

**Forum:** Environment and sustainable development committee

**Agenda:** On measures to promote sustainable exploitation of marine fish stocks

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## Introduction

The sustainable exploitation of marine fish stocks is an important issue affecting the economic stability of the world's population, such as buying and selling food and seafood, and above all, marine biodiversity to maintain a sustainable state. According to the Food and Agriculture Organization (FAO), about 35% of the world's fish stocks are overfished, while only 65% of all fish stocks are exploited at a sustainable level. The deterioration of marine fish resources is often caused by humans, including reckless overfishing, illegal farming, and overfishing. In many regions and countries, fishing is deeply related with economic works and traditional practices. However, these activities led us to current problem. For example, Atlantic cods were once overfished for the North Atlantic fishery economic. But the marine fish stocks of Atlantic decreased because of exploitation, so the North Atlantic fishery economic got economic hardship and loss of cultural heritage. Also, there are also natural causes by climate change and habitat destruction. If the vicious cycle continues due to these problems, the FAO warns, fish populations will decline to unsustainable levels. More than 3 billion people rely on seafood as a major protein source, and fishing is responsible for the livelihood of 200 million people worldwide. This also fits well with U2NESCO's motto to secure a future soon.

## Key Terms

### Sustainability

Sustainability means the ability which can maintain process or condition, It is an essential factor that should be considered to address the issue of sustainable expansion of fish stocks, which is the agenda. To enable the capture of marine life in the future and address food issues, we must create an environment where fish can be produced and supplied continuously, which requires sustainability.

### Overfishing

Overfishing means harvesting or capturing too much to affect the fluctuations in resource stocks. As one of the decisive factors that hinders the continued provision of fish, it is necessary to

investigate why it is so important to prevent the collapse of the fishing industry and to maintain the ecological balance of the marine ecosystem.

### **Illegal, unreported and unregulated fishing (IUU)**

IUU refers to fishing activities that impede sustainability efforts in violation of national or international regulations. This is an activity that hinders the exploitation of sustainable marine fish stocks, and the international community should actively regulate these activities in order to solve problems.

### **Climate change adaptation**

Climate change adaptation refers to the activities of mitigating or eliminating damage through the control of natural and artificial systems to the ripple effects and effects of climate change that are currently occurring or are likely to occur in the future. Climate change affects fish stocks by changing sea temperature, ocean currents, and habitats, so adaptive strategies are needed to respond to these changes and ensure sustainable fishing.

### **Ocean governance**

Ocean governance is an international and national framework that regulates the use of marine resources. It is one of the most closely-knit official policies on this issue, as a good use of it would ensure the equitable and sustainable exploitation of fish stocks. Relatively recently, in 2015, the Paris Agreement has a precedent for addressing the impact of climate change on the oceans, including rising sea levels and ocean acidification, by emphasizing global greenhouse gas reduction. Delegates can use it to come up with solutions such as improving policies or creating new rules.

### **Marine Protected Areas (MPAs)**

MPAs are designated areas where human activities are restricted to preserve marine ecosystems and biodiversity. This helps to secure populations when creating a sustainable fishing environment and can protect marine life from excessive fishing. By monitoring IUUs and imposing strict regulations, we ensure long-term availability of marine resources by preventing excessive exploitation.

## **General Overview**

Marine ecosystems have long been exploited for food, trade, and economic benefits. In

particular, there are still fishing-oriented countries like Norway and Japan to this day, and this is an activity that is directly related to survival. In the 20th and 21st centuries, technological advances have also allowed people to catch more fish, which has increased demand, putting unprecedented pressure on fish stocks. Technological advances have also led humans to produce more carbon dioxide, which is a crucial cause of global warming, threatening marine ecosystems. These phenomena threaten biodiversity, destroy natural circulation, destabilize food security, and above all damage regions and countries that use fishing as their main economic means.

