

Committee: Environment Sub-Commission 1

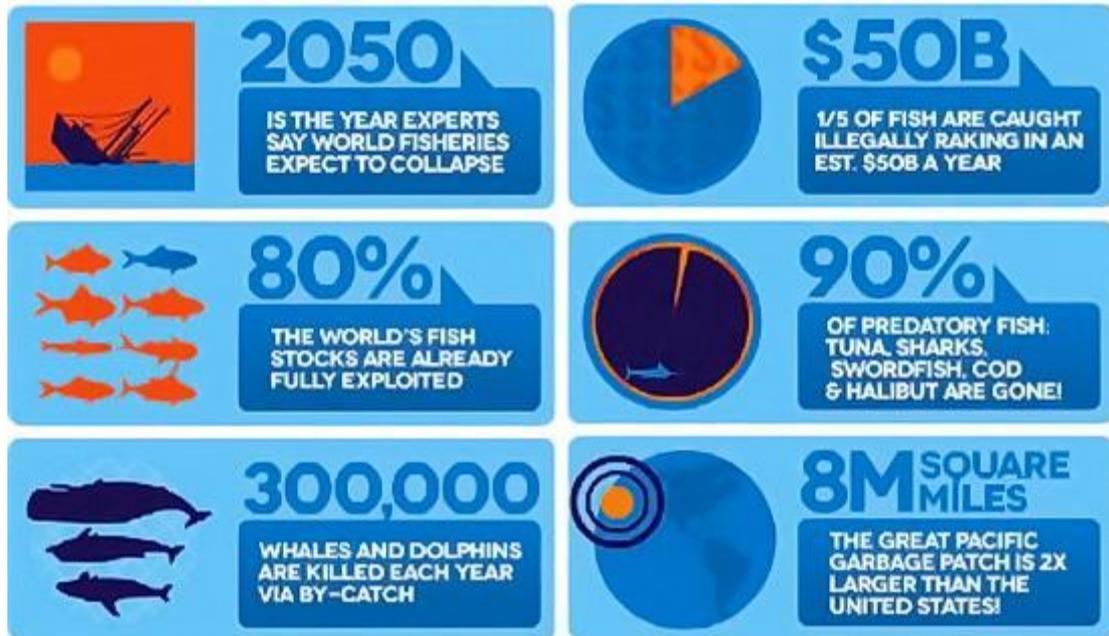
Issue: Overfishing as a threat to the Mediterranean Sea

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INTRODUCTION

The Mediterranean Sea hosts more than 10,000 species, borders nineteen nations and provides a source for food and work for millions of people in Europe. With so many nations and people to support, it is a vital source of income and food and because of this, it is severely over-fished. More than 65% of fish species are endangered because of overfishing as confirmed by bodies such as the EEA (European Environment Agency) and the UNFAO (United Nations Food and Agriculture Organisation). If measures are not enforced urgently, there is a serious risk of the Mediterranean becoming exploited to a point where it can no longer replenish and recover, which will consequently negatively affect its productivity, species and health for future generations. It will be dominated by small tropical species such as jellyfish and microbes, resulting the human species to not be able to get the significant amount of its food supply that it does currently, as the species we use for food will be extinct. Because it is surrounded by land, the warm waters of the Mediterranean would take more than 100 years to renew and clean themselves. The waters can't recover easily from exploitation and damage. Scientists support that in order to maintain the seas and life of the Mediterranean, up to 50% of it should be off limits to destructive activities, which include fishing. The European Commission, a key party in the fight to end overfishing in the Mediterranean, has confirmed that 91% of its stocks are overfished. Several efforts have been done so far such as the European Union imposing quotas on the amount that each country can fish, but nothing has worked and overfishing is still an issue which has and will have even worse consequences on the species of the Mediterranean Sea, its livelihood and even people.



