

# How do we use the sea?

## Fact File



### The ocean's natural services

**The ocean is a vital support system for our planet.**

- It plays a major role in the **water cycle**
- Marine plants and algae produce over 50% of the **oxygen** we breathe
- Marine habitats help to store **carbon**, which is vitally important in our fight against climate change
- The ocean regulates our **climate**
- Coastal habitats **protect** coastal villages and towns from storms and flooding



Eelgrass bed  
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Salt marsh habitat, Wales  
© James Hime via Shutterstock



### Ocean resources and human uses

The ocean provides us with many resources that we use in our daily lives, from food and medicine to fuel and electricity. Hundreds of people work in marine industries. With a growing population, the demand on ocean resources is increasing. Perhaps because the ocean is so vast, we underestimate humans' ability to have an impact on it, but these resources aren't limitless and harvesting them can cause damage to marine ecosystems. Read on to learn more about the different ways we use the ocean.

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Ocean industry	Human use	Possible threat
<b>Seafood</b>	Billions of people all over the world rely on seafood for an income and as a source of food	Overfishing affects marine food chains and biodiversity, and it can cause fish populations to collapse. Destructive fishing methods can also badly damage seabed habitats. Intensive fish farming can cause reduction in water quality, and spread disease and parasites to wild fish.
<b>Oil &amp; gas</b>	99% of the oil and gas we use in the UK comes from under the sea. (1) The industry supports around 300,000 jobs in the UK and is important to the economy (2)	Drilling for oil and gas can pose serious threats, from construction of platforms, transporting of goods, creating pipes lines and through extremely destructive oil spills. The industry is also responsible for greenhouse gas emissions, contributing to climate change which in turn is having damaging effects on the ocean.
<b>Shipping</b>	95% of goods moving in and out of the UK are transported by sea. (3) 20.7 million international passengers pass through UK ports each year (4)	Shipping can be associated with noise pollution, emissions, oil spills, container spills, dumping of rubbish at sea and chemical pollution. Shipping can also directly damage the environment through anchoring, shipwrecks, and direct contact with large marine mammals. Shipping is also associated with the movement of invasive species through ballast water, which is when ships store water to even out the weight of the boat. This water can be loaded on in one location and then discharged in another, meaning small animals and plants within the water can be transported to new areas. Biofouling – the accumulation of plants and animals on the hull of the boat – can also transport non-native species to new locations.

1. wintershalldea.com 2021
2. Oilandgasuk.co.uk 2021
3. Foresight Future of the Sea 2018
4. Department for transport 2020

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<b>Marine aggregates</b>	Sand and gravel is dredged from the seafloor to provide materials for construction, for coastal defences, and to increase the depth of shipping channels	Dredging physically damages seafloor communities of plants and animals where the material is removed and where it is deposited.
<b>Offshore windfarms</b>	Offshore wind powers the equivalent of 4.5 million homes a year (5)	Construction of wind farms can directly damage marine environments, migratory species, and cause noise pollution.
<b>Aquarium trade</b>	With an estimated 2 million people worldwide keeping marine aquariums, the aquarium trade is worth around £237 million (6)	Coral reef species make up the majority of the aquarium trade. Collecting these species in the wild can be very destructive to the habitat and non-target fish. Some fish that have been targeted are at risk of extinction.
<b>Tourism</b>	60% of the world's population live within 60km of the coast, and many people use beaches and coastal waters for recreation and tourism. Coastal tourism is an important livelihood for many people in the UK and benefits the economy	Pressure from coastal development and recreational activities can cause harm to sensitive habitats. Activities on the ocean like boating can discharge oil, damage seabed habitats through anchoring and cause noise pollution. Coastal development on land reduces areas of natural coastal habitats. This reduction directly reduces biodiversity and also reduces vital functions these habitats provide, like helping protect land from erosion and helping to filter nutrient runoff from land.
<b>Medicine</b>	Many medicines are derived from natural sources on land, but the ocean is also a source of medicine. Many marine plants and animals are being studied to find new medicines	Healthy seas with healthy species are required to be able to derive medicine from the sea. If resources for medicines aren't harvested sustainably this could contribute to a decline in habitat health.

5. renewableuk.com 2021

6. UNEP 2003

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### Protecting our ocean

To ensure a healthy ocean for the future, we must reduce habitat damage, ensure sustainable harvesting and protect vital ecosystems.

#### How can we protect the ocean?



**Legislation and laws** are in place to reduce threats. Many activities require licenses, like removal of any material, construction work, work which may include disturbing or collection of wildlife, any activity which may have contact with the seabed, and any activity that might deposit substances into the sea. These activities must pass several environmental criteria before being issued a license



**Marine Protected Areas (MPAs)** are similar to nature reserves. They are set up to protect specific species or whole habitats. MPAs can reduce destructive activities and protect and recover biodiversity. It's estimated that, within Europe, for every €1 invested into MPAs there could be a return of €3 due to the value of services they provide (7)



**Fully Protected Marine Areas or No Take Zones** are strict MPAs where all damaging activities are banned to allow habitats a chance to recover and thrive



**Restoration projects** aim to actively restore habitats through conservation work



### Difficulties in protecting our ocean

Managing the ocean is tricky, as there are many stakeholders with conflicting interests and opinions, including governments, commercial industries, large and small-scale fishers, tourist industries, environmental NGOs, scientific communities and coastal inhabitants.

The ocean is a vast space and managing activities is logistically and financially difficult.

7. European Commission 2020