The exploitation of marine fish stocks is driven by a number of factors, including economic demand, technological advances, and a lack of regulation on fish stocks. Fishing has been an essential source of food and income for millions of people around the world, and people have benefited economically by hunting and selling fish stocks for survival. Since then, with the advent of industrial fishing technology in the 20th century after the Industrial Revolution, the scale of exploitation has increased dramatically, providing people with more fish and related products, resulting in a surge in demand. Generally, Japan's demand and consumption of bluefin tuna accounts for more than 80% of fish consumption, putting enormous pressure on catches. In addition, fishing countries such as Spain and Italy are exporting a significant portion of their bluefin catches to meet Asian demand. As in this case, humans have exploited fish more and more rapidly to meet crowd demand, which in turn has led to the current problem of overfishing and depletion of several major fish species.

Climate change is a problem caused by the passage of time and the further development of human technology. It is a phenomenon that occurs as the concentration of greenhouse gases (GHG) in the atmosphere increases, and it is carbon dioxide (CO<sub>2</sub>) that increases these concentrations. As industries developed, humans began to use fossil fuels as their main energy source. The problem was that to extract energy from these fossil fuels, they had to be burned, and CO<sub>2</sub> was emitted in the process, which now accounts for more than 75 percent of all greenhouse gas emissions. Another component of greenhouse gases is methane. Methane (CH<sub>4</sub>) is a gas that comes from gases such as livestock excrement and belching that account for a significant portion of nitrogen dioxide. Climate change is caused by these greenhouse gases. Fish must adapt when global warming caused by greenhouse gases causes sea levels to rise and ocean temperatures to change. However, it takes too long for fish affected by climate change to adapt through biological evolution, resulting in loss of habitat and death of fish, or conversely, a surge in specific populations. For example, in 2020, it was reported that salmon in the Pacific Ocean lost their spawning season as climate change prevented them from finding their way to the creek, resulting in a reduced salmon population. Also, in the case of jellyfish, the population has increased exponentially as the temperature of the sea rises due to global warming, causing fish in their original habitat to be poisoned or fed, causing damage to fish and fishermen. This also has a significant impact on human fishing activities, as it means the breakdown of nature's balance.

The two factors mentioned above have created this situation today because of the lack or lack of adequate regulations in the management of marine fish resources. First, there is often a lack of political will to enforce or establish fishing policies. A case in point is the WWF's announcement that fish from the Indian Ocean are being indiscriminately captured, accounting for more than 14% of the world's wild catch. The reason for this reckless exploitation is mostly for economic gain, and regions or developing countries, especially those that use fishing as their main economic tool, may have weak regulatory frameworks because they prioritize short-term economic benefits over long-term sustainability. Regulations on environmental issues are also needed. Because global warming caused by environmental pollution affects the oceans, governments should introduce regulations and systems.

### *Norway*

Norway is a global leader in sustainable fishing management, quota implementation, advanced monitoring technology, and strict regulatory enforcement. Being a country in a position to export seafood, it has stricter regulations and rules in place for these issues, and for this reason, its success in balancing economic benefits and conservation is often cited as a model for sustainable fishing practices.

### *Japan*

Japan, a major seafood exporter and consumer, is having difficulty balancing global sustainability goals with traditional practices such as whaling. Japan is actively participating in international fishing agreements and investing heavily in aquaculture as an alternative to wild catch, but the prospects for sustainable fish exploitation are vague due to the release of Fukushima contaminated water in 2023.

### *United States of America*

The U.S. currently has strict fisheries management in place through the Magnus-Stevens Act, which sets quotas and enforces fish conservation measures. As a major country responding to IUU fisheries, the U.S. invests in satellite monitoring technologies for fish and works with other countries to ensure compliance with global standards.

### *China*

China is the largest producer and consumer of seafood, and its size has a significant impact on fisheries around the world. China imposes a domestic fishing ban during the breeding season of fish for a sustainable fishing environment, but it has also been criticized for overfishing workers and for continuing fishing in other countries' territorial waters in defiance of the ban. Currently, however, China is taking a positive approach to creating a sustainable fishing environment, participating in international treaties, increasing investment in aquaculture for population preservation.

### *Small Island Developing States (SIDS)*

Currently, developing countries such as Fiji and the Maldives rely heavily on marine resources for economic stability and food security. They strengthen international protection against overfishing in exclusive economic zones (EEZs), emphasize the importance of equitable resource sharing, and are in favor of creating a sustainable fishing ecosystem.

