

Forum:	Environmental Commission (EC)
Issue:	Combatting Illegal, Unreported and Unregulated (IUU) Fishing
Student Officer:	Stefania Danai Gkania
Position:	Co-chair

PERSONAL INTRODUCTION

Dear delegates of the Environmental Commission,

My name is Stefania Danai Gkania and I am a 9th grade student at Platon School. I am honored to serve as a co-chair for this year's PSMUN conference in the Environmental Commission. I am thrilled to have the opportunity to work alongside my fellow co-chairs and be guided by the esteemed Secretariat members, especially the one in charge of this committee, as I learn and grow from their expertise.

This marks my first experience as a chair, and I am filled with excitement and determination to meet the expectations of this role. My journey with MUN began in 7th grade when I was only 12 years old, and I am grateful to have come this far. I hope my journey serves as inspiration for you to pursue your goals and aspirations, regardless of the obstacles that may lie ahead.

I have chosen to be a part of the Environmental Commission, recognizing it as a beginner committee, as I believe this will provide me with the opportunity to be a role model for the delegates. I have had the privilege of being guided and supported by several inspiring individuals in the MUN community, and I hope to be the same for each of you. I encourage you to find your voice, be confident in expressing your beliefs, and represent your country with pride.

The Environmental Commission's aim is to combat and resolve environmental issues. This study guide will introduce you to the topic of "Combatting of Illegal, Unreported and Unregulated (IUU) fishing." Fishermen are required to follow certain rules, procedures and allowances to ensure the safety of humans and fish alike. When these rules are not followed, there can be significant consequences.

I expect and hope for a fruitful debate and so I would like to clarify that this study guide is for introductory purposes only and should absolutely not be used as your only source of information. It will not fully cover all required knowledge, but just assist you in the start of your research. If you have any questions or need any clarifications, please do contact me by sending me an email at gania.stefania@platon.gr.

I cannot wait to meet you all in person this March for the first live conference of PSMUN since Covid-19's unfortunate infliction!

Yours truly, Stefi

INTRODUCTION

Marine life is a big part of the environment and if left unprotected, many species are bound to become extinct. The importance of illegal unreported and unregulated (IUU) fishing has been officially recognized by United Nations in the Sustainable Development Goals (SDGs), specifically in SDG 8 “decent work and economic growth,” SDG 12 “responsible consumption and production” and SDG 14 “life bellow water.”¹

IUU fishing can be broken down to three activities; illegal, unreported and unregulated fishing. Illegal fishing generally involves the violation of the laws of fishing. Unreported fishing describes any fishing activity that has not been reported or has been misreported to the authorities outlined in the relevant legislation. Unregulated fishing occurs when vessels without national flags undertake fishing activities, or are fishing in areas that are restricted or not assigned to them.



Figure 1 Fishermen involved in illegal, unreported and unregulated (IUU) fishing

Although IUU fishing is a constant threat to all water bodies, high seas and vulnerable areas suffer more. This is because they constitute easy targets, since they may not have constant monitoring authorities, while security may be weak usually due to lack of funds. The problem has gradually intensified over the years, despite the various efforts that have been made to tackle it. IUU fishing has been classified as an environmental issue, but it can also impact human lives on socioeconomic levels. The impact of IUU fishing should, thus, not be underestimated, necessitating effective solutions to tackle both its causes and its impact.

¹ Zwick, Steve. “Why the UN Sustainable Development Goals Really Are a Very Big Deal.” *HuffPost*, HuffPost, 7 Dec. 2017, www.huffpost.com/entry/why-the-un-sustainable-de_b_10798326.

DEFINITION OF KEY TERMS

Illegal, Unreported and Unregulated (IUU) fishing

Illegal fishing

Illegal fishing is when fishing activities occur in a way that defies or violates certain legislations, regulations, which may be national or international in nature.

Unreported fishing

Unreported fishing is when fishing activities that defy or violate certain legislations, regulations, both global or local, are not reported or are misreported to germane national authorities.

Unregulated fishing

Unregulated fishing is when fishing boats which are not connected to any specific area, origin, or nationality undertake fishing activities or when fishing is, more generally, not appropriately managed or protected.²

High seas

“The open ocean, especially that not within any country's jurisdiction.”³

Keystone Species

Keystone species are the species which have an extremely high impact on a particular ecosystem and food chain. They have certain characteristics that make them necessary for the survival of an ecosystem as without them, it would eventually collapse. That is the reason behind their name “keystone” because they are the key to the whole ecosystem. It is vital for them to be protected because without their contribution to this life-cycle, the other species within their environment would overpopulate, causing chaos. IUU fishing leads to severe harm of multiple keystone species, destroying whole habitats along the way.⁴

Flagship species

A flagship species is a species selected to act as an ambassador, icon or symbol for a defined habitat, issue, campaign or environmental cause. By focusing on, and achieving conservation of that species, the status of many other species which share its habitat or are vulnerable to the same threats may also be improved. Flagship

² Fisheries, NOAA. “Understanding Illegal, Unreported, and Unregulated Fishing.” NOAA, www.fisheries.noaa.gov/insight/understanding-illegal-unreported-and-unregulated-fishing.

³ “High+Seas+Definition.” Yahoo!, Yahoo!, search.yahoo.com/search?fr=mcafee_uninternational&type=E210GR885G0&p=high%2Bseas%2Bdefinition.

