

U.S. Law on Sustainable Marine Fisheries Exploitation and Its Relation to the Practical Situation in Vietnam

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Abstract: This paper examines the legal framework and practices regarding sustainable marine fisheries exploitation management in the United States, and provides a comparative analysis with the current legal system of Vietnam. The article first explores the legal structure of the U.S. regarding sustainable fisheries exploitation, clarifying the basic legal frameworks, sustainable fishing exploitation principles, the state management apparatus, and penalties for violations. It then compares U.S. regulations with those of Vietnam, identifying challenges and gaps in policy enforcement in Vietnam. The paper also analyzes the impact of institutional frameworks, management capacity, fishery scale, and fishermen's awareness on sustainable fisheries exploitation management in both countries. Based on these findings, the article offers lessons for Vietnam and suggests solutions to improve the legal framework and enforcement mechanisms for sustainable fisheries exploitation management in Vietnam.

Keywords: Sustainable fisheries exploitation; U.S. fisheries law; Vietnamese fisheries law; Marine fisheries management; Penalties for fisheries violations; Sustainable fishing exploitation principles.

I. INTRODUCTION

Marine fisheries exploitation are an important economic sector for many countries, particularly for those with long coastlines and abundant marine resources, such as Vietnam and the United States. However, if fisheries are not closely managed, they can lead to the depletion of fish stocks, destruction of marine ecosystems, and significant impacts on the livelihoods of fishermen. Therefore, sustainable fisheries management is an urgent and necessary issue to protect marine resources and ensure the long-term development of the industry.

The United States, with its extensive experience in managing marine resources, has developed a comprehensive and robust legal system to ensure sustainable marine fisheries exploitation. This legal framework includes specific principles and

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regulations for fisheries exploitation, strict monitoring and management mechanisms, as well as stringent penalties for violations. These regulations not only help protect marine resources but also promote the sustainable development of the fisheries industry in the United States. The U.S. fisheries management model has been studied and adopted by many countries, including Vietnam.

Meanwhile, Vietnam, although having made significant progress in developing and implementing fisheries exploitation laws, still faces many challenges. Issues such as Illegal, Unreported, and Unregulated (IUU) fishing, deficiencies in monitoring, management capacity, and fishermen's awareness of sustainable practices are hindrances to the sustainable development of the fisheries sector. Comparing the legal systems of the United States and Vietnam, and analyzing the lessons learned, is essential to improving fisheries management in Vietnam.

The objective of this paper is to study the legal framework for sustainable marine fisheries exploitation management in the United States and compare it with the current legal system in Vietnam. Specifically, the article will explore the fundamental principles in the U.S. legal system, the structure of fisheries management institutions, and penalties for violations. It will also highlight the differences in approaches between the two countries and analyze the impact of institutions, management capacity, fishery scale, and fishermen's awareness on maintaining sustainable fishery resources in both countries. Based on this analysis, the paper will propose recommendations to improve the legal and policy framework for fisheries management in Vietnam, contributing to the sustainable development of the fisheries sector and the protection of marine ecosystems.

These comparative studies are not only significant for Vietnam in refining its fisheries laws but also help broaden the perspective on how countries can collaborate and learn from each other in managing marine resources.

II. METHODOLOGY

To study and compare the legal frameworks for sustainable fisheries exploitation management between the United States and Vietnam, this paper applies a qualitative research method combined with a comparative analysis approach. The qualitative method helps clarify the key elements that constitute the legal systems of both countries, while the comparative analysis method is used to highlight the similarities and differences between the legal provisions for sustainable fisheries in the United States and Vietnam. The research process is conducted through the following specific steps.

First, the paper collects legal data from official sources. Legal documents related to sustainable fisheries management in the United States and Vietnam will be thoroughly analyzed, including laws, decrees, circulars, and relevant policies. Specifically, the study focuses on the Magnuson-Stevens Fishery Conservation and Management Act (U.S. Fisheries Law) and the 2017 Fisheries Law of Vietnam, along with decrees, circulars, and other legal documents guiding the enforcement of these regulations. Additionally, the paper also references research reports, scientific papers, and documents from international organizations such as FAO, the World Bank, and non-governmental organizations, to provide insights into the current situation and effectiveness of fisheries law enforcement in both countries.

