



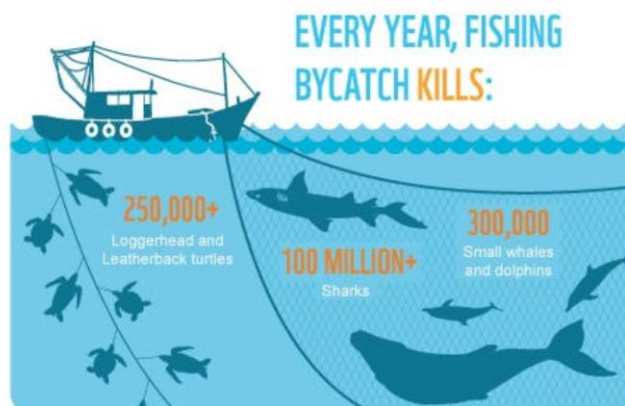
Implementing Measures to Prevent Bycatch and Overfishing in the Mediterranean
Environmental Committee

Thomas Li-Behn & Annemijn Ezechiëls, Chair & Deputy Chair



Introduction

Fishing might not seem like a big threat at first sight. However, when you start to look closer at the effects of bycatch and how it affects overfishing, worrying details will start to appear. Ocean wildlife populations are declining rapidly because of overfishing and bycatch. Especially in the Mediterranean, this is a big problem since this is the world's most overfished sea according to a report by the FAO.



Bycatch means that not only the intended species are captured. Species such as dolphins, whales, seabirds and marine turtles are caught in large fishing nets. Every year around 93 million tons of fish are being caught. Nevertheless, over 41% of this is bycatch. Many of these fish are thrown away. Even though they will never make it to the market, this directly affects the population.

Overfishing occurs when vessels catch fish faster than stocks can restore. The damage of overfishing and bycatch on marine life is disastrous, but the damage also goes beyond the sea. Many people rely on fish for food and jobs. Preventing bycatch and overfishing should be a main concern of the UN. Luckily, organisations such as The United Nations Food and Agriculture Organisation (FAO) and the Global Environment Facility (GEF) have been putting in efforts to preserve and protect international waters.

Definition of Key Terms

Catch shares

Catch shares is a fisheries management system that is all about dedicating shares of fish to individual fishermen, cooperatives, or communities. It focuses on making it advantageous to harvest a specific (safe) area

Trawling

Trawling is one of the most unsustainable and wasteful fishing techniques used in the Mediterranean. Fishermen drag large and heavy nets along the seafloor, destroying everything in their way. This technique causes a lot of bycatch.



Total Allowable Catch

Every year governments agree on a Total Allowable Catch (TAC). They use this tool to establish maximum fishing limits during a specific timeframe. Unfortunately, this TAC system does not work supposedly, because recommendations are systematically ignored.

NGO

A Non-Governmental Organisation is typically an organisation that has not been established by a specific country. They are run by volunteers, charity, or government funding. Non-Governmental organisations usually have a social mission. An example of a successful NGO is the Red Cross.

United Nations Convention on the Law of the Sea

The United Nations Convention on the Law of the Sea (UNCLOS) is an international agreement. It informs states of their duty to protect the marine environment. Currently, a total of 162 countries and the European Union have ratified UNCLOS.

the National Oceanic and Atmospheric Administration (NOAA)

The agency that the federal government of the United States of America put in place in October 1970 to monitor our climate and environment and take steps to preserve them. Their tasks include the *Environmental Assessment and Prediction*, which provides short-term weather forecasting and the *Protecting Natural Resources while Helping Develop Them* aiming to protect coastal ecosystems in the United States of America.

General Overview

History

Once called the Mare nostrum by Romans, the Mediterranean has seen centuries of fishing, in which the ecosystems thrived. It was a propellant for the invention and development of trade by boat. Much of the culture of countries surrounding the sea stems from the inspiration and globalisation which had a positive impact on the Mediterranean. During the 1970s, the advancements in technology allowed fleets to fish for aquatic life both in greater intensity and in greater volume.