⁴ Editors, BD. “Keystone Species - Definition and Examples.” *Biology Dictionary*, 26 Dec. 2017, biologydictionary.net/keystone-species.

species are usually relatively large and considered to be “charismatic”. They may also be keystone species and may be good indicators of biological process.⁵

Ecosystem

“A biological community of interacting organisms and their physical environment.”⁶

Food chain

“An arranged by rank series of organisms each dependent on the next as a source of food” or “the series of processes by which food is grown or produced, sold, and eventually consumed.”⁷

Resilience

“The strength to recover quickly from difficulties; toughness that one has endured.”⁸

Juvenile fish

“Juvenile fish are called fingerlings. In fish, the embryo turns into a larva when born. The stage of development after the larvae is called fry. When scales and fins are developed they become fingerlings, also known as juvenile fish. This period is very delicate and risky for the survival of the fish.”⁹

Bycatch

Fishermen sometimes catch and discard animals they do not want, cannot sell, or are not allowed to keep. This is collectively known as “bycatch.” Bycatch can be fish, but

⁵ “Global Species Programme: How WWF Classifies Species.” WWF, wwf.panda.org/discover/our-focus/wildlife_practice/flagship_keystone_indicator_definition/.

⁶ “Ecosystem+Definition.” Yahoo!, Yahoo!, search.yahoo.com/search?fr=mcafee_uninternational&type=E210GR885G0&p=ecosystem%2Bdefinition.

⁷ “Food+Chain+Definition.” Yahoo!, Yahoo!, search.yahoo.com/search?fr=mcafee_uninternational&type=E210GR885G0&p=food%2Bchain%2Bdefinition.

⁸ “Resilience+Definition.” Yahoo!, Yahoo!, search.yahoo.com/search?fr=mcafee_uninternational&type=E210GR885G0&p=resilience%2Bdefinition.

⁹ Lucchini, Karen. “What Are Juvenile Fish?” Pet Igloo, 3 Jan. 2022, petigloo.com/what-are-juvenile-fish/#:~:text=What%20are%20juvenile%20fish%3F%20juvenile%20fish%20are%20called,of%20development%20after%20the%20larvae%20is%20called%20fry.

also other animals such as dolphins, whales, sea turtles, and seabirds that become hooked or entangled in fishing gear.¹⁰

BACKGROUND INFORMATION

Types of IUU fishing

There exists readily available information on the appropriate methods of fishing, meaning that most professional fishermen are largely educated on the issue. Nevertheless, the issue of IUU fishing persists and can take many different forms.

Perhaps the main type of IUU fishing involves fishing without a license or approval for a certain species. Licences to fish are usually mandatory to fish and are often coupled with additional permissions required to fish certain fishes. They serve as a means of verification that fishermen undertaking the relevant activity are adequately skilled, responsible and familiar with rules, regulations and common practices. Since there is rarely any control in who fishes and their catch, especially in the high seas, this is the most common and perhaps simple way to undertake IUU fishing.

Furthermore, misreporting catches or not reporting them at all is another prevalent way to commit IUU fishing. A report of each fisherman or sector and their activity is essential for the port authorities to control and sustain the balance needed for marine life. Nevertheless, some fishermen, motivated by private interests and wishing to increase their profits, choose to either partially or wholly ignore this rule. Fishermen that partially follow relevant regulations might submit false reports, including misrepresentations of the number of fish they caught or the species.

An extension of the misreporting catches issue, many fishermen choose to knowingly fish endangered or otherwise protected species. Perpetrators may often find legal loopholes to exploit, which means that even though they go against the intent of regulations and regulatory bodies, their actions cannot always be characterised as illegal. This has developed to become a serious issue, resulting in many species coming close to complete extinction and the disruption of marine ecosystems.

To add to that, many fishermen choose to fish in areas or in seasons that are prohibited. Fishing is forbidden in certain places and during specific times due to multiple reasons, mainly for the fishermen's and fish's safety. More often than not, fishing during specific seasons is banned due to fish migration patterns as an attempt to protect certain, often endangered, species.

¹⁰ Fisheries, NOAA. "Understanding Bycatch." NOAA, www.fisheries.noaa.gov/insight/understanding-bycatch.

Similarly, IUU can take the form of fishing in areas that vessels are not allowed to. This can take various forms depending on both national and international legal frameworks. On a national level, a sovereign State retains the right to allow only its citizens to gain profit by fishing in its own seas; vessels from other Member States may, thus, not be allowed to fish as an attempt to curtail competition. On an international level, there may be disputed that vessels are advised or mandated to avoid. Nevertheless, many vessels tend to disregard these instructions, believing that since most of their competition will follow them, there will be more fish available for them.

Moreover, the rise of technology and the subsequent innovation in fishing gear has resulted in further harm under the umbrella of IUU fishing. Certain fishing gear may be banned on a national or international level, usually due to the negative impact it has on marine ecosystems, the fish and the environment as a whole. Some examples of banned gear may include explosives, toxic substances, towed gear, and static nets.¹¹ Nevertheless, since many believe that these methods are extremely effective at capturing the intended catch, they choose to ignore the applicable regulations.