Next, the paper uses a comparative analysis method to contrast the legal provisions on sustainable fisheries exploitation management in the United States and Vietnam. Specifically, the paper will compare the similarities and differences between the two legal systems, including sustainable principles, monitoring mechanisms, penalties for violations, and fisheries management structures. Moreover, the context analysis method will also be applied to clarify factors such as institutional frameworks, management capacity, fishery scale and structure, as well as fishermen's awareness of sustainable fisheries. This analysis will provide a clearer understanding of the differences in how legal provisions are applied and enforced in each country.

The paper also adopts a case study approach to examine exemplary cases of sustainable fisheries exploitation law enforcement in the United States. Specifically, it will investigate the fishery management programs of NOAA (National Oceanic and Atmospheric Administration) and the U.S. measures to protect fishery resources, evaluating the effectiveness of monitoring and management mechanisms. Simultaneously, the paper will reference several practical cases in Vietnam, particularly the challenges and difficulties in implementing sustainable fisheries exploitation regulations, and the impacts of these policies on fishermen's livelihoods.

In the process of analysis and evaluation, the paper will focus on assessing the effectiveness of the policies and legal provisions in maintaining sustainable fisheries exploitation in each country. Based on research materials and real-world reports, the paper will evaluate the relevance and applicability of lessons learned from the United States to the practical context of Vietnam. Additionally, the paper will evaluate the impact of external factors, such as the marine environmental situation, climate change, and challenges in international relations, on the fisheries sector of both countries.

Apart from qualitative and comparative analysis methods, the paper will also use statistical methods and quantitative data, if available, on fishery production, violations, and the effectiveness of management measures. The use of statistical methods will help enhance the objectivity in assessing the state of sustainable fisheries management in both the United States and Vietnam, while providing a solid foundation for analysis and conclusions.

Finally, the paper will propose policy recommendations and solutions to improve the legal framework for sustainable fisheries exploitation management in Vietnam. These recommendations will include improving regulations on marine resource management, enhancing coordination among relevant authorities, and applying modern monitoring technologies. In addition, the paper will propose strategies to raise awareness and capacity among fishermen through training programs, advocacy, and policies that encourage sustainable practices. Through these research methods, the paper hopes to contribute to improving the legal system for sustainable fisheries exploitation management in Vietnam, learning from international experiences, and building a strong legal foundation to protect marine resources while promoting sustainable fisheries development in the current context.

III. RESULTS AND DISCUSSIONS

3.1. The Current Situation of the Construction and Enforcement of Fisheries Law for Marine Fisheries Exploitation in the United States

a. The Basic Legal Framework of the United States for Sustainable Marine Fisheries Exploitation

The United States has developed a comprehensive legal system to ensure that marine fisheries exploitation is carried out sustainably, responsibly, and based on scientific principles, in order to protect fishery resources and maintain marine ecological security. The cornerstone of this legal framework is the Magnuson–Stevens Fishery Conservation and Management Act (MSA), along with amendments and supplementary laws introduced later to enhance management, control IUU fishing, protect habitats, and ensure human rights in the seafood supply chain.

In general terms, the U.S. legal framework for sustainable fisheries exploitation has a multi-layered structure, expressed through various legal forms. The first form is *Acts or Public Laws*, which are the basic legislative documents enacted by the U.S. Congress, providing the legal foundation for fisheries management and conservation. For instance, the Magnuson–Stevens Fishery Conservation and Management Act (16 USC Ch. 38, 1976, updated 2022) is the central law that governs marine fisheries activities in the U.S. Other laws like the *Illegal, Unreported, and Unregulated Fishing Enforcement Act of 2015* set penalties for IUU fishing, while laws such as the *Shark Conservation Act 2010* and *Billfish Conservation Act 2012* focus on the conservation of specific fish species. These laws serve as national legal sources that establish principles, scope, and management responsibilities.