The Mediterranean sea is only in contact with one other massive body of water, the Atlantic Ocean, through a connection between Morocco and Portugal. Surrounded by Southern Europe and the west side of North Africa, the Mediterranean is essentially closed off and surrounded by bodies of land. With an area of 2.5 million

km squared, it is the most overfished sea in the entire world, having 62% of its caught fish go to waste due to enormous amounts of bycatch. With a 1.5km average depth, it is an ecosystem that flourishes with aquatic life.

Current Situation

Overfishing has become a major issue globally, but especially in enclosed ecosystems such as the Mediterranean sea. In recent years the Mediterranean has seen a surge in fishing, forcing the once described “international biodiversity hotspot” to come under the threat of overfishing which could lead to the extinction of certain aquatic life groups. From 1970 to 2010 both tuna and mackerel have been subject to a 74 percent drop in population. This unsustainable practise of pushing biological limits will end disastrously.

Overfishing has become part of the industry and several factors contribute to the challenges of preventing overfishing. These challenges include difficulties in quantifying overfishing in individual cases, fluctuations in supply vs. demand, and fish industry prices.

Currently, an estimate of the overfishing in the Mediterranean by the United Nations ranks the Mediterranean as the most overfished sea in the world. This is by far biologically unsustainable for the sea which is exclusively home to almost 519 different native fish species out of a total of 712 exclusive and widespread species. 9 out of 10 fish species are under constant overfishing. Some of the most popular fish such as the red mullet, angler fish and European hake are being harvested at rates 10 times the limit which is considered sustainable by organisations like Oceana. The methods which are tied to these mass fishing techniques also destroy the aquatic ecosystem. Juvenile and undersized fish are caught in these methods which often leads to their deaths or careless disposal.



Ocean floor vegetation is extremely important for the upbringing of certain species of fish and acts as nurseries until the fish are old enough to move on from these habitats. An example of an industrial fishing technique is the use of a fishing trawler which drags heavy nets across the ocean floor, leaving full-on aquatic wastelands, destroying coral reefs and habitats. This method leads to mass bycatch which refers to the catching of fish or other sea creatures that were not intended to be caught or are not legally allowed to be sold. This differentiates from overfishing which is a term used to

describe the impact on the fish ecosystem through fishing more fish from certain species than the fish can reproduce, meaning that the supply will eventually stop replenishing itself.

It comes as a top priority to prevent overfishing before the Mediterranean ecosystem is further propelled into danger of dying out.



Major Parties Involved

FAO

The United Nations Food and Agriculture Organisation, short for FAO, is a United Nations specialized agency that leads international efforts to end hunger, improve nutrition, and ensure food security. The FAO has often discussed the issue of global overfishing hurting countless ecosystems, such as the Mediterranean. Some of its actions include creating an international plan of action at the request of the COFI committee of fisheries. The plan's main objective was transparent management of fishing capacity. Domestic plans would include taking immediate action on coastal fishing problems and strengthening organisations for improvements on fishing boundaries and capacities.

GEF

For over 4,800 projects in 170 countries, the Global Environment Facility (GEF) has provided close to \$20.5 billion in grants and mobilized an additional \$112 billion in co-financing. On the eve of the 1992 Rio Earth Summit, the Global Environment Facility (GEF) was established to assist in addressing our planet's most pressing environmental problems. The GEF brings together 184 countries to address global environmental issues while supporting national sustainable development initiatives in collaboration with international institutions, civil society organizations (CSOs), and the private sector.

Oceana ORG

Oceana is a non-profit organisation that is dedicated to the preservation and protection of the world's oceans. Their goal is to make our oceans more biodiverse and to take care of aquatic life. Some of the ways they achieve this is through infographics, and national policy influence in different countries such as the US. Although Oceana was first founded in the US, it is considered an NGO due to its influence on global discussions.

Mediterranean Recovery Action

Mediterranean Recovery Action (MedReAct) is an organisation that has 'taking action for the recovery of the Mediterranean ecosystems' as its main goal. They strive to do this by establishing Fish Recovery Areas (FRA's). They work closely with World Wildlife Fund (WWF) and Oceana.