### *Food and Agriculture Organization (FAO)*

The FAO is playing a pivotal role in global fisheries management, providing frameworks such as the Code of Responsible Fisheries Conduct, as it is directly related to human food issues. Currently, the FAO is supporting the Port National Action Agreement (PSMA) to respond to the IUU fishing industry, and is actively working on the process of creating a sustainable marine life exploitation environment by providing solutions and methods for national governments and private companies engaged in the fishing industry

### *World Wildlife Fund (WWF)*

WWF is an environmental organization that advocates for marine conservation, with an emphasis on habitat protection, sustainable fishing methods, and efforts to respond to IUU fishing around the world. They are supporting fisheries activities in a sustainable manner through the Marine Stewardship Council (MSC) certification, and are working with governments, companies, and international organizations in various countries to develop and implement policies related to sustainable fishing.

### *Marine Stewardship Council (MSC)*

MSCs are international non-profit organizations established to promote sustainable fisheries, and they are working to maintain the health of marine ecosystems by giving certification marks after assessing whether fisheries operate in a sustainable and responsible manner, helping fisheries and distributors build sustainable supply chains, and reducing overfishing and habitat destruction caused by current climate change.

### *National Oceanic and Atmospheric Administration (NOAA)*

NOAA is the U.S. Department of Commerce's central administration that examines the Earth's oceans and atmospheric conditions. They regularly collect data to manage fish species, work with local fisheries management committees under the Magnuson-Stevens Act to establish a Fishery Management Plan (FMP), and strive to create a sustainable fishing environment in their own country. They work together in many ways to address fisheries issues not only in their own country but also international, and provide educational resources to inform them of the need for sustainability of marine resources.

## Timeline of Events

Date	Description of event
October 31 1995	<p>Adoption of the FAO Code of Conduct for Responsible Fisheries.</p> <p>On October 31, 1995, the FAO meeting unanimously passed the formalization of the Global Code of Conduct for Responsible Fisheries, which establishes principles and standards applicable to the preservation, management and development of all fisheries. The Code provides the framework necessary for national and international efforts to ensure the sustainable development of aquatic biological resources in harmony with the environment.</p>
July 22, 2010	<p>UN agreement on sustainable fisheries management goals adopted at the General Assembly.</p> <p>On July 22, 2010, the U.N. General Assembly emphasized the importance of international cooperation to prevent excessive fishing and protect marine ecosystems through discussions on sustainable fishing management. Since this discussion, several countries have worked hard to develop various international norms and guidelines for fishing management.</p>
June 15, 2016	<p>Ratification of the Port State Measures Agreement (PSMA), marking the first binding international treaty focused on IUU fishing.</p> <p>The Port State Means Agreement (PSMA), which took effect on June 5, 2016, is a binding international treaty aimed at eradicating illegal, unreported, and unregulated (IUU) fishing. It is the first binding treaty to be involved in fishing and aims to strengthen port inspections and regulate ships involved in illegal activities.</p>
May 15, 2022	<p>Release of FAO's "The State of World Fisheries and Aquaculture" report highlighting overfishing concerns and trends.</p> <p>To address excessive fishing and promote sustainable practices, it urgently calls for strengthening fishery management, and presents challenges, opportunities and improvement measures related to sustainability. Reports suggesting this future direction are used as key data for policymakers,</p>

	researchers, and private companies to refer to and provide the data and insights needed for sustainable fishing through related policies and projects.
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## UN Involvement, Relevant Resolutions, Treaties and Events

The United Nations has taken numerous steps to address overfishing and promote sustainable exploitation of marine fish resources. There are several notable steps, but to pick from the most recent Resolution written by General Assembly in 2021:

Important UN General Assembly Resolutions;