DEFINITION OF KEY TERMS

Mediterranean Sea

An almost landlocked sea between southern Europe, the north coast of Africa, and south-western Asia. It is connected with the Atlantic by the Strait of Gibraltar, with the Red Sea by the Suez Canal, and with the Black Sea by the Dardanelles, the Sea of Marmara, and the Bosphorus.¹

Overfishing

Deplete the stock of fish in a body of water or a marine species by excessive fishing.²

Illegal fishing

Unregulated, and unreported fishing. It occurs across all types of fisheries, within national and international waters, and small scale to large industrialized operations.³

Endangered species

A species, in this case a marine species, at risk of extinction because of human activity.

Subsidies

A sum of money granted by the state or a public body to help an industry or business keep the price of a commodity or service low.⁴

¹ "Definition of Mediterranean Sea in English." (n.d.): n. pag. *en.oxforddictionaries.com*. Web.

² "Definition of Overfishing in English." (n.d.): n. pag. *en.oxforddictionaries.com*. Web.

³ "Threats|WWF." (n.d.): n. pag. *Worldwidelife.org*."

⁴ Definition of Subsidies English." (n.d.): n. pag. *en.oxforddictionaries.com*. Web

Marine reserves

A marine reserve is an area of ocean and shore that is protected under the Marine Reserves Act. Marine reserves allow the recovery of marine life to a natural state and provide areas for scientific study.⁵

Common fisheries policy

The policy for fisheries of the European Union, which sets proportional quotas as to the amount of each type of fish they are allowed to catch, to each member state of the European Union. It makes up of approximately 0.75% of the budget of the European Union

Sustainable fishing

A model in which the fishing activities do not endanger the fishing population in an area and ensures that the fish stock is healthy over an unlimited time period. It also ensures that the fishing activities don't have a negative impact on the ecosystem. This is achieved by ensuring that only species which are needed are caught at an extent where it is feasible for them to recover and repopulate.

Fishery

A register and legal activity in catching, processing and marketing species of fish for human or animal consumption as well as medical use for a medicinal product (eg. Omega 3). Every fishery has a license to fish legally in locations which are well defined as well as to approve the type of fish to be caught, their quantity and the method in which they are fished.

BACKGROUND INFORMATION

Causes of overfishing

If we can understand the causes of overfishing, we can find solutions to tackle them and the issue as a whole. Firstly, a cause of overfishing is the lack of protected areas. Only 1.6% of oceans are protected areas and 90% of them are exposed to fishing. One other key cause of the overfishing crisis is illegal fishing. This is unreported and unregulated fishing which can occur in all fisheries from small to even large scale. Illegal fishing is responsible for 20% of the world's fishing and 50% of its fisheries. Illegal fishing generates a great income, at

⁵ "Definition: Marine Protected Area." (n.d.): n. pag. *Www.forestandbird.org.nz*. Web. <<http://www.forestandbird.org.nz/what-we-do/campaigns/we-love-marine-reserves/definition-marine-protected-area>>.

20-23.5 billion dollars annually. Additionally, another cause of overfishing is unsustainable fishing. This means using nets, fishing methods and other equipment that catch too many fish at once. In the process of catching all those fish, by-catch also gets caught which means other animals other than the targeted fish are caught.

Lastly, a lot of governments continue to subsidize their fleets. This results in permitting unprofitable operations to subsist, which causes overfishing. Today's worldwide fishing fleet is estimated to be up to two and a half times the capacity needed to catch what we actually need.⁶

Illegal, unregulated and unreported fishing in the Mediterranean (IUU)

We do not know much about IUU fishing and its extent, as it is an unreported activity. But it is known that these activities have become common activities in the past years. The Mediterranean countries are currently reporting several issues regarding IUU fishing, related to the Mediterranean fleet. The General Fisheries Commission for the Mediterranean reported in 2013 that seine, trawl and driftnets are the gear which is mostly used in IUU fishing incidents. Serious infringements related to these driftnets are repeatedly documented in Italy, showing the extent of illegal activities by over 300 driftnets.