Another important legal structure is the *United States Code (USC)*, which systematizes laws categorized by subject. Title 16 (Conservation) is particularly relevant for fisheries and marine environmental issues. Specific chapters (e.g., 10, 38, 48, 56, 61, 75, 88, 99, 101) regulate aspects such as managing Exclusive Economic Zones, salmon conservation, Pacific fisheries, Atlantic tuna, international cooperation, and aquaculture. The USC demonstrates the interconnection and systematization of different fields of fisheries resource management.

Additionally, there is the *Code of Federal Regulations (CFR)*, which consists of regulations issued by executive agencies, primarily the National Marine Fisheries Service (NMFS) under NOAA. These regulations provide detailed guidance on implementing laws. Key regulations are found in 50 CFR, including Sections 600–679, which set rules for implementing the Magnuson–Stevens Act, such as National Standards, Essential Fish Habitat (EFH), Vessel Monitoring Systems (VMS), fishing capacity reduction, and quota management. Furthermore, Section 300 regulates international fisheries agreements, including conventions and IUU enforcement. The CFR regulations are a technical enforcement tool that is updated regularly to meet evolving management needs.

The *Executive Orders* are another key aspect of the legal framework. These orders provide executive guidance and set policy directions. For example, the *Executive Order on Promoting American Seafood Competitiveness and Economic Growth* (2020) aims to foster sustainable seafood development while promoting economic growth. These orders play a coordinating role in adjusting macro policies during different periods.

Furthermore, each state with a coastline, such as California, Texas, and Alaska, has its own legal system governing fisheries within state waters, in conjunction with federal laws. These are known as *State Laws*, which include Fish and Game Codes or Agriculture Codes. For example, the *California Fish and Game Code* (Part 1.7, Chapter 6 – Sections 7050–7090)

regulates marine resource management and conservation, while the *Texas Agriculture Code – Chapter 134* regulates aquaculture. These state laws reflect the cooperation mechanism between federal and state authorities in managing marine resources.

The overall U.S. legal framework for fisheries exploitation is designed to promote sustainability, with the following key pillars. First, it focuses on the *conservation and management of fisheries resources*. This is based on the principle of "sustainable use," which emphasizes rational and renewable resource use. The framework also establishes Regional Fishery Management Councils (RFMCs) to develop Fishery Management Plans (FMPs). It uses mechanisms such as catch limits, Individual Fishing Quotas (IFQs), and fisheries monitoring programs (Observer Program) to manage fisheries.

Second, the U.S. framework prioritizes *combating Illegal, Unreported, and Unregulated (IUU) fishing*. It includes strict regulations on vessel monitoring systems (VMS), seafood traceability for imports, and port state measures. Additionally, it fully implements international conventions such as the South Pacific Fisheries Agreement, North Pacific Fisheries, IATTC, and WCPFC. Laws like the *Illegal, Unreported, and Unregulated Fishing Enforcement Act of 2015* and 50 CFR §300.300–304 focus on regulating IUU fishing.

Third, there are efforts for *the protection of marine ecosystems and biodiversity*. This includes standards for Essential Fish Habitat (EFH), Marine National Monuments, and marine protected areas. Other regulations address bycatch reporting, habitat conservation, and the Marine Mammal Protection Act. The U.S. also encourages sustainable aquaculture development as seen in 16 USC Ch. 48.

The framework also places importance on *international cooperation in fisheries management*. The U.S. is a member and signatory of many international conventions related to marine resource conservation. Through the chapters in the USC (Ch. 70, 71, 75, 76, 88, 96, 97) and provisions in 50 CFR Part 300, the U.S. government demonstrates its commitment to Regional Fisheries Management Organizations (RFMOs).

Finally, the U.S. legal system focuses on *governance and law enforcement*. It delegates authority to NOAA Fisheries and the U.S. Coast Guard for monitoring, inspection, and enforcement of regulations. It also specifies penalties, civil or criminal litigation for violations, and ensures transparency and accountability through periodic reports on the status of resources and management effectiveness.

