broadcast point for these vessels as either apparently fishing or not fishing, and shows the former on the GFW fishing activity heat map. AIS data, as broadcast, may vary in completeness, accuracy and quality. Also, data collection by satellite or terrestrial receivers may introduce errors through missing or inaccurate data.

GFW's fishing presence algorithm is a best effort to mathematically identify "apparent fishing activity". As a result, it is possible that some fishing activity is not identified as such by GFW; conversely, GFW may show apparent fishing activity where fishing is not actually taking place. For these reasons, GFW qualifies designations of vessel fishing activity, including synonyms of the term "fishing activity", such as "fishing" or "fishing effort" as "apparent" rather than "certain". Any/all GFW information about "apparent fishing activity" should be considered an estimate and must be relied upon solely at your own risk. GFW is taking steps to make sure fishing activity designations are as accurate as possible. GFW fishing presence algorithms are developed and tested using actual fishing event data collected by observers, combined with expert analysis of vessel movement data resulting in the manual classification of thousands of known fishing events. GFW also collaborates extensively with academic researchers to share fishing activity classification data and automated classification techniques.

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