Endangered species

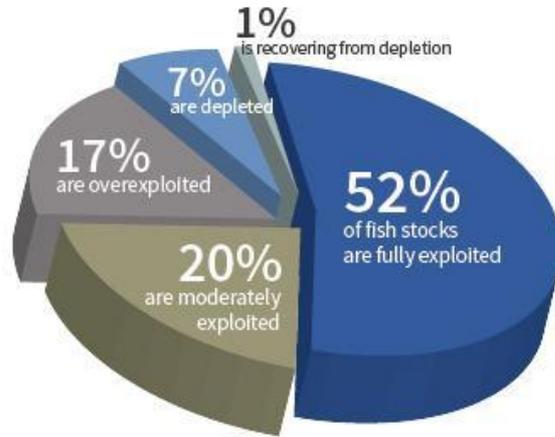
Nearly 65% of all species in the Mediterranean are threatened and 91% of the stocks are overfished. The ones at the greatest risk are sharks, rays, blue fin tuna and other cartilaginous fish. The shark is one of the many species that don't have any catch limits, allowing the fishing industry to harvest as much as they want

Many other species don't have any catch limits established, which exacerbates the situation as it allows overfishing and the extinction of these species. Another species which is facing extinction is the blue fin tuna. The numbers of this species were so low that

⁶ "Threats|WWF ." (n.d.): n. pag. *Worldwidelife.org*.

environmental organizations such as Greenpeace have repeatedly called for blue fin fishing to be banned.

Sharks, rays, and other cartilaginous fish are at greatest risk, with about 40% facing extinction. The blue shark, for example, is one of the most exploited species in European waters. It's a major slice of the global fin trade, and Spain is by far the biggest exporter of shark fins and meat, but the fishing industry can harvest as much as they want.



Ecosystem changes as a cause of overfishing

Marine biodiversity and balance is at stake because of overfishing. Aquatic animals and plants play a vital role to balancing the marine ecosystem and in order for them to thrive they need certain nutrients and a specific environment, which many times depends on other organisms. Overfishing can threaten those species and their environment as well as disrupt their food chains which is detrimental to their survival.

‘For example, herring is a vital prey species for the cod. Therefore, when herring are overfished the cod population suffers as well. And this has a chain reaction on other species too. For example, seabirds such as puffins were dependent on the sand eel for their food around the Shetland Islands. However, with the overfishing of sand eels, the colonies of seabirds nesting around Shetland automatically declined.’⁷

From these examples, we can understand how all living organisms in a food chain are at stake if their food chain breaks at any level. Overfishing causes these food chains to break and creates an unbalanced ecosystem and the destruction of marine biodiversity.

Decreased food security as a result of overfishing

When talking about the impacts of overfishing, we mostly measure them in economic and environmental terms, but what is often overlooked is the threat that depleted fish stocks to millions of people who depend on fish products for food. The World Resources

⁷ Krysten Jetson. "Impact of Overfishing On Human Lives." *Marine Science Today LLC*. (n.d.): n. pag. *Marinesciencetoday.com*. Web. 9 Apr. 2014.

Institute found that one billion people, mostly in developing countries in the world heavily rely on fish as their primary source of protein. It is highly nutritious as it is a valuable supplement in diets where vitamins and minerals are lacking. Three billions depend on it to provide them with 20% of their general protein and 500 million have it as their primary source of protein, meaning if fish stocks continue to decline they would be deprived of this crucial part of their nutritional needs. This especially affects the food security of LEDCs.

Economic loss

Fishing is crucial to economies around the world and it threatens nations which are situated near coasts. It also devastated communities whose main source of revenue and labor depends on healthy and plentiful stocks of fish. Additionally, because we have pushed oceans to the limit because of overfishing they are now on the verge of collapsing. This means the ones who depend on oceans for their source of income such as fishermen and fisheries will be out of business as they will have no productive fish left in the ocean to fish and bring income. The New Economics Foundation (NEF) found that overfishing costs over 100,000 jobs and up to 3.2 billion dollars each year. The research also found that if only 43 fish stocks were given time to renew and recover to their maximum sustainable yield the fishing industry would gain 3.5 million more additional tones of products, which in turn would generate a larger income.