In conclusion, the U.S. legal framework for sustainable marine fisheries exploitation is diverse in form, ranging from federal laws, codes, and administrative regulations to state laws. It is also rich in content, encompassing resource conservation, harvest management, IUU control, ecosystem protection, and international cooperation. This entire system forms a robust, unified, and adaptive legal structure that helps realize the goal of sustainable fisheries development based on an ecosystem-based fisheries management approach.

Among the key legal documents concerning the sustainable exploitation of marine fisheries in the United States, the following prominent texts can be mentioned:

The Magnuson–Stevens Fishery Conservation and Management Act (MSA) is the primary law regulating the management of marine fisheries in U.S. federal waters. First enacted in 1976, the MSA promotes the long-term biological and economic sustainability of marine fisheries. The goals of the Act include preventing overfishing, rebuilding overfished fish stocks, enhancing long-term economic and social benefits, ensuring a safe and sustainable seafood supply, and protecting essential habitats for fish, including those used for spawning, feeding, and growing to maturity. Under the MSA, U.S. fishery management is a transparent and science-based process, involving management, innovation, and collaboration with the fishing industry.

The Sustainable Fisheries Act of 1996 introduced numerous provisions on science, management, and conservation. The Act recognizes the importance of healthy habitats for both commercial and recreational fish stocks. Fish and other aquatic species depend on their habitats for survival and reproduction. The Act also stipulates strengthening requirements to prevent overfishing and rebuild overfished stocks, setting standards for fishery management plans to identify objective, measurable criteria for assessing stock status. It adds three new national standards to address vessel safety, fishing communities, and bycatch, and establishes new requirements for fishery management councils to identify and describe Essential Fish Habitat (EFH) and protect, conserve, and enhance EFH for the benefit of fisheries. The 2002 update to the EFH regulations allows fishery councils to designate Special Areas of Ecological Importance within EFH—those areas with critical ecological functions and/or those that are especially vulnerable to degradation. The Act also establishes a federal consultation process on EFH, advising federal agencies to avoid, minimize, mitigate, or offset negative impacts on EFH.

The Magnuson-Stevens Act Reauthorization of 2007 further improved and enhanced the science, management, and conservation of fisheries. It established annual catch limits and accountability measures, promoted market-based management strategies including catch share programs, and strengthened the role of science through peer reviews, scientific committees, and the Marine Recreational Information Program. It also enhanced international cooperation by addressing illegal, unreported, and unregulated (IUU) fishing and bycatch. Under the MSA, the U.S. is ending overfishing and rebuilding fish populations, which enhances the value of fisheries for both the economy and marine ecosystems.

A positive certification will be granted to a country if it provides evidence that it has taken actions to address activities it has been identified for. Negative certification may lead to denial of access to U.S. ports for vessels from that country and may result in import restrictions on fish or fish products.

On December 31, 2018, the Magnuson-Stevens Act was amended by the Recreational Fisheries Management Modernization Act. This law focuses on improving data on recreational fishing and managing multi-use fisheries. It includes new reporting requirements, studies, and guidelines related to fisheries management and science [16].

The Maritime Security and Fisheries Enforcement Act (SAFE Act, Pub. L. 116-92, 16 U.S.C. § 8001) establishes a government-wide approach to combat illegal, unreported, and unregulated (IUU) fishing and related maritime threats, including organized crime, trafficking, and forced labor. It mandates U.S. collaboration with international partners, other nations, and civil society in “priority areas” and “flag states of concern,” coordinated by a 21-member Interagency Task Force.

Following the 2022 National Security Memorandum prioritizing IUU fishing and labor abuses, the Task Force issued a 5-year National Strategy with three goals: Promote sustainable fisheries management via cooperation with countries, regulators, and stakeholders; Strengthen Monitoring, Control, and Surveillance (MCS) of fishing through interagency and international coordination and enforcement at sea; Ensure that seafood entering trade is legal, sustainable, and free from labor abuses.

