



ENVIRONMENT COMMITTEE

QUESTION OF SUSTAINABLE USE AND MANAGEMENT OF MARINE RESOURCES

Introduction of Topic

The ocean, thought to be the birthplace of life itself, is one of the most crucial resources humanity has. We sometimes think of earth's marine resources as an unlimited resource due to the sheer size and depth of our oceans, but this is not the case. With 37% of the global population living on the coast, many communities rely on the ocean as their major source of food, health, energy, and transportation. In an age of mass production and massive population booms, our global fish consumption has climbed rapidly. In addition to being source of food, the ocean brings tourism, life styles, and materials to communities.

The ocean is a very important resource to all persons in a multitude of ways. Thus that is why it must be protected. Modern issues like overfishing and pollution has threatened the availability of the ocean as a resource. Overfishing may cause us to lose species of fish most common in our diets like the almost extinct Southern Atlantic Bluefin. If the natural beauty of the ocean degraded, a community may suffer economically and socially.

Definition of Key Terms

Biodiversity

The 1992 United Nations Earth Summit defined "biological diversity" as "the variability among living organisms from all sources, including, 'inter alia', terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part: this includes diversity within species, between species and of ecosystems".

Marine Resources

Marine resources can be separated into three categories: physical resources (natural): minerals, oil, and gas. Biological resources: seafood, plant life, ecosystems. And nonrestrictive resources: the use of the ocean for biodiversity and tourism.

Renewable Resources

Energy derived from natural processes (e.g. sunlight and wind) that are reacquired at a faster rate than they are consumed.

Overfishing

Overfishing is the exploitation of the world's fish reserves to depletion and unsustainable levels. It manifests itself through the hunting of near-extinct fish species, ignorance of protocols in place against fishing off season, or simply fishing at an unsustainable rate.

Background Information

Physical resources

Oil and Natural Gas

Assuming our population will require the same amount of petroleum in the future, our supply of oil is estimated to be used up as soon as 2052. Gas too is very much scarce and unsustainable. The oil industry is also environmentally unfriendly in their methods of extraction and transportation with the potential to create large oil spills. Such man-made disasters cause oil to seep in and harm marine life, birds, and habitats.

Energy Resources

The ocean can be used as a source of energy and is therefore a resource. Aside from the oil and natural gas extracted from the sea floor. The energy production generated from the ocean are sustainable - including wind energy, hydroelectric energy, and wave energy. However, the world still largely relies on unsustainable resources because of the already invested development to the oil, gas, and coal industries. Dependency on unsustainable resources have sparked a movement towards sustainable energy like the ones from the ocean (waves and tides) however the current investment and technology in ocean energy resources is not enough to compete against oil, gas, and coal.

Fish and Marine Mammals

Fishing is not only intended for food consumption. One of the biggest cases of overfishing is whales and whaling. Whales have economic value due to their oil, baleen. As for common fish

like salmon and tuna, they risk extinction in the wild due to high demands for fish. If these species are no longer exploitable in the wild, they face commercial extinction – unless as happens now, they are raised in fishery farms. These fish need to be then protected until they have replenished their populations which can take time and resources. Worse, the overfished species can even face extinction, which is irreversible damage.

Non-extractive resources

Tourism

Although not often thought of as a resource, the sustainability of marine resources can ensure that a country's tourism sector, especially if known for its reefs and coasts, stays profitable and naturally beautiful. An example of this would be Australia's Great Barrier Reef. From a mere economic standpoint, the reef has been estimated to contribute \$6.4 billion per year to the Australian economy. Fortunately, the large tourist attraction is strongly protected by the UNESCO World Heritage Committee as well as the Australian government's own policies continuously work for the preservation of the great barrier reefs. However, there are plenty of other tourist destinations that are severely exploited beyond sustainable practices. For example, mangroves and seagrass meadows are being cleared for beaches, piers and other structures are built on coral reefs, and mass tourism is disturbing natural habitats for marine life like certain species of endangered turtles. All of these examples exhibit damages to the environment on all levels, which goes to show that tourism can be an overexploited marine resource.