Reactions to over-fishing

European countries including France, Italy, Cyprus, Greece, Italy, Malta, Portugal and Spain were threatened by the European commission with legal action, because of overfishing as European fishermen surpassed their quota for 2007 of 16779.5 tons for blue fin tuna and were immediately instructed to stop fishing until the next year. If they failed to do so, the European Commission could prosecute these countries for not abiding the laws set in the European Court of Justice.

MAJOR COUNTRIES AND ORGANISATIONS INVOLVED

Spain

Spain by far is the biggest exporter of shark fins and meat, belonging to the blue shark which is one of the most exploited species. Spain receives subsidies and has a fishing fleet that represents one-fourth of the entire EU fishing capacity.

Italy

Italy has been warned by the European Commission that it is risking heavy court fines for failing to stop illegal overfishing. But as reported by Italian officials the number of vessels targeting species such as swordfish have decreased by 90%.

Greece

Greece heavily relies on seafood for food security. The Hellenic Center for Marine Research (HCMR) shows that the fish population in the seas of Greece has been decreasing alarmingly during the past 20 years. Greece, along with Turkey significantly lacks marine reserves, to protect the livelihood of the species.



European Commission

The European Commission has made several resolutions to help solve the issue. Firstly, the Common Fisheries policy has been introduced as well as several quotas limiting countries from overfishing.

Greenpeace

Greenpeace International is an active member when it comes to the protection of the health and productivity of the Mediterranean Sea. It organizes three-month-long ship tours where the ships travel across the Mediterranean region exposing destructive activities, taking actions, documenting areas that are threatened and are in need for protection as well as calling for solutions. Greenpeace is encouraging and suggesting that a network of marine reserves which will cover 40% of the Sea is immediately built. It has also made several proposals on ways to improve the situation of the Mediterranean Sea which is caused by overfishing, named 'Freedom for the Seas' project.

European Fisheries Control Agencies

The European Fisheries Control Agencies is an agency of the European Union which

coordinates the operational activities in the areas where fisheries exist and helps member states of the European Union to successfully apply the Common Fisheries Policy.

World Wide Fund for Nature (WWF)

The WWF has made multiple actions to help with the problem of overfishing in the Mediterranean. It has helped with the establishment of the Marine Stewardship Council (MSC) which has set environmental standards in order to identify sustainable fisheries and work with other partners to assist fisheries to meet its requirements.

Med React

Med React is an organization with its main goal being to ‘catalyze action for the recovery of Mediterranean Marine Ecosystems by ensuring a long term, fair and responsible use of our Common Seas’. It constantly puts pressure on the European Union to take strong measures against illegal and unregulated fishing of species such as the blue fin tuna.

TIMELINE OF EVENTS

Date	Description of Event
1931	Fishing industry revolutionized by the first powered drum, a circular device on the side of the boat that draws in the nets. This enables the nets to be drawn in faster, and along with the speedier gas powered boats, fisherman was able to fish in areas that they previously could not
1956	United Nations Conference on the Law of the Sea I (UNCLOS I)
1958	United Nations Convention on Fishing and Conservation of Living Resources of the High Seas opened for signature
1960	United Nations Conference on the Law of the Sea II (UNCLOS II)
1967	Introduction of fine <u>synthetic fibers</u> such as <u>nylon</u> in the construction of fishing gear marked an increase in the commercial use of gillnets
1995	United Nations Fish Stocks Agreement (UNFSA) is opened for signature. This binds countries to conserve and sustainably manage fish stocks using a precautionary approach and to peacefully resolve disputes on the high seas.
1995	UN FAO Code of Conduct for Responsible Fisheries developed, includes the concept of the precautionary approach
2001	1995 UNFSA comes into force

2004	Annual bluefin quota for East Atlantic and Mediterranean fisheries is exceeded by 40%. The quota was 32,000 tons and the fishers brought in nearly 45,000 tons
2007	Food and Agriculture Organization (FAO) estimates that 25% of the world's fish stocks are being fished at an unsustainable level, are being exploited or depleted, while fishing fleets are over-capacitated
2009	First blue fin tuna bred via aquaculture
2014	The European Commission publishes the consultation paper on the status of overfishing, which highlights the progress made towards ending overfishing in the Mediterranean, as the number of fish stocks within safe biological limits are rising.