- 15. *Emphasizes* the need for international cooperation for capacity-building, including cross-sectoral cooperation, at national, regional and global levels, to address, in particular, gaps in capacity-building in ocean affairs and the law of the sea, including marine science;
- 29. Recognizes the holding of the regional courses on the continental shelf in Arusha, United Republic of Tanzania, jointly organized by the African Institute of International Law and the University of the Faroe Islands, and their continuing important contribution to capacity-building, particularly in developing countries;
- 85. Calls upon States that have not done so to consider ratifying or acceding to the Agreement on the Privileges and Immunities of the Tribunal<sup>53</sup> and to the Protocol on the Privileges and Immunities of the Authority;
- 127. Recalls in this regard the call by the Ministerial Conference on Fishing Vessel Safety and Illegal, Unreported and Unregulated Fishing, held in October 2019 in Torremolinos, Spain, to those States that have not yet become parties to the Cape Town Agreement, whose entry into force would create a more robust International Maritime Organization regulatory framework for the safety of fishing vessels and fishing vessel personnel, to consider doing so by the tenth anniversary of its adoption on 11 October 2022;
- 204. Acknowledges the request by the United Nations Environment Assembly at its second session, in paragraph 6 of its resolution 2/10 of 27 May 2016, to the United Nations Environment Programme to step up its work, including through its Regional Seas Programme, on assisting countries and regions in the application of the ecosystem approach to managing the marine and coastal environment, including through enabling intersectoral cooperation in integrated coastal zone management and marine spatial planning;

## Possible Solutions

### *Continuous fishing management*

As the current problem is related to people's livelihoods, economic activities in fishing should be regulated to the appropriate extent without harming people's lives. To begin with, in order to prevent the population from shrinking due to frequent overfishing, government or local governments can use satellite tracking, electronic monitoring systems, and regular patrols to ensure compliance with fishing regulations, and creating protected areas for fish resources to recover can also be one way. To realize this, regional-based management of the areas where fishing is implemented is essential, and a joint management approach should help local fisheries manage their resources.

These solutions, however, have their limitations. First of all, it's a financial issue: the initial cost of purchasing and maintaining a supervision device is expensive, and can be financially burdensome, especially in small fisheries and provinces. Additionally, since catch regulation and supervision can provoke opposition from local fisheries workers, it takes a lot of time to compromise, and fair compensation and alternative means must be prepared to minimize conflict.

### *Environmental efforts*

Since climate change and garbage problems caused by environmental pollution also hinder the creation of a sustainable fishing environment, the international community should consider a number of measures to solve these problems. First of all, there is a way to expand the Marine Protection Area (MPA), which is actually a case in which Canada announced a prospect of expanding its marine protection area (MPA) to 10% by 2020, and demonstrated long-term benefits for the fisheries industry by implementing this. In addition, efforts and policies to reduce greenhouse gas emissions, a major cause of climate change, are needed to minimize the damage caused by climate change, or management and solutions that take into account the path of fish movement to adapt to rising sea temperatures or acidification are needed. Of course, the first priority is to restore the ecosystem rather than adapting it.

However, there are many variables to implement these measures. Right now, climate change alone has made progress in a short period of time, and uncertainty about climate change makes it difficult for fishing policies to adapt to changing environments, making the policy itself useless. In particular, since climate change has a significant impact on marine ecosystems, it is time-consuming and expensive to predict all of the effects of temperature rise, acidification, and sea level rise, and above all, there are uncertain possibilities, making it very difficult to respond.



### *Personal interests and efforts*

As governments and the international community work politically and environmentally, a sustainable fishing environment is getting closer to realization. However, it is necessary to encourage businesses and ordinary people to take an interest in this problem and work toward solving it, not just by themselves. Encouraging the choice of seafood produced through sustainable fishing also helps environmentally and economically. Encouraging the purchase of MSC or ASC-certified products is currently the most popular, as it promotes sustainable fishing practices, and can reduce the demand for unethical fishing practices. In addition, there are ways to reduce waste emissions to prevent environmental pollution, or encourage the use of public transportation to reduce greenhouse gases. In addition, education can raise awareness of the sustainability of marine resources for the next generation of fishing, and many schools and educational institutions often invite related daily classes or seminars.

It is of utmost importance that these methods draw public attention. However, many people may not be aware or concerned about the importance of a sustainable fishing environment, and may not be aware of these issues. And although these training should be conducted continuously, there are cases where fishing training ends up as a one-time event or the effectiveness of training does not continue due to the lack of follow-up activities. To address this, it is necessary to establish a system that encourages participants to continue their practice in their daily lives, or to encourage and help future generations and the current public who receive training through follow-up monitoring.

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