In June 2023, the Department of State became Task Force Chair, supported by NOAA and the Coast Guard. In December 2024, the State Department released the “U.S. Efforts to Combat IUU Fishing and Labor Abuse” information sheet, highlighting efforts to strengthen fisheries regulations, enforce compliance, and prevent illegally or forcibly produced seafood from entering trade. The U.S. has established a comprehensive legal system and enforcement mechanisms to prevent IUU fishing, protect fishery resources, and ensure maritime security. The Maritime SAFE Act represents a whole-of-government strategy, combining legal measures, surveillance, and international cooperation to address IUU fishing and related crimes such as drug trafficking, arms trade, and forced labor. Thus, the U.S. clearly identifies priority areas and flag states of concern in combating IUU. The 2006 Magnuson-Stevens Act amendment continues to strengthen the legal framework by introducing international provisions to promote cooperation and accountability with other nations. Regular reporting to Congress on IUU nations and the strict consultation process enables the U.S. to apply sanctions such as port access bans and seafood import restrictions for non-compliant nations.

The Seafood Import Monitoring Program (SIMP) is a key tool to prevent IUU seafood and seafood harvested illegally or produced using forced labor from entering the U.S. market through a traceability system and strict management of 13 key seafood species. The above legal measures and policies reflect the U.S.'s strong commitment to protecting global fishery resources, ensuring sustainable fisheries development, and promoting human rights standards in the seafood industry [18].

The U.S. has built its offshore fisheries legal system based on the Magnuson-Stevens Fishery Conservation and Management Act (MSA), first enacted in 1976 and amended several times to enhance sustainability and management effectiveness. This Act sets out the goal of protecting fishery resources in the U.S. Exclusive Economic Zone (EEZ), preventing overfishing, and maintaining fish stocks at sustainable levels based on scientific principles (NOAA Fisheries, 2021). The MSA also established Regional Fishery Management Councils, key agencies that develop and enforce fishery management plans tailored to the ecological and social characteristics of each region (MSA, 16 U.S.C. §§ 1801-1884).

b. Principles of Sustainable Marine Fisheries Exploitation in the United States

Sustainable fisheries exploitation is one of the top priorities in U.S. fisheries management policy. U.S. law, particularly the Magnuson-Stevens Fishery Conservation and Management Act (MSA), establishes principles and regulations to ensure that marine fisheries are exploited in a sustainable, efficient, and responsible manner.

Below are the fundamental principles of sustainable marine fisheries exploitation under U.S. law:

- (1). **Maximum Sustainable Yield (MSY) Principle:** All fishing activities must be managed so as not to exceed the maximum sustainable yield. This ensures the recovery and maintenance of fish populations at levels that can be sustainably harvested over the long term.
- (2). **Preventing Overfishing:** Fishing activities that exceed the capacity of marine populations to recover are prohibited. Specific regulations are in place for Annual Catch Limits (ACLs) and Accountability Measures (AMs) to control overfishing.
- (3). **Protection of Habitats and Marine Ecosystems:** Protecting critical habitats for marine life, such as coral reefs and seagrass beds, is essential. The impact of fishing gear, especially bottom trawls, on the seafloor environment is minimized.
- (4). **Minimizing and Preventing Bycatch:** Technologies and measures are employed to reduce the bycatch of non-target species such as sea turtles, whales, and juvenile fish. Accurate reporting of bycatch volumes is required.
- (5). **Ecosystem-Based Fishery Management (EBFM):** Fisheries management integrates ecological, climatic, and biodiversity factors. It considers the entire ecosystem, rather than focusing on individual species alone.
- (6). **Enhanced Monitoring, Surveillance, and Enforcement:** Systems such as Vessel Monitoring Systems (VMS), onboard observers, and logbooks are used for monitoring fishing activities. Severe penalties are applied for violations, such as illegal, unreported, and unregulated (IUU) fishing.
- (7). **Community Consultation and Participatory Management:** Fisheries are managed regionally through the Regional Fishery Management Councils (RFMCs). The voices of fishermen, scientists, local communities, and stakeholders are ensured in decision-making processes.
- (8). **Balancing Economic Benefits and Resource Conservation:** Fisheries must provide livelihoods for fishermen while preventing resource depletion. The sustainable, fair, and efficient use of marine resources is encouraged.

