

BE THE WAVE AR FRIG Y DON

Threats to the Ocean

Background Information



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**MARINE
CONSERVATION
SOCIETY**



UNDEB EWROPEAIDD
EUROPEAN UNION



Llywodraeth Cymru
Welsh Government

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Threats to the Ocean

Why do we need to protect the ocean?

The ocean covers over 70% of the planet and is home to some of the most colourful, fascinating and beautiful life in the world. The ocean is a vital support system for our planet, playing a major role in the water cycle, providing oxygen, storing carbon, regulating our climate and providing food for millions of people.

Human activity has been threatening the health of our ocean for centuries and harming the oceans' ability to support us. One third of the world's population live by the coast, putting enormous pressure on coastal ecosystems. Fragile habitats have been destroyed, once-common species are now endangered, and marine resources have been exhausted. Our seas are under threat all around the world, with marine ecosystems some of the most heavily exploited ecosystems on the planet. Perhaps because the ocean is so vast, we underestimate our ability to have an impact on it.

Threats

Marine Litter - 80% of marine litter comes from sources on land, and our throwaway society is having a harmful effect on marine life. 60-90% of marine litter is made of plastic items, which can take hundreds of years to break up. Animals can become entangled in litter, causing injury, reduced mobility and even death. Ingestion of litter, particularly plastic, is very problematic for marine life which is unable to digest it. Consumers and businesses are beginning to change their behaviour to reduce the threat of plastic pollution, but we are still a long way off where we need to be.

Chemical Pollution - There are many forms of invisible pollutants causing harm to the ocean. Sewage enters the ocean either treated from water treatment plants or untreated from drains. Harmful chemicals from factories, industries and even household products are discharged into rivers finding their way eventually to the ocean. Agriculture runoff entering the ocean contains pesticides and other chemicals which can cause algal blooms, reducing oxygen and harming marine life. Toxic chemicals can build up in food chains causing harm to a variety of marine life. Due to the mobility of the ocean, chemical pollutants can travel in ocean currents and have been found in areas of the ocean miles away from human activity.

Climate change - Human activities are producing high levels of CO₂ and other greenhouse gases, leading to climate change. The ocean is absorbing these harmful emissions and is rising in temperature. Marine ecosystems are sensitive to even modest changes to their environment. Increasing temperatures is causing coral reefs to bleach and die and species to change their natural migration routes. Ocean acidification (caused by an increase in CO₂ affecting the chemistry of the ocean) is affecting species that have calcium carbonate skeletons, like mussels and lobsters. Rising sea levels and increased storms are affecting fragile coastal habitats.



Unsustainable fishing practices - Billions of people all over the world rely on seafood for income and food. However, unsustainable fishing poses a huge threat to marine biodiversity, affecting food chains and causing depleting fish stocks. 90% of the world's fish stocks are fully or over-exploited. Destructive fishing like trawling and dredging can badly damage seabed habitats. Illegal and unregulated fishing has disastrous effects on marine environment and harms the livelihood of honest fishers. Intensive fish farming causes pollution and depletion of wild caught fish stocks, through their use of fish feed the spread of diseases and parasites to wild fish.

Trafficking of marine life - Species like seahorses, sharks and eels are caught for their value in the traditional medicine market, as seaside souvenirs and delicacies like shark fin soup. Every year, an estimated 150 million seahorses are caught for the souvenir and medicine trades. As a species, seahorses could be extinct by 2050. The critically endangered European eel is the centre of the largest wildlife crime in Europe, with illegal trafficking to Asia becoming a multibillion-euro industry.

Oil & Gas - Drilling for oil and gas can pose serious threats to the marine environment, from the construction of platforms, transportation of goods, creation of pipelines and through extremely destructive oil spills.

Construction & Dredging - In the ocean construction occurs for oil and gas rigs, wind turbines, pipelines, coastal development or the extraction of marine sediments for construction on land. All cause harm to the marine environment through destruction of habitats and noise pollution.

Recreation and tourism. - 60% of the world's population live within 60km of the coast and many people use beaches and coastal waters for recreation. Pressure from recreational development and activities can cause harm to sensitive coastal habitats. Activities such as boating can cause harm through oil discharge and damage to seabed habitats through anchoring. Natural coastal habitats are being destroyed to make room for development. This not only directly reduces biodiversity but also reduces the vital functions these habitats provide, such as helping to protect land from erosion and helping to filter nutrient runoff from land.

Shipping - Many of our commercial goods are transported around the world by our shipping industry. This industry is associated with causing large amounts of pollution through emissions, oil spills, container spills, dumping of rubbish at sea and chemical pollution through anti fouling paint. Shipping also causes damage through anchoring, shipwrecks, noise pollution, direct contact with large marine mammals and the movement of invasive species through ballast water.

Managing threats in the marine environment

Managing activities in the marine environment is important to protect the future health of the ocean, but it is an incredibly difficult task. There are many stakeholders who all have conflicting opinions, including: governments, commercial industries, large and small-scale fishers, tourist industries, environmental NGOs, the scientific community and coastal inhabitants. The ocean is a vast space and managing activities within it is logistically and financially difficult.



Ecosystem based management - EBM is an integrated approach to managing the oceans resources. Rather than considering a single issue, species or ecosystem, this type of management seeks to protect the environment, while continuing to support communities and the economy. It's important that the various users of the sea understand how their interactions with the ocean affect its environment. By better understanding this connection, users can be better prepared to predict risk and work to eliminate any harm to the ocean. EBM is also about assessing the cumulative impacts on the ocean. Users from various sectors need to work collaboratively with each other to increase knowledge and ensure sustainability of ocean resources.

Marine Protected Areas - MPA act like nature reserves, protecting specific vulnerable species or whole habitats due to their importance as breeding or feeding grounds. MPA is a catch all term and there are many different types in the UK, including: Special Protected Areas (SPAs), Special Areas of Conservation (SACs), Marine Conservation Zones (MCZs) or RAMSARR sites. MPA have the ability to reduce destructive activity and to protect and recover biodiversity. But in order for MPA to work effectively, a network of sites is needed across the UK, as marine species are mobile. Many of the designations are merely names and damaging activities still take place within some of these areas. MPA need to be better managed and enforced, and we need to increase the number of highly protected marine areas / no take zones, where all damaging activities are banned.

Restoration – Restoration projects aim to actively restore habitats through conservation work. For example, initiatives such as Project Seagrass in Wales and Remedies project in South-West England aim to restore seagrass beds by collecting and cultivating seeds, then actively planting these seeds in the coastal waters at suitable sites.

Legislation, Laws & Licences - Legislation and laws are in place to reduce threats. Many activities require licenses and marine industries such as dredging, and construction must pass several environmental criteria before being issued with a license.



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