UN INVOLVEMENT: RELEVANT RESOLUTIONS, TREATIES AND EVENTS

Sustainable development goal 14 (SDG14) which is: 'to conserve and sustainably use the oceans, seas and marine resources for sustainable development' contains clauses 14.4 and 14.6 which are meant to limit and potentially stop overfishing.

- "Clause 14.4: By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics"
- "Clause 14.6: By 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported and unregulated fishing and refrain from introducing new such subsidies, recognizing that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the World Trade Organization fisheries subsidies negotiation"⁸

Regulation (EU) 2015/812 and Regulation (EU) No 1380/2013-There also is the Common Fisheries Policy (CFP)- are "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 and prevent further overfishing"⁹

UN Code of Conduct For Responsible Fisheries, 1955

⁸ Goal 14 ." (n.d.): n. pag. *Oceanconference.un.org*. Web.

⁹ "The Common Fisheries Policy (CFP)." (n.d.): n. pag. *Ec.europa.eu*. Web.

The United Nations Code of Conduct for Responsible Fisheries is a voluntary code of principles of behavior standards for practices that include fishing ensuring effective conservation, management and development of aquatic resources without harming biodiversity and ecosystems. This Code recognizes the economic, social and nutritional importance and needs of fisheries and takes into account interests of all stakeholders of the aquaculture and fishing industries. It also considers the biological characteristics of the resources and the interest of consumers.

PREVIOUS ATTEMPTS TO SOLVE THE ISSUE

Every year, scientific research concludes in new possible quotas that would restore the livelihood of the Mediterranean Sea, which are submitted to the parliament of the European Union. Based on the scientific facts about fisheries, ministers set accordingly quotas to each country, but these quotas have not been implemented yet, while illegal, unregulated and unreported fishing continue making the enforcement of the quotas even more difficult to achieve.

Laws restricting overfishing have been passed by bodies such as the European Commission. The reason why they haven't been effective is because there aren't the necessary mechanisms available to make sure these laws are implemented. Furthermore, protected areas have been introduced however this measure has not been very effective yet.

POSSIBLE SOLUTIONS

Increasing marine reserves which are meant to sustain and manage fish stocks as well as prohibit certain types of fishing has proven to be effective at protecting threatened species and helping recover marine life, for example Spain's Medes Islands Marine Reserve. They have also shown to result in more "productive" oceans, in which the increasing marine populations that are inside spill over into the remaining fishing grounds. These measures can also help ensure the recovery of the endangered species and the viability of the Mediterranean in the long term.

Another way to solve this issue is by establishing new regulations and catch limits that need to be enforced so that species can be harvested at sustainable levels. This can be achieved by imposing catch limits and strict regulations on the countries that overfish, as well as the ones that don't, in order to prevent the phenomenon from happening. But in

order to make sure these regulations are followed, enforcement protocols need to change. Increasing monitoring systems to guarantee that fishing is not excessive and that parties are not exceeding their catch limits could be a potential measure. In addition, subsidies in certain areas or countries need to be eliminated, since many times they result in those specific areas to be targeted leading to overfishing. Eliminating these subsidies will significantly decrease overfishing in these areas.

Another way of dealing with this is addressing consumers by creating labels in order to make consumers more aware of the seafood they buy and eat as well as help educate them about the fish which are endangered because of overfishing. This could make consumers purchase seafood which is harvested in the lowest possible environmental impact.

Lastly, small scale bans on equipment used for illegal and undocumented fishing such as driftnets, can allow the closing of the current regulatory loophole that the operators of illegal fishing have used to elude controls.

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