c. The U.S. Government's Management System for Sustainable Marine Fisheries Exploitation

According to current regulations, the U.S. government's system for managing sustainable marine fisheries exploitation is structured and assigned as follows:

(1) Federal Management Agencies

Under U.S. law, the National Oceanic and Atmospheric Administration (NOAA), which is part of the U.S. Department of Commerce, is responsible for managing marine fisheries within the U.S. Exclusive Economic Zone (EEZ), an area covering over 4 million square miles, extending from 3 to 200 nautical miles off the U.S. coastline. Each state typically manages fisheries from its coastline out to three miles [17]. NOAA collaborates with federal, regional, state, and territorial partners to ensure the sustainable management of U.S. fisheries in the EEZ.

NOAA's responsibilities for managing U.S. fisheries include [25]: Maintaining, protecting, and increasing the domestic seafood supply; Maintaining and enhancing recreational fishing opportunities and livelihoods; Protecting the health and sustainability of ecosystems; Creating jobs, supporting related economic and social benefits, and maintaining community resilience.

To achieve these goals, it is essential to ensure that fish populations are maintained at sustainable levels (not overfished) and that catch rates remain within levels that allow for maximum sustainable yield (MSY). With a science-based fisheries management process, NOAA has made significant progress in ending overfishing and restoring fish stocks. Overfishing and overfished stocks remain at historically low levels, and NOAA has restored 50 fish stocks since 2000.

Within NOAA, there is a dedicated fisheries division: the National Marine Fisheries Service (NMFS). NOAA/NMFS is responsible for science, stock assessments, monitoring, enforcement of laws, international cooperation, and seafood imports/exports.

NOAA is the National Oceanic and Atmospheric Administration, a part of the U.S. Department of Commerce [17]. This federal agency focuses on the study, prediction, and management of oceanic, atmospheric, fisheries, and marine resources.

Organizational Structure: NOAA is divided into six line offices, along with supporting staff offices.

- i) NMFS – National Marine Fisheries Service: Responsible for managing, conserving, and developing marine fishery resources in the U.S. EEZ. It implements acts like the Magnuson–Stevens Fishery Conservation and Management Act, the Marine Mammal Protection Act, and the Endangered Species Act. This office has 5 Regional Offices and 6 Fisheries Science Centers.
- ii) NOS – National Ocean Service: Manages coastal resources, nautical charts, and National Marine Sanctuaries; supports marine environmental protection and climate change adaptation efforts.
- iii) NWS – National Weather Service: Provides weather, storm, climate, and natural disaster forecasts and warnings; supports aviation, maritime operations, agriculture, and public safety.
- iv) NESDIS – National Environmental Satellite, Data, and Information Service: Manages weather and Earth observation satellite systems; stores, analyzes, and provides global climate-ocean data.
- v) OAR – Office of Oceanic and Atmospheric Research: Conducts scientific research on climate change, oceans, extreme weather, marine ecology, and forecasting technologies; includes research centers like Earth System Research Laboratories (ESRL) and Atlantic Oceanographic and Meteorological Laboratory (AOML).
- vi) OMAO – Office of Marine and Aviation Operations: Manages NOAA’s research fleet and specialized aircraft; operates missions related to marine observation, surveys, and search-and-rescue operations.

In addition to these six main offices, NOAA has supporting staff offices that provide executive, financial, personnel, and strategic support, including: Office of the Chief Scientist; Office of General Counsel; Office of Legislative and Intergovernmental Affairs; Office of Communications; Office of Human Capital Services;

NOAA Corps: A specialized officer corps responsible for technical missions, surveys, and research.

(2) Regional Fishery Management Councils

According to the Magnuson-Stevens Act (MSA), the U.S. has eight (8) Regional Fishery Management Councils responsible for planning the management of fisheries in the federal waters of each region, including: New England, Mid-Atlantic, South Atlantic, Caribbean, Gulf of Mexico, Pacific, Western Pacific, and North Pacific [30]. These councils consist of representatives from various stakeholders: federal and state agencies, the fishing industry, scientists, and local communities. Their main tasks are to draft Fishery Management Plans (FMPs) and management measures (e.g., fishing seasons, quotas, closed areas) for their respective regions, which are then submitted to NOAA/NMFS for approval and implementation.