One final and important type of IUU fishing concerns the transferring of unauthorised or unconfirmed shipments to vessels. The fact that these materials are either unauthorised or unconfirmed or both means that fishermen have kept this information secret from the relevant authorities, making this a case of unreported fishing. Withholding such information from authorities makes it impossible to accurately track vessels and their shipment which can pose a variety of practical and safety issues.

The effects of IUU fishing

Impact on the environment

IUU fishing can severely endanger marine life by threatening marine ecosystems and aquatic habitats.

Illegal, Unreported, and Unregulated (IUU) fishing and climate change are major threats to the health and balance of marine life, putting the aquatic ecosystem and habitat to the test of resilience on a daily basis. While the environment and natural resources have demonstrated formidable resistance to such challenges, human progress and the increasing use of technology have made their impact on the world, often driven by greed and disregarding the consequences.

¹¹ “Clear Rules on Prohibited Fishing Gear and More Flexibility for EU Fishermen: News: European Parliament.” *Clear Rules on Prohibited Fishing Gear and More Flexibility for EU Fishermen* | News | European Parliament, 21 Nov. 2017, www.europarl.europa.eu/news/en/press-room/20171120IPR88437/clear-rules-on-prohibited-fishing-gear-and-more-flexibility-for-eufishermen#:~:text=prohibited%20fishing%20gear%20and%20methods%2C%20i.e.%20toxic%20substances,reptiles%2C%20special%20provisions%20to%20protect%20sensitive%20habitats%2C%20and.

Marine life and natural resources play a significant role in supporting the economy and providing benefits to humankind. However, it is imperative to preserve the health and balance of these resources for sustainable use. Humans are natural predators and consumers, but this does not necessarily harm the food chain when managed correctly. Unfortunately, the trend of IUU fishing is on the rise, fuelled by increasing demand for seafood, with an estimated 3 billion people relying on it as their primary source of protein.

It is evident that the future of aquatic species depends on human actions, which will likely determine the outcome. It is crucial to consider the long-term consequences of human actions and to make responsible decisions that will preserve the health and balance of marine life.

The environment in which a living organism resides holds a critical importance to its survival. The degradation of the marine habitat can result in a vulnerable state for the species that inhabit it. While there are numerous factors that can contribute to the deteriorating state of the marine habitat, this Study Guide will only focus on IUU fishing. IUU fishing, utilizing prohibited fishing gear poses a significant threat to the marine environment and its inhabitants. This includes littering, overfishing, and pollution that can inflict severe damage to the habitat and lead to the death of various fish species.

Moreover, pollution can have a toxic effect on the environment and its inhabitants, resulting in the suffering of many fish species, and in turn, pose a health risk to humans consuming the contaminated fish.

The ecosystem requires a delicate balance, which is maintained by keystone species. While flagship species are widely recognized, keystone species play a crucial role in maintaining unity, neutrality, and preventing overpopulation within the ecosystem. An example of a marine keystone species is the sea otter. Sea otters regulate the population of sea urchins, preventing an overpopulation that would harm the kelp and destroy the aquatic environment.¹²

¹² calacademy. "Exploring Ecosystems: Coastal Food Webs | California Academy of Sciences." YouTube, YouTube, 14 July 2016, www.youtube.com/watch?v=LVJ5BKcAhAg

The absence of keystone species can result in an unstable ecosystem, emphasizing the importance and crucial role of such species. Keystone species play a vital role in maintaining the health and stability of the ecosystem and the food chain without human interference or unnatural alterations. Unfortunately, human activities have had a negative impact on the environment, despite various proposals and efforts to address this issue. IUU fishing, in particular, has proven to be a persistent problem, with perpetrators disregarding prohibited and restricted fishing practices, causing irreparable damage to the marine environment and its inhabitants.

The criminal actions associated with IUU fishing put the resilience of the ecosystem to the test on a daily basis, undermining all efforts to maintain a healthy and stable marine environment. Ultimately, this will lead to the collapse of the ecosystem's ability to withstand such harm, despite the best efforts to preserve it.

Impact on the economy

The financial impact of IUU fishing can be viewed from two different perspectives: that of the fishermen involved in IUU fishing, and that of the inhabitants of areas affected by IUU fishing.

From the perspective of the fishermen involved in IUU fishing, the activity can be financially lucrative. However, this profit is often obtained at the expense of law-abiding fishermen, and the money gained from such activities can be used to finance other criminal enterprises such as money laundering, the creation of false documents, and illegal licenses.¹³ This highlights the fact that while IUU fishing may be financially beneficial to the individuals involved, the broader societal impacts include a parallel economy and increased criminal activity, leading to a net financial loss for society as a whole.

The financial impact of IUU fishing on the affected communities and ecosystems is harder to quantify due to limited reporting. However, some estimates suggest that the cost of IUU fishing may reach tens of billions of dollars annually. This highlights the need for better reporting and monitoring systems to fully understand and address the financial and ecological impacts of IUU fishing.¹⁴

There are two economic implications of IUU fishing that must be considered. On one hand, there is the significant cost of resources such as security, personnel and port authority staff that must be allocated to protect each country's seas from IUU fishing. On the other hand, economically deprived areas may not have the financial means to

¹³ "Fao.org." *Links between IUU Fishing and Crimes in the Fisheries Sector | Illegal, Unreported and Unregulated (IUU) Fishing | Food and Agriculture Organization of the United Nations*, www.fao.org/iuu-fishing/background/links-crimes/en/.

