

Fact Sheet

The study, [Protecting the global ocean for biodiversity, food and climate](#), answers the question of which places in the ocean should we protect for nature and people. The authors developed a novel framework to produce a global map of places that, if protected from fishing and other damaging activities, will produce multiple benefits to people: safeguarding marine life, boosting seafood production and reducing carbon emissions. Twenty-six scientists and economists contributed to the study.

Study's Topline Facts

- *Ocean life has been declining worldwide because of overfishing, habitat destruction and climate change. Yet only 7% of the ocean is currently under some kind of protection.*
- *A smart plan of ocean protection will contribute to more abundant seafood and provide a cheap, natural solution to help solve climate change, alongside economic benefits.*
- *Humanity and the economy would benefit from a healthier ocean. Quicker benefits occur when countries work together to protect at least 30% of the ocean.*
- *Substantial increases in ocean protection could achieve triple benefits, not only protecting biodiversity, but also boosting fisheries' productivity and securing marine carbon stocks.*

Study's Topline Findings

- *The study is the first to calculate that the practice of bottom trawling the ocean floor is responsible for one gigaton of carbon emissions on average annually. This is equivalent to all emissions from aviation worldwide. It is, furthermore, greater than the annual emissions of all countries except China, the U.S., India, Russia and Japan.*
- *The study reveals that protecting strategic ocean areas could produce an additional 8 million tons of seafood.*
- *The study reveals that protecting more of the ocean--as long as the protected areas are strategically located--would reap significant benefits for climate, food and biodiversity.*

Priority Areas for Triple Wins

- *Priority conservation areas change depending on the priority that is valued most--biodiversity, climate change or food provision.*
 - *If society were to value marine biodiversity and food provisioning equally, and established marine protected areas based on these two priorities, the best conservation strategy would protect 45% of the ocean, delivering 71% of the*

possible biodiversity benefits, 92% of the food provisioning benefits and 29% of the carbon benefits.

- *If no value were assigned to biodiversity, protecting 29% of the ocean would secure 8.3 million tons of extra seafood and 27% of carbon benefits. It would also still secure 35% of biodiversity benefits.*
- *Global--and not national--priorities should be the focus.*
 - *Global-scale prioritization helps focus attention and resources on places that yield the largest possible benefits.*
 - *A globally coordinated expansion of marine protected areas (MPAs) could achieve 90% of the maximum possible biodiversity benefit with less than half as much area as a protection strategy based solely on national priorities.*
- *Exclusive Economic Zones (EEZs) are key.*
 - *Among those unprotected marine areas with the highest potential for a triple win--biodiversity conservation, carbon storage and food provision--most are found in EEZs.*
 - *EEZs are areas of the global ocean within 200 nautical miles off the coast of maritime countries that claim sole rights to the resources found within them. ([Source](#))*

Priority Areas for Climate

- *Eliminating 90% of the present risk of carbon disturbance due to bottom trawling would require protecting 3.6% of the ocean, mostly within EEZs.*
- *Priority areas for carbon are where important carbon stocks coincide with high anthropogenic threats, including Europe's Atlantic coastal areas and productive upwelling areas.*

Countries with the highest potential to contribute to climate change mitigation via protection of carbon stocks are those with large EEZs and large industrial bottom trawl fisheries.

Priority Areas for Biodiversity

- *Through protection of specific areas, the average protection of endangered species could be increased from 1.5% to 82% and critically endangered species from 1.1% to 87%.*
- *Other priority areas are around seamount clusters, offshore plateaus and biogeographically unique areas including:*
 - *the Antarctic Peninsula*
 - *the Mid-Atlantic Ridge*
 - *the Mascarene Plateau*
 - *the Nazca Ridge*
 - *the Southwest Indian Ridge*
- *Despite climate change, about 80% of today's priority areas for biodiversity will still be essential in 2050. In the future, however, some cooler waters will be more important protection priorities, whereas warmer waters will likely be too stressed by climate change to shelter as much biodiversity as they currently do. Specifically, some temperate regions and parts of the Arctic would rank as higher priorities for*

biodiversity conservation by 2050, whereas large areas in the high seas between the tropics and areas in the Southern Hemisphere would decrease in priority.

Priority Areas for Food Provision

- *If we only cared about increasing the supply of seafood, strategically placed MPAs covering 28% of the ocean could increase food provisioning by 8.3 million metric tons.*