The councils make management decisions through a transparent cooperative process that includes public input, scientific research, and an analysis of the economic and social impacts. They work closely with federal and state agencies to coordinate efforts and ensure consistency in fisheries management nationwide.

Each council includes a diverse group of stakeholders, including commercial and recreational fishermen, seafood processors, conservationists, scientists, and other experts. This unique management system allows for flexibility, using local input to develop management strategies tailored to the specific fisheries, challenges, and opportunities in each region [30].

(3) State Management, Native Peoples, and Local Coordination

In coastal areas, states have the authority to manage fisheries within state waters, typically extending up to 3 nautical miles from shore. Additionally, Native American tribes (tribal fishermen) may also be involved in management and harvesting rights in certain regions. Furthermore, there may be federal-state or interstate organizations, such as the **Atlantic States Marine Fisheries Commission (ASMFC)** on the East Coast, which manages shared resources across state borders

i) Mechanisms for Sustainable Fisheries Management: Effective fisheries management is underpinned by comprehensive management plans (FMPs), which must align with national standards. These plans include components such as catch quotas, fishing seasons, the establishment of marine protected areas, and mechanisms for bycatch reduction. Periodic stock assessments are integral to evaluating the status of fish populations, identifying trends, and forecasting the potential impacts of fishing activities.

ii) Monitoring, Compliance, and Enforcement: The National Oceanic and Atmospheric Administration (NOAA) and the National Marine Fisheries Service (NMFS) collaborate with other agencies to ensure regulatory compliance, including monitoring the importation of seafood to prevent illegal, unreported, and unregulated (IUU) fishing. Data collection systems

are employed to track both commercial and recreational fishing, which supports informed decision-making and effective management.

iii) International Cooperation and Trade: The United States actively participates in international fisheries management frameworks, ensuring that imported seafood is legally sourced and sustainably harvested. Strategic programs, such as the IUU Fishing Working Group, involve multiple federal agencies in combating illegal fishing practices globally [8].

Socioeconomic Considerations and Sustainable Development: The fisheries management system not only seeks to achieve ecological sustainability but also aims to safeguard the socioeconomic well-being of coastal communities and the broader fishing industry. For example, the "catch shares" model allocates specific fishing rights to individuals or communities, thereby incentivizing responsible and sustainable resource use [27].

Ecosystem-Based Management and Climate Change Adaptation: NOAA's strategies emphasize ecosystem-based management (EBM), which considers the interconnectedness of marine ecosystems. Additionally, NOAA is focused on adapting management practices to mitigate and address the impacts of climate change on fisheries and marine ecosystems.

d. Penalties for Violations in the U.S. Sustainable Fisheries Management

According to regulations and enforcement guidelines, penalties are designed at various levels — from the least to the most severe — to ensure flexibility and suitability to the nature of the violation. These penalties are categorized as follows:

i) Warning and Administrative Actions: The least severe penalty is the issuance of a warning or citation, which is typically done on-site. According to § 600.740(a)(1) 50 CFR, "issuance of a citation (a type of warning), usually at the scene of the offense." This action is used for minor violations, first-time offenses, or less serious infractions, such as late reporting or failure to submit paperwork on time. For example, NOAA's Penalty Policy shows that at Offense Level I (no economic gain, minor impact), fines could range from a few thousand dollars [26].