¹⁴ "Fao.org." *Opens External Link in New Window*, www.fao.org/iuu-fishing/en/.

allocate such resources, making them vulnerable targets for IUU fishing activities. This can result in the depletion of their already limited income from their seas.

For example, as reported by the Pew Trusts Report, the global value of IUU fishing is estimated to be around 23 billion dollars annually.¹⁵ This highlights the negative economic impact that economically disadvantaged areas suffer in order for the perpetrators of IUU fishing to profit.

Case studies

Case Study 1: Coral triangle

The Coral Triangle, located in the West Pacific Ocean and encompassing the waters of six countries, is of utmost significance to the global marine ecosystem. It is considered the center of aquatic biodiversity, boasting an impressive array of marine life, including nearly 600 species of reef-building corals, six of the world's seven marine turtle species, numerous tuna populations, and over 200 species of reef fish.

This area is also home to 120 million people who depend on the seafood industry for their livelihood.¹⁶ Therefore, the preservation of this habitat and its inhabitants is critical to ensure the well-being of both oceanic and land populations.

Despite its significance, the Coral Triangle is often targeted by illegal, unreported, and unregulated fishing activities, such as destructive fishing, overfishing, and bycatch. The destruction of this habitat and its diverse marine life would not only be detrimental to the people who inhabit the area but would also have far-reaching effects on other aquatic habitats and their inhabitants.

In conclusion, the Coral Triangle is a vital component of marine ecosystems, and its preservation is crucial to ensure the health and stability of not only its own inhabitants but also the global oceanic community.

Case Study 2: Galapagos Island

The Galapagos Islands are an archipelago of 19 volcanic islands located in the Pacific Ocean, approximately 605 miles west of South America and on the equator line. This unique location and its cool temperatures provide an ideal habitat for a diverse and rare range of wildlife, making the islands a popular destination for tourists. In response, strict national protocols have been put in place to protect both the marine and terrestrial life.

¹⁵ *The Pew Charitable Trusts. "Illegal, Unreported and Unregulated Fishing." The Pew Charitable Trusts, The Pew Charitable Trusts, 25 Feb. 2013, www.pewtrusts.org/en/research-and-analysis/articles/2013/02/25/illegal-unreported-and-unregulated-fishing-frequently-asked-questions*

¹⁶ *"Coral Triangle." WWF, World Wildlife Fund, www.worldwildlife.org/places/coral-triangle.*

The Galapagos Islands have a rich cultural history and were originally inhabited by slaves who used the islands as a place of exile. As a result, the environment has remained largely unaltered and the local inhabitants have developed a strong connection to the islands and its wildlife. Many locals work as fishermen, providing for their families and maintaining the islands' economy, which is estimated to be worth 2 million dollars per year.

However, the Galapagos Islands have recently become the target of illegal, unreported, and unregulated (IUU) fishing, particularly by Chinese vessels. In 2021, hundreds of Chinese vessels travelled to the Galapagos Islands to take advantage of its rich marine life, causing significant damage to the local economy and threatening the stability of the marine ecosystem. Despite efforts from non-governmental organizations (NGOs), the IUU fishing continues, leaving the local population feeling helpless and overwhelmed. The Galapagos Islands and its unique wildlife are in urgent need of protection from illegal fishing activities to ensure their preservation for future generations.

Issues related to IUU fishing

Firstly, overfishing. Overfishing occurs when someone fishes more than necessary, either on purpose or accidentally. In other words, when vessels catch fish faster than the living ones have time to reproduce in order for the food chain to sustain its balance. Unfortunately, the consistency of this activity arises rapidly, supporting the statement that the number of overfished stocks has tripled over half a century.¹⁷

Firstly, the issue of overfishing must be addressed. Overfishing occurs when the quantity of fish caught exceeds the amount that can be replenished by the ecosystem. This can occur intentionally or accidentally and has resulted in a tripling of overfished stocks in the past half-century.

A related problem is bycatch, which occurs when unintended species are caught during fishing activities due to the use of inadequate or hazardous fishing gear. Despite advancements in fishing technology, the implementation of safer fishing practices remains a persistent issue, resulting in harm to the environment and the loss of profits due to the discarding of unintended catch.

Aquatic litter also contributes to illegal, unreported, and unregulated (IUU) fishing. It is estimated that 10% of the 8 million tonnes of plastic litter entering the ocean

¹⁷ "Over Fishing." OOOOF Foundation, 28 Feb. 2022, www.ofoof.foundation/over-fishing/#:~:text=The%20number%20of%20overfished%20stocks%20globally%20has%20tripled,Food%20and%20Agriculture%20Organization%20of%20the%20United%20Nations.

annually is a result of abandoned fishing gear, causing the death of fish caught in this waste.¹⁸

In conclusion, the perpetrators of IUU fishing often underestimate the impact of their actions on the environment. This illegal activity threatens vulnerable and poorly guarded areas, leading to job loss and economic strain. Furthermore, this exacerbates the already challenging task of maintaining a balanced ecosystem, and experts estimate that IUU fishing generates up to 36.4 billion dollars annually.¹⁹



Figure 2 Burning of prohibited fishing

¹⁸ "Four Reasons Illegal, Unreported and Unregulated (IUU) Fishing Affects Us and What We Can Do about It." Food and Agriculture Organization of the United Nations, www.fao.org/fao-stories/article/en/c/1403336/#:~:text=There%20is%20a%20direct%20link%20between%20IUU%20fishing,their%20fishing%20gear%20when%20they%20fear%20getting%20

¹⁹ "What Is Overfishing? Facts, Effects and Overfishing Solutions." WWF, World Wildlife Fund, www.worldwildlife.org/threats/overfishing.