Spain

Spain is claimed to be the leader in overfishing in the Mediterranean. They want to allow more fishing in the Mediterranean in 2022 than the European Union Commission is demanding. They are also negotiating about reducing trawling in the Mediterranean. They probably do not want to accept a reduction.

Portugal

Portugal positions itself in the same way as Spain regarding this issue. They do not show any support for the reduction of using trawl nets in the Mediterranean. A lot of sharks and rays are subject to bycatch in Portugal. Portugal is also the number one import and export of sharks and rays.

Italy

Italy has the largest fleet in the European Union and many of its inhabitants rely on fishing. Illegal, Unreported and Unregulated (IUU) fishing is a big problem in Italy. This results in tons of overfishing. The intensive use of non-eco-friendly fishing techniques is just as devastating.

Timeline of Key Events

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| 5 April 1949 | EFCA establishes the General fisheries commission for the Mediterranean (GFCM). |
| 1970s | Technology allows fleets to fish farther, resulting in the beginning of Overfishing and Bycatch |
| 21 October 1972 | Marine Mammal Protection Act (MMPA) was implemented by the NOAA, the U.S. Fish and Wildlife Service and the Marine Mammal Commission |
| 1 July 1975 | Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) entered into force. This had a lot of impact on global fisheries. |
| 10 December 1982 | Concerns and discussions on the issue of overfishing and bycatch during UNCLOS, which followed with an international agreement on all marine and maritime activities. |
| 9 July 2018 | UN declares the Mediterranean the most overfished sea globally |



Previous attempts to resolve the issue

Even though this issue is very important and there needs to be something done, previous achievements are minimal. Especially in the Mediterranean, there have been very few efforts to try to resolve this issue. There has been some attention to the topic. Mostly by NGOs like the National Oceanic and Atmospheric Administration (NOAA), but this organisation only focuses on the USA. During the United Nations Convention on the Law of the Sea (UNCLOS) in 1982, some countries raised their concerns about the issue of overfishing and bycatch. This resulted in fisheries agreements between some EU countries and some non-EU countries. A lot of the catch shares in the EU are shared because of this. In 1949 the European Fisheries Control Agency (EFCA) established the General Fisheries Commission for the Mediterranean (GFCM). This management organisation focuses on the conservation of the Mediterranean and the Black Sea.

Possible Solutions

To prevent bycatch and overfishing on a large scale, a number of measures can be put forward both on international and national levels. Delegates can look into improving laws and rules regarding the improvement of fishing gear. Research about innovative fishing nets is still developing. By funding research programs globally, fishing gear can be improved faster. They should think about making sure that these rules are followed by fishermen.

Delegates should also look into protecting areas in international and national waters. As of now, less than 2% of the global oceans are Marine Protected Areas (MPA's) and in less than 1% of the oceans, any kind of fishing is forbidden. By making more Marine Protected Areas and no catch areas, fish populations get the chance to replenish and their ecosystems get the chance to recover. When taking this solution into consideration delegates should not forget to include an alternative for where our fish comes from when there are more Marine Protected Areas.

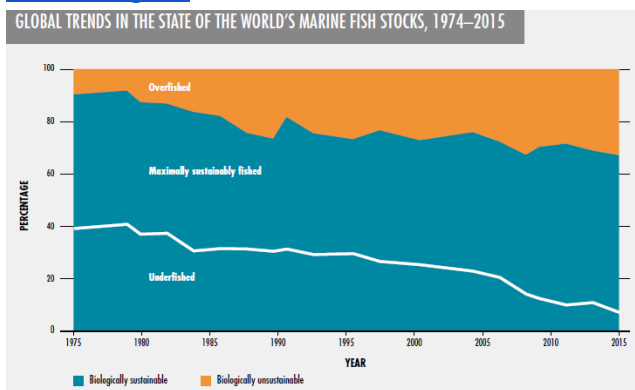
Delegates could strive to work together and accomplish catch shares. This management system is proven to allow plenty of fish stocks to replenish while still providing fishing communities with livelihood by preventing a sudden collapse of the market. Catch shares make seafood more valuable resulting in a more predictable and higher salary for fishermen. However, catch shares are not the best solution for the ecological problem.