United Nations Convention on the Law of the Sea

The United Nations Convention on the Law of the Sea (UNCLOS) is a series of three conventions that establish the international laws of the sea. The treaties set forth by the United Nations Convention Law of the Sea are the current guidelines that member parties abide by on the ocean. It is important to note that while the convention is well established, having been ratified by 168 parties, 14 UN states have not yet ratified the convention, including the United States of America.

The Continental Shelf

The continental shelf is an area in which a state is given exclusive rights to all other marine resources. There is a naturally defined border that spans from 200 nautical miles out to the outer edge of their continental shelf (a region where the continental margin is shallow before dropping to larger depths). Resources in this area are available exclusively to a single coastal state in this zone. Common resources harvested in these regions include the oil, gas, and minerals.

The High Seas

The high seas define international waters: where the area's resources can be used by any and all countries. Any mining or exploration of the high seas is licensed and regulated by the International Seabed Authority (ISA), an organization established by the UNCLOS treaties. Although mining in the high seas is considered very difficult and not a common practice.

Major Countries and Organizations Involved

International Union for Conservation of Nature (IUCN)

Founded on the 5th of October 1948, the IUCN is a large international membership union that has the goal of assessing and providing knowledge to public, private, and non governmental organisations so that they can properly act on conservation projects. Although they do not tackle the issue of marine resources directly, they do assist and aid governments with conservation projects by providing insight and information

The World Ocean Council

The WOC, launched in 2008, is an international organization focused on the corporate ocean responsibility. The Council convenes many ocean-related companies concerned with the well-being of the marine environment and its resources. The group works towards establishing itself in many other marine corporations as well as providing research and guidance on their mandate.

Regional Fishery Management Organisations

RFMOs are not a single organisation but rather a collection of a type of international organisations tasked with managing the fisheries of either single species, or specific regions.

Relevant UN Treaties and Events

Convention on Fishing and Conservation of Living Resources of the High Seas, 29 April 1958

United Nations Convention on the Law of the Sea, 16 November 1994

UN Fish stocks agreement, 4 December 1995, (A/CONF.164/37)

Code of Conduct for Responsible Fisheries, 1995

Main Issues

Illegal Exploitation

Despite the protocols and restrictions in place, the unauthorized fishing, mining, and harvesting of marine resources exist. These problems contribute to the depletion of fish stocks and biodiversity in the ocean ecosystem, especially in developing coastal countries. Since they are illegal, unreported, and unregulated (IUU), the degree to which the problem feeds unsustainable methods is unknown, however the difference between fish registered in an economy and fish caught highlights the problem. It is estimated that about one-fifth of global catch per annum falls under IUU fishing. IUU exploitation exists because it lets someone evade tax and it is easy to do so without facing governmental consequences. This thrives in governments with weak legislation, corruption, and no enforcing body to regulate resource quotas.

Issues with Coral Reefs

Coral reefs are an important marine resource. However the many benefits of healthy coral reefs are threatened by unsustainable tourism and over exploitation of the resource. The corals face the problem of coral bleaching, a process that ruins the environment of many coral reefs around the world. There have been about 60 mass bleaching events since the 80s. The most destructive events just ended in 2017 where about 70% of the world's coral reefs were damaged. Unfortunately, the rate at which these events are only expected to increase, which would threaten our sustainable use of coral reefs.

Ocean Pollution

Ocean pollution can take many forms, plastic disposal in the ocean, offshore drilling oil spills, and ocean acidification (caused by air pollution), and even noise pollution from ship navigation systems and ocean floor mapping systems. All forms however revolve around the consequence of harming, restricting, and migrating marine life. Despite numerous organizations, international and domestic law, and efforts to clean the ocean, about 1 million seabirds and 100,000 sea mammals are killed by pollution every year.

Controversial Methods in Extracting Marine Resources

The largest example of which include seismic blasting to extract oil, which is backed up by many industries and politicians but challenged by various environmental organisations and governments. The arguments for the method is its effectiveness in finding oil and natural gas, as well as making out our oceans. However the side effect of the practice is that it has been found to injure several marine life, threatening biodiversity and therefore sustainability of the marine biological resources.