MAJOR COUNTRIES AND ORGANISATIONS INVOLVED

European Union (EU)

The European Union (EU) is a significant market for seafood products, particularly due to the presence of the Mediterranean Sea which is renowned for its abundant seafood offerings and populations. To combat illegal, unreported, and unregulated (IUU) fishing, the EU has implemented several regulations starting from January 1, 2010. These regulations include the rejection of uncertified or non-flagged fish products from entering the EU market, and a system of warnings and sanctions for countries that engage in IUU fishing. A "yellow flag" is issued for a first offense, while a "red flag" is issued for persistent involvement in IUU fishing activities, leading to a ban from participating in the EU market.

The EU is also working towards closing loopholes that allow IUU fishing activities to persist. However, this is a complex issue, and a comprehensive solution has not yet been identified. While the EU's focus is primarily on addressing the issue within Europe, it has the potential to serve as an influential voice beyond its borders and provide support and guidance to other regions.

United States of America (USA)

The United States has several policies in place to combat IUU fishing. The most notable of these is the Magnuson-Stevens Fishery Conservation and Management Act, which is the primary law governing the management of marine fisheries in the country. The act requires that all fish harvested in US waters be managed in a way that ensures their long-term sustainability and provides for measures to prevent and reduce IUU fishing. The US also participates in international treaties and agreements aimed at combating IUU fishing, including the Port State Measures Agreement and the Agreement on Compliance and Enforcement Measures of the Western and Central Pacific Fisheries Commission. The US government also works with foreign governments, industry groups, and environmental organizations to address IUU fishing through a variety of programs and initiatives.

China

China is a significant player in the global fight against illegal, unreported, and unregulated (IUU) fishing. The country's high seafood consumption and reckless depletion of its own waters make it a critical focus of efforts to combat IUU fishing. In 2021, China's vessels were discovered operating illegally in the restricted waters of the Galapagos Islands, causing significant harm to the islands' marine life and economy. The vessels were also linked to human trafficking, with thousands of men and women forced to work on board in exchange for meager sustenance and the threat of violence. Despite evidence of China's persistent disregard for regulations that prevent IUU fishing, few significant actions have been taken to curb their activities.

Belgium

Belgium is the country with the lowest rate of IUU fishing. The official stance of Belgium on Illegal, Unreported, and Unregulated (IUU) fishing is to comply with the international rules and regulations regarding this issue. Belgium, as a member of the European Union, implements the EU's regulations on IUU fishing, which include measures to prevent the import of seafood products from IUU sources and to impose sanctions on countries that are involved in IUU fishing activities. Belgium also works with international organizations, such as the United Nations Food and Agriculture Organization (FAO) and the International Maritime Organization (IMO), to combat IUU fishing and to promote sustainable fishing practices.

Senegal

Senegal is a coastal state with a significant fishing industry, and, therefore, has a vested interest in ensuring the sustainability of its fish stocks and protecting its rights and responsibilities in accordance with international law. Vessel activity in this area has been persistent for a long while, having annually lost about 2.6 million MT (weight) of fish, worth 269 million euros.²⁰ There was a regional collaboration between Senegal and Mauritania, another West African State, but that came to an end when Senegalese fishing vessels were caught trespassing Mauritanian sea borders. This constituted an act of IUU fishing and a sign of disrespect to their alliance, causing Mauritania to dissolve it.

²⁰ "Supply & Trade." *SeafoodSource Official Media*, www.seafoodsource.com/news/supply-trade.

Peru

Peru has implemented several measures to tackle Illegal, Unreported and Unregulated (IUU) fishing. The country's National Institute of the Sea (INP) is responsible for the enforcement of regulations in the country's Exclusive Economic Zone (EEZ), which includes monitoring and controlling fishing activities to prevent IUU fishing.

Peru has taken measures to strengthen its fishing inspection and control system, including the deployment of satellite monitoring systems and increased cooperation with other countries in the region. Additionally, the country has taken steps to improve the traceability of its seafood products, through measures such as the implementation of a Vessel Monitoring System (VMS) for fishing vessels, and the establishment of a national traceability system for seafood.

Peru is also a member of regional and international organizations that aim to combat IUU fishing, such as the Inter-American Tropical Tuna Commission (IATTC), the South Pacific Regional Fisheries Management Organization (SPRFMO), and the Western and Central Pacific Fisheries Commission (WCPFC). Through these organizations, Peru works with other countries in the region to share information and coordinate efforts to combat IUU fishing and promote sustainable fishing practices.

Russian Federation

Russia faces issues with Illegal, Unreported, and Unregulated (IUU) fishing. Despite having regulations in place to prevent IUU fishing, the enforcement of these regulations is reportedly weak, and there have been instances of IUU fishing in Russian waters. The country has also been accused of allowing its vessels to engage in IUU fishing in other countries' waters. In order to address these issues, Russia has been working with international organizations and other countries to improve its policies and enforcement mechanisms.