Spreading awareness about overfishing and bycatch is essential to resolve this issue. Educating people about how to consume smarter and more sensible could help a

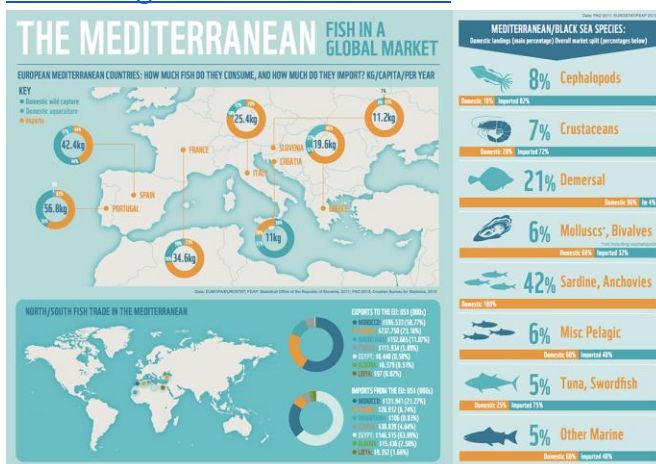
lot. Delegates can try to provide more people with the right education and to spread the word about this issue.

Appendix/Appendices

- Oceana, UN alert: Mediterranean is world's most overfished sea. <https://europe.oceana.org/en/press-center/press-releases/un-alert-mediterranean-worlds-most-overfished-sea#:~:text=The%20Mediterranean%20Sea%20is%20the,on%20fishing%20in%20the%20region.>



- Geo Geographical, Is the Mediterranean becoming a second 'Dead Sea'?. <https://geographical.co.uk/nature/oceans/item/2856-is-the-mediterranean-becoming-a-second-dead-sea>



Bibliography

Donovan, Sophie. "Is the Mediterranean Becoming a Second 'Dead Sea'?" - Geographical Magazine." *Geographical.co.uk*, <https://geographical.co.uk/nature/oceans/item/2856-is-the-mediterranean-becoming-a-second-dead-sea>.

"FAO Fisheries & Aquaculture." *Www.fao.org*, <https://www.fao.org/fishery/en/ipoa-capacity>.

"Fisheries." *Www.wwfmmi.org*, https://www.wwfmmi.org/what_we_do/fisheries/.

Hitchcock, Kristin. "24 Overfishing Statistics & Facts in 2021." *It's a Fish Thing*, 23 Aug. 2021,

<https://www.itsafishthing.com/overfishing-statistics-facts/>.

"International Agreements on Fisheries." *Www.consilium.europa.eu*, <https://www.consilium.europa.eu/en/policies/eu-fish-stocks/international-agreements-on-fisheries/>

"International Plan of Action for the Management of Fishing Capacity." *Www.fao.org*, 27 Feb. 2022,

<https://www.fao.org/3/x3170E/x3170e04.htm>

Lawson, Craig, and Marta Madina. "UN Alert: Mediterranean Is World's Most Overfished Sea." *Oceana Europe*, 9 July 2018,

<https://europe.oceana.org/en/press-center/press-releases/un-alert-mediterranean-worlds-most-overfished-sea>

Mrowiec, Agata. "Overfishing and Pollution Have Trashed the Mediterranean." *Oceana*, 16 Aug. 2018, <https://oceana.org/blog/overfishing-and-pollution-have-trashed-mediterranean/>

Nations, United. "The Mediterranean Sea: Cradle of Civilization." *United Nations*, <https://www.un.org/en/chronicle/article/mediterranean-sea-cradle-civilization>.

"Tackling Overfishing – EU Push for Sustainability Shows Results." *Ec.europa.EU*, 20 Feb. 2018, https://ec.europa.eu/oceans-and-fisheries/news/tackling-overfishing-eu-push-sustainability-shows-results-2018-02-20_en.

"The Effects of Overfishing & Bycatch." *Ian Somerhalder Foundation*, <https://www.isfoundation.com/news/effects-overfishing-bycatch>.

24 Overfishing statistics and facts, August 2021

<https://www.itsafishthing.com/overfishing-statistics-facts/>