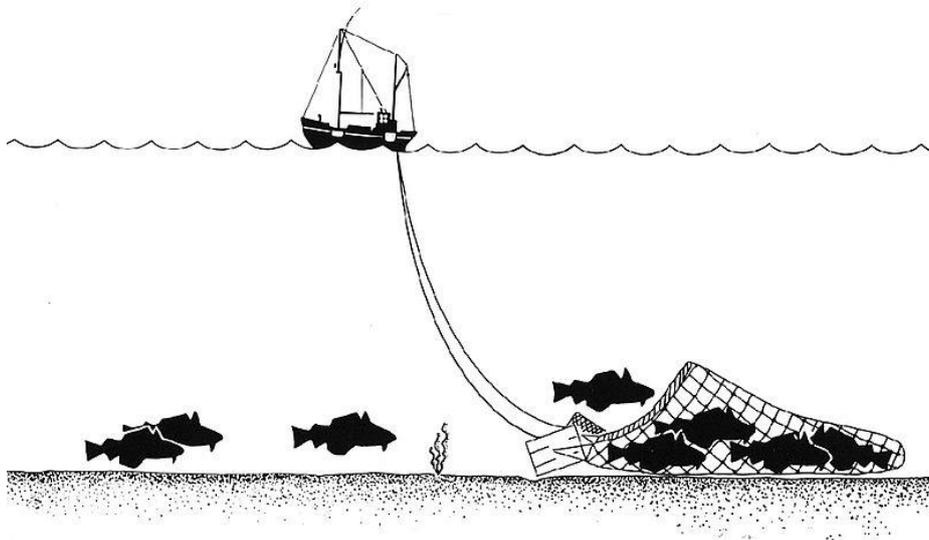


Overfishing Resource Pack

This resource pack has been developed for Secondary School students working on the Green-Schools Global Citizenship Marine Environment theme. It includes:

- “Overfishing – what’s it all about?” - a brief overview of overfishing, highlighting the main issues
- What can you do? - ideas for taking action on overfishing
- Glossary of terms
- Discuss – a series of questions are provided, to be discussed in groups or as a class
- Useful links and resources





Overfishing – what’s it all about?

Overfishing occurs when humans take too many fish out of the ocean – the fish cannot breed fast enough to replace the fish that have been lost. This has big impacts for ocean ecosystems as each species plays an important role in maintaining the natural balance. It also affects the health of the remaining fish populations as fish aren’t able to grow as large as they used to in previous generations, this in turn means that they can’t produce as many offspring, which makes it even more difficult for the population to return to a healthy size.

Humans have been impacting on fish populations for thousands of years, however in the past 200 years fishing technology has rapidly improved, meaning that we have the ability to take massive numbers of fish from the ocean very quickly. This has led to the “collapse” of certain species’ populations. Given time these populations may recover, but only if they are no longer exploited.

As well as reducing fish populations and disrupting ecosystems, some fishing methods can also have devastating effects on marine habitats. Trawling is a fishing process that involves dragging a net along the sea bed. In doing so, the sea floor is damaged and many animals which live here, and may not necessarily be the target of the fishers, suffer habitat loss.

By-catch and **discards** are two other important issues associated with overfishing. By-catch are the non-target species which get caught in nets, but are not wanted because they are not the ‘**target**’ species or are not usually eaten, and so are not profitable. These fish, and other animals such as dolphins and turtles, often die or are injured before they are brought on board the fishing vessel. They are usually thrown back into the sea, but their chances of survival are slim.

Discards are fish that are thrown back over-board, because they exceed the fishing vessel’s quota. Fishing vessels are only allowed to catch a certain number of fish according to international laws, but often catch more than this because they are so well designed. Even-though the fish that is caught is perfectly good for eating, and may already be dead, it will be thrown back overboard anyway.

Overfishing is an issue which is very relevant to our Global Citizenship – fish do not know borders and our ocean ecosystems are all interconnected. It is essential that we take action to end overfishing if we want to regain a healthy and productive ocean.

What can you do?