International Maritime Organization (IMO)

The International Maritime Organization (IMO) has taken a strong stance against Illegal, Unreported and Unregulated (IUU) fishing. IMO's policy is to ensure that measures are in place to prevent, deter, and eliminate IUU fishing, and to promote the responsible and sustainable use of marine resources.

To achieve this goal, IMO has adopted several measures, including the implementation of port state control measures, the introduction of mandatory vessel tracking systems, and the promotion of international cooperation and coordination between coastal states, regional organizations, and the fishing industry.

IMO also works to promote the adoption of best practices in the fishing industry and to raise awareness about the negative impacts of IUU fishing on the marine environment, coastal communities, and the legal fishing sector.

Additionally, IMO is a member of the Food and Agriculture Organization of the United Nations (FAO) Committee on Fisheries, which provides a forum for international cooperation on fisheries-related matters, including the fight against IUU fishing.

Food and Agriculture Organization (FAO)

The Food and Agriculture Organization (FAO) of the United Nations has a comprehensive policy on combating Illegal, Unreported, and Unregulated (IUU) fishing. The organization recognizes IUU fishing as a threat to sustainable seafood production and the livelihoods of fishing communities. To address this issue, FAO has developed the International Plan of Action for the Management of Fishing Capacity (IPOA-Capacity), which aims to promote responsible and sustainable fishing practices.

The IPOA-Capacity provides a framework for countries to manage fishing capacity, regulate fishing activities, and monitor and enforce compliance with fishing regulations. The FAO also works with other international organizations, such as the World Bank and the International Maritime Organization, to develop and implement measures to combat IUU fishing, such as the promotion of transparent and responsible supply chains and the strengthening of coastal state capacities for monitoring, control, and surveillance.

In addition, the FAO provides technical assistance to developing countries to improve their fisheries management systems and to implement effective measures to combat IUU fishing. The organization also provides a platform for international cooperation and information exchange on IUU fishing issues and promotes sustainable and responsible seafood production and trade practices.

International Labour Organization (ILO)

The International Labour Organization (ILO) is a specialized agency of the United Nations that focuses on promoting social justice and promoting decent working conditions.

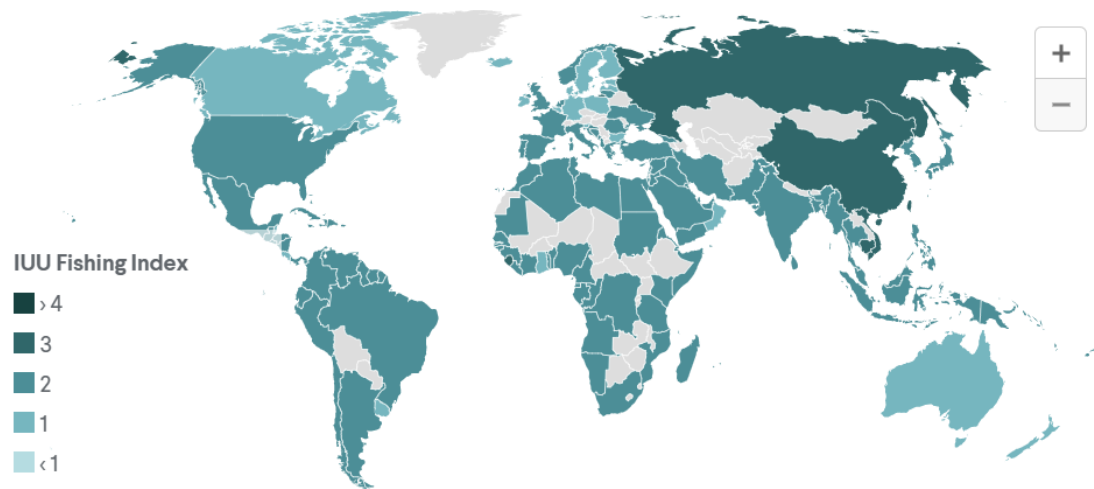
In regards to IUU fishing, the ILO is concerned about the labor rights and conditions of the workers on fishing vessels. The ILO has established several international labor standards related to working conditions in the fishing sector, including the Work in Fishing Convention, 2007 (No. 188). This convention lays out the rights and responsibilities of employers and workers in the fishing sector, with the aim of ensuring safe and healthy working conditions and protecting workers from exploitation and forced labour.

The ILO has also worked to raise awareness about the issue of forced labor and trafficking in the fishing sector, including through the "Supporting the Fight against Forced Labour in the Fishing Sector" project. The ILO collaborates with a variety of stakeholders, including governments, employers' organizations, and workers' organizations, to improve labor conditions in the fishing sector and address IUU

fishing.

Fishing in the Shadows

How much coastal states are exposed to and combat illegal, unreported, and unregulated fishing



Scores fall between 1 and 5, with darker shaded countries faring worse. The Cook Islands are not shown on the map, but have an index value of 2.3.

Sources: Poseidon Aquatic Resource Management Ltd.; Global Initiative Against Transnational Organized Crime.