Lack of Regulation over High Seas

According to the Guardian, only about 3.5% of the world's oceans are legally protected. Making the rest of the 96.5% prone to over-exploitation, pollution, overfishing and over mining. It is only until recently that progress has been made in this regard. After 5 years of negotiation, the UN is set to establish a new rulebook by 2020, and a specific treaty for the high seas has been tabled before the end of the year. Unfortunately, the move has some opponents. Many major fishing nations has shown hesitation like Iceland, Japan, and South Korea, by pushing for the exclusion of fishing in the treaties. On another end of the spectrum, the lack of regulation over the high seas also hinders our scientific knowledge of it, its biodiversity, and its sustainability.

Previous Attempts to solve the Issue

Convention on the Law of the Sea

The main major international attempt to solve the issue is the United Nations Convention on the Law of the Sea, yet it mostly focuses on how the sea is divided between states, and what are the rights of passage. There is the following relevant articles:

The convention's section 2 from article 116 to 120 discusses the conservation and management of the living resources (biological resources) of the high seas. Article 145 is the only discussion of sustainable marine practices in the high seas which calls for "the protection and conservation of the natural resources of the Area [Seabed] and the prevention of damage to the flora and fauna of the marine environment". The articles do not discuss of oil and natural gas, tourism, marine plant life, and biodiversity.

The relevant articles are posted in the appendix for reference.

UN Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks

Ratified by 84 parties, the conference promotes cooperation in management of fisheries between the UN and member states. The issues the agreement tackles are straddling and highly migratory fish, fish species with wide distributions around the world like tuna. These species are especially prone to overexploitation due to inefficient fishery management and need for global communication on the problem.

Possible Solutions

Improved Fishery Management

There are various methods of improving fishery management and sustainability. For example, Catch Document Schemes (CDS) can mitigate IUU fishing and ensure that catch is legal by tracking fish stocks from capture to the market. Such documentation can help identify illegal fisheries and foster consumer awareness on which seafood is legal and illegal. As for international supervising bodies, the current system with RFMOs works to some extent, but has nonetheless has received criticism for still not being able to control large amounts of IUU fishing through their traditional rules and sanctions. The critics say that the lack of RFMO efficiency comes from a lack of general commitment to implementing sustainable measures and an inability to identify illegal fishing when they saw it. Perhaps a refinement or redefining of the RFMOs is necessary.

Inclusion for Other Marine Resources

As seen with the many conventions and conferences related to or originating from the UNCLOS, the issue of living resources, fish, is well discussed. However, other marine resources, like oil, natural gas, minerals, tourism, and biodiversity are not. With no doubt, living resources are the largest resources of the ocean, but perhaps international standards for these resources can ensure some degree of a sustainable ocean.

High Seas Drafting

There is great hope among many environmental and marine groups that the surging interest in the High Seas is a spark for a “Paris Agreement” of the Seas. The primary thing that must be addressed is: what is a state’s binding legal obligations to the conservation and sustainable use of marine resource sustainability beyond national and geological jurisdiction. The answer could be a shared collaborative, a “clean-up-after-yourselfes” narrative, a mix, or others. The best course of action will be left to debate.

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Appendix or Appendices

I. Code of Conduct for Responsible Fisheries a. <http://www.fao.org/3/a-v9878e.htm>

b. “FAO. Code of Conduct for Responsible Fisheries.” *Fao.org*, FAO of the UN, www.fao.org/3/a-v9878e.htm.

II. United nations Convention on the Law of the Sea

a. http://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf

b. “FAO. Code of“UN Convention on the Law of the Sea.” *UN*, 1982, www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf.

Conduct for Responsible Fisheries.” *Fao.org*, FAO of the UN, www.fao.org/3/a-v9878e.htm

III. Convention on Fishing and Conservation of the Living Resources of the High Seas

a. https://www.gc.noaa.gov/documents/8_1_1958_fishing.pdf