It is important that we take action to tackle overfishing before irreparable damage is done to our ocean ecosystems. Fish is an important source of protein for over 3 billion people around the world; as the human population increases, so do the demands on our natural environment. Unfortunately, our natural resources are not limitless, and unless we stop taking so many fish out of the ocean, our ocean ecosystems will stop functioning properly altogether. However, by making informed decisions about the kind of fish we buy and by campaigning for lower fishing quotas we can help reduce the impact we are having on the marine environment. Here are some ideas to help you get started:

- Do a project on overfishing and help inform your school and wider community: for example, investigate the cod fisheries off eastern Canada, or the blue-fin tuna fishery.
- Hold a class discussion or debate about the possible solutions to over-fishing.
- Investigate the different types of fishing methods used by fishers around the world – which ones do you think are the most sustainable? Which ones catch the most fish? Here are some terms to look up to get you started: “purse-seine net”, “pole and line fishing”, “super trawler”, “artisanal fishery”.
- Download the [Good Fish Guide](#) or App from the Marine Conservation Society UK.
- Make informed choices about what kind of fish you eat and how and where it is caught.
- Ask your TD and MEP to campaign the government and the EU for fishing quotas that are in line with scientific advice.
- Encourage your friends and family to make sustainable choices when buying and eating fish.



Glossary of terms

By-catch – Animals (fish, sharks, marine mammals, turtles, seabirds, octopus etc.) that are caught by fishing vessels accidentally and were not the intended target species.

Common Fisheries Policy – “The Common Fisheries Policy (CFP) is a set of rules for managing European fishing fleets and for conserving fish stocks. Designed to manage a common resource, it gives all European fishing fleets equal access to EU waters and fishing grounds and allows fishermen to compete fairly.” (See ec.europa.eu/fisheries/cfp for further details)

Discards – When a fishing vessel catches too many fish (above its quota), the extra fish are discarded (thrown back) though they are often already dead or injured.

Exploit – To take advantage of or make full use of, often to an extent that it is unsustainable.

Fishery collapse – A collapsed fishery occurs when a fish stock is reduced to 10% of its historic productivity; although it is likely that we are already underestimating the “historic productivity”.

Population – A community of animals of a particular species.

Quota – The amount of fish of each species that a fishing vessel or an individual country is allowed to catch, in a given time period; often measured by weight.

Species – Animals of the same type, capable of inter-breeding; e.g. cod is a species of fish, puffin is a species of bird.

Stock – The supply or quantity of fish in the ocean.

Sustainable – Able to be maintained over time.

Total Allowable Catch – The fishing quota of a particular vessel; this is set by the European Commission.

Trawling – Fishing using a large wide-mouthed fishing net which is dragged along the seabed.

Discuss

How do you contribute to overfishing? Do you know if the fish you/your family eat is caught in a sustainable way?

Can you name any fish species that you know are overfished?

Why do you think overfishing is a problem? What impact do you think it will have on ocean ecosystems if we continue to overfish?

Do you think large-scale commercial fisheries have a positive or negative impact on local economies? Compare and contrast different parts of the world.

Have you ever gone fishing? When you hear the word “fishing” or “fishery” what images come to mind?

Can you think of any other impacts that fisheries have on the marine environment – aside from reducing fish populations?

Fish farming has been suggested as a potential alternative to catching wild fish – but unfortunately it is not so straight-forward. Carry out a research project and discuss the pros and cons of fish farming – is it really a sustainable solution?

What do you think we should do about overfishing? Can you think of any solutions? What are the pros and cons of different measures we can take to reduce overfishing?

The ocean is a shared global resource – how do you think this affects the management of fish stocks and the enforcement of fisheries laws?



Useful Links & Resources

Videos:

<https://ed.ted.com/featured/Vs2D6GfT> - 4 minute TED ED video explaining overfishing.

<https://ed.ted.com/lessons/will-the-ocean-ever-run-out-of-fish-ayana-elizabeth-johnson-and-jennifer-jacquet#watch> – 6 minute TED ED video “Will the world ever run out of fish?”

<https://www.youtube.com/watch?v=-V4D77N3bZc> – excerpt from documentary “Planet Ocean”, focusing on overfishing.

Informative websites:

<http://stopoverfishing.eu/> - Oceana is the largest international advocacy organization dedicated solely to ocean conservation.

<https://www.worldwildlife.org/industries/sustainable-seafood> - the World Wildlife Fund is the world's leading independent conservation organisation.

<https://www.mcsuk.org/responsible-seafood/> - the Marine Conservation Society is the leading non-profit organization for marine conservation in the UK.

<http://www.pewtrusts.org/en/projects/ending-overfishing-in-northwestern-europe/> - campaign information from PEW Charitable Trusts, an American NGO.

<http://www.greenpeace.org/archive-international/en/campaigns/oceans/seafood/understanding-the-problem/fisheries-problems-today/> - the Greenpeace website has a lot of information about the different types of fishing