COUNCIL OF
FOREIGN
RELATIONS

Figure 6 the global scores of illegal, unreported and unregulated (IUU) fishing

TIMELINE OF EVENTS

DATE	DESCRIPTION OF EVENT
10 December 1982	The United Nations Convention on the Law of the Sea (UNCLOS) is an international treaty that was adopted.
4 August 1995	The United Nations Fish Stocks Agreement is adopted, which aims to ensure the long-term conservation and sustainable use of fish stocks through cooperation among states.
2 March 2001	FAO adopts the International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (IPOA-IUU).
22 November 2009	The Agreement on Port State Measures is signed.
29 January 2010	The European Union (EU) adopts the EU IUU Regulation.
1 January 2016	The United Nations Sustainable Development Goals (SDGs) come into force.
July 2018	The Voluntary Guidelines for the Marking of Fishing Gear (VGMG) are adopted by FAO.
31 December 2020	The United Nations General Assembly adopts a resolution on the fight against IUU Fishing.

PREVIOUS ATTEMPTS TO SOLVE THE ISSUE

UN Convention on the Law of the Sea (UNCLOS)

The United Nations Convention on the Law of the Sea (UNCLOS) is a treaty that provides a comprehensive legal framework for the use and conservation of the world's oceans and their resources. The treaty establishes a system of cooperation among states in the conservation and management of fish stocks, including measures aimed at preventing, deterring and eliminating illegal, unreported and unregulated (IUU) fishing. UNCLOS requires states to take measures to prevent, reduce and control pollution from fishing vessels and to establish a system of inspections to ensure compliance with conservation and management measures. In addition, the treaty allows for the creation of regional fisheries management organizations (RFMOs) to manage and conserve fish stocks, and to adopt binding measures to prevent, deter, and eliminate IUU fishing. UNCLOS plays a crucial role in promoting sustainable use of the oceans and their resources and provides a comprehensive legal framework for the conservation and management of living and non-living resources in the oceans, including fish stocks.

UN Sustainable Development Goals

The United Nations' Sustainable Development Goal 14, "Life Below Water," seeks to conserve and sustainably use the world's oceans, seas, and marine resources for the advancement of sustainable development. The goal addresses the issue of illegal, unreported, and unregulated (IUU) fishing through various targets aimed at promoting sustainable fishing practices, protecting marine resources, and improving the economic benefits of marine resource use for Small Island Developing States and least developed countries.

Target 14.4 calls for the regulation of harvesting and the elimination of overfishing, IUU fishing, and destructive fishing practices by 2020. Target 14.6 seeks to eliminate fisheries subsidies that contribute to IUU fishing and to increase the number of marine protected areas, with a focus on preserving biodiversity and mitigating the impacts of climate change.

Moreover, Target 14.a aims to increase the economic benefits of sustainable use of marine resources through the management of fisheries, aquaculture, and tourism for Small Island Developing States and least developed countries.

In conclusion, SDG 14 provides a comprehensive framework for global action and cooperation towards sustainable use and conservation of the world's oceans and marine resources, and it plays a crucial role in combating IUU fishing.



Figure 7 The United Nations Sustainable Development Goals

EU IUU Fishing Regulation (2010)

The EU IUU Fishing Regulation of 2010 represents a comprehensive effort by the European Union to tackle the challenge of illegal, unreported, and unregulated (IUU) fishing. This regulation seeks to enhance control and enforcement measures aimed at curbing IUU fishing, by creating a dedicated control system that can track and report on fishing vessels.

The regulation encompasses several crucial elements. Firstly, it seeks to increase traceability by introducing a catch certificate system and vessel identification numbers to make it easier to trace the origin of fish products and verify that they were caught legally. Additionally, the regulation endeavors to improve transparency within the fishing industry by making data on fishing vessels, their activities, and catches publicly accessible. The EU also aims to reinforce cooperation with developing countries by requiring them to implement similar measures against IUU fishing, and providing technical assistance and capacity-building support. Lastly, the regulation establishes a blacklisting system for vessels and countries that engage in IUU fishing, making it harder for them to access the EU market.

In conclusion, the EU IUU Fishing Regulation of 2010 is a significant initiative aimed at addressing the problem of IUU fishing through stricter control and enforcement measures, increased transparency and cooperation, and support for third countries. It serves to protect the ocean and its resources, ensuring that the fish products entering the EU market are legally caught.

National Ocean and Atmospheric Administration (NOAA)

The National Oceanic and Atmospheric Administration (NOAA) is a leading federal agency in the United States that is dedicated to the provision of scientific research, management, and conservation efforts aimed at preserving the nation's coastal and marine resources. In its pursuit of this goal, the agency regularly produces a range of reports and studies on a variety of topics related to the ocean and atmosphere, including illegal, unreported, and unregulated (IUU) fishing.

Some of the key outputs from the agency include the National Plan of Action to Prevent, Deter, and Eliminate IUU Fishing. This report, developed in partnership with other federal agencies, outlines the US government's strategy for addressing IUU fishing, including measures such as vessel inspections, licensing requirements, and penalties for violations. Additionally, the agency's Office of Law Enforcement has produced the IUU Fishing and Seafood Fraud report, which provides a comprehensive overview of the problem of IUU fishing and seafood fraud, including its impacts on marine resources and the economy, as well as the efforts being made to combat these issues.

Another important publication from the agency is the Economic and Social Impacts of IUU Fishing report, produced by NOAA's National Marine Fisheries Service. This report provides a thorough analysis of the economic and social impacts of IUU fishing on coastal communities, fishing industries, and marine resources. Lastly, the State of U.S. Fisheries report, also produced by the National Marine Fisheries Service, offers an overview of the status of U.S. fish stocks and the efforts being made to manage and conserve them, including measures to combat IUU fishing.

In conclusion, these reports from NOAA provide critical information on the impact of IUU fishing, the initiatives being taken to combat it, and the progress being made towards the sustainable management of marine resources.

The Agreement on Port State Measures (PSMA)

The Agreement on Port State Measures (PSMA), adopted by the United Nations Food and Agriculture Organization in 2009, is a binding instrument aimed at combating illegal, unreported, and unregulated (IUU) fishing by preventing the entry of IUU-caught fish into the market. The PSMA requires port states, where fishing vessels dock, to implement measures aimed at verifying the legality of the fish caught by these vessels, and ensuring that they comply with conservation and management measures.

One of the key measures under the PSMA is the inspection of fishing vessels and their catch. This will allow port states to confirm that the fish being caught by the vessels are legal, and that they adhere to conservation and management measures. The agreement also requires the refusal of entry to port for vessels that are non-compliant with conservation and management measures, or are listed as IUU vessels, effectively preventing IUU-caught fish from entering the market.

In addition, the PSMA provides for the suspension or revocation of authorization for vessels that repeatedly engage in IUU fishing, acting as a deterrent against such practices. The PSMA also calls for the sharing of information on IUU vessels and their activities among countries and regional fisheries management organizations (RFMOs), thus promoting greater international cooperation and information exchange in the fight against IUU fishing.

As of 2021, the PSMA has been ratified by over 50 countries and the European Union, and is widely recognized as a crucial international instrument in the efforts to combat IUU fishing.

POSSIBLE SOLUTIONS

Capacity building

Capacity building refers to the enhancement of the necessary knowledge, skills, and resources required for effective management and conservation of marine resources, including the prevention, deterrence, and elimination of Illegal, Unreported, and Unregulated (IUU) fishing. This objective can be achieved through various means, such as the provision of technical assistance and financial support from developed countries and international organizations to developing countries.

Technical assistance can encompass training in vessel inspections, information management systems, and legal frameworks, while financial support can help developing countries acquire the essential equipment, infrastructure, and technology necessary to combat IUU fishing. Furthermore, capacity building can be facilitated through knowledge sharing, where developed countries and international organizations can share their best practices and experiences in combatting IUU fishing with developing nations.

Institutional capacity building is also critical, and can involve the strengthening of the knowledge, skills, and resources of fisheries management agencies and other relevant institutions through training and capacity-building programs for officials, scientists, and stakeholders. Building partnerships and cooperation among nations and international organizations is also crucial in the fight against IUU fishing, including the sharing of information and intelligence, joint patrols and inspections, and collaboration on research and development.

It is important to note that capacity building is a prolonged process that requires sustained commitment and efforts from all stakeholders. Moreover, it is essential to ensure that the initiatives are tailored to the specific needs of each country, sustainable, and inclusive in nature.

Market-based measures

Market-based measures are a suite of economic strategies aimed at addressing the issue of illegal, unreported, and unregulated (IUU) fishing. These measures leverage economic incentives to promote compliance with conservation and management measures and discourage the consumption of fish products from illicit sources.

One of the primary market-based measures is the imposition of import bans on fish products from countries known to engage in IUU fishing. This approach serves a dual purpose, by making it more difficult for IUU-caught fish to enter the market and protecting the legitimate fish products industry.

Traceability systems for fish products is another important market-based measure. Governments can establish traceability systems to confirm that fish products are caught legally, using catch certificates, vessel identification numbers, and other documentation to track the origin of fish products. This helps to identify the sources of IUU-caught fish and prevents them from entering the market.

Industry organizations and environmental groups can also play a crucial role in the implementation of market-based measures. By developing and implementing certifications and labeling systems, such as the Marine Stewardship Council (MSC) certification, consumers are provided with information about the sustainability of the fish products they purchase.

Moreover, industry organizations can engage in voluntary agreements with governments or other stakeholders to promote sustainable fishing practices and combat IUU fishing. These agreements can include the implementation of vessel monitoring systems, observer programs, and traceability systems to ensure that the fish products entering the market are sustainably caught and in compliance with conservation and management measures.

Stronger regulations and enforcement

To combat illegal, unreported, and unregulated (IUU) fishing, a range of regulations and enforcement measures can be put in place. These measures are aimed at improving compliance with conservation and management measures by increasing the consequences for non-compliance and by strengthening the frequency and effectiveness of inspections and enforcement efforts.

One effective regulation is the requirement for fishing vessels to be licensed. This enables governments to monitor and regulate the activities of these vessels and enforce conservation and management measures, including preventing IUU fishing. Another tool is conducting inspections of fishing vessels to ensure adherence to conservation and management measures and regulations.

The use of technology, such as Automatic Identification System (AIS) and Vessel Monitoring Systems (VMS), can play a crucial role in combatting IUU fishing. These systems can provide real-time information on the location and activity of fishing vessels, making it easier for governments to detect and address IUU fishing activities.

Penalties for non-compliance with conservation and management measures, such as fines and the revocation of fishing licenses, should also be increased to serve as a deterrent against IUU fishing and to promote compliance.

In conclusion, comprehensive regulations and effective enforcement are crucial measures in the fight against IUU fishing. By combining licensing, inspections, technology, and penalties, governments can work towards the sustainable use of marine resources and the elimination of IUU fishing.

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