ii) Civil Penalties and Permit Sanctions: For more serious violations or repeat offenses, civil penalties may be imposed, such as fines or the suspension/revocation of fishing permits. According to MSA § 308(a), "Any person ... found ... to have committed an act prohibited by section 307 shall be liable ... for a civil penalty. ... The amount of the civil penalty shall not exceed \$100,000 for each violation." Additionally, the House/Senate Report suggests raising civil penalties "for significant and severe offenses or serious repeat offenders" to \$240,000 or more. Permits may be suspended, revoked, or subject to additional conditions. For example, the Southeast Region penalty schedule shows that first-time violations for failing to provide records or allowing inspections could result in fines ranging from \$500 to \$30,000 and a suspension of 0-45 days. For repeat offenses, fines can range from \$1,000 to \$75,000, with a suspension of 30-90 days. The penalty assessment takes into account factors such as the violation history, intent, economic benefit from the violation, and the impact on the management program. For instance, NOAA's Penalty Policy states that for intentional violations at Offense Level II D, the base penalty could range from \$12,000 to \$24,000 [24].

iii) Seizure of Vessels, Gear, and Catch (Forfeitures): MSA § 310 stipulates: "Any vessel (including its gear ...), and any fish (or the fair market value thereof) taken or retained ... shall be subject to seizure and forfeiture as provided in this section." 50 CFR § 600.740(a)(3) also mentions: "judicial forfeiture action against the vessel and its catch" [4]. The purpose of the seizure is to remove illegal gear and increase deterrence.

iv) Criminal Prosecution: Serious violations, especially those that involve knowingly illegal actions or significant distortion of the fisheries management program (e.g., illegal fishing in the EEZ, endangering enforcement personnel, falsifying large data), can lead to criminal prosecution. MSA § 309(a) states: "Any person ... who knowingly violates ... shall be imprisoned for not more than 5 years and fined ... not more than \$500,000 if individual; \$1,000,000 if corporation." (A 2005 proposal suggested raising the fine levels). Furthermore, in cases of especially aggravated offenses (such as using weapons or assaulting enforcement officers), penalties can extend to up to 10 years in prison and higher fines. 50 CFR § 600.740(a)(4) states: "Criminal prosecution of the owner or operator for some offenses." [4]

3.2. Comparison and Relation to Vietnamese Law on Sustainable Marine Fisheries Exploitation

3.2.1. Overview of Vietnam's Legal Framework for Sustainable Fisheries Exploitation Management

Vietnam is a coastal nation with a coastline exceeding 3,260 km, stretching across 28 coastal provinces and cities, and boasting an exclusive economic zone (EEZ) of about 1 million square kilometers. This provides the country with a rich and diverse marine ecosystem. The sea is not only essential for the livelihood and economic development of coastal communities

but also plays a key role in national defense, security, and foreign relations. However, in recent decades, Vietnam's fisheries sector has encountered numerous challenges, especially the problem of illegal, unreported, and unregulated (IUU) fishing. This issue led the European Commission (EC) to issue a "yellow card" warning against Vietnamese seafood in 2017. In this context, the development and improvement of a legal framework for sustainable fisheries management has become an urgent priority, reflecting the government's commitment to meeting international obligations and promoting green marine economic development.

Vietnam's legal system for sustainable fisheries management is structured across multiple levels of legislation, including laws, decrees, circulars, and executive directives. The 2017 Fisheries Law stands as the central legal document, implemented through various guiding regulations. The system is designed to manage and regulate fishing activities in a way that ensures sustainability, aligns with international standards, and addresses the challenges posed by IUU fishing.

a) Legal System and Codes Directly or Indirectly Governing Fisheries Activities

Several laws directly regulate Vietnam's marine areas and fisheries resources. The Vietnamese Maritime Law 2015 establishes the legal framework for Vietnam's maritime zones, sovereignty, and jurisdiction over marine resources. The 2017 Fisheries Law is the most important legal document in this domain, outlining principles of responsible and sustainable fishing, co-management measures, vessel monitoring, fishing logs, and seafood origin certification. Additionally, the Biodiversity Law 2008, Law on Marine and Island Resources and Environment 2015, and the Environmental Protection Law 2020 provide the legal foundation for the conservation of marine ecosystems. The Criminal Code 2015 (Article 242) imposes penalties for the "destruction of fishery resources," serving as a deterrent for serious violations. Other laws, such as the Vietnam Coast Guard Law 2018, the National Defense Law 2018, and the Customs Law 2014, govern various aspects of marine resource management, enforcement, and monitoring.

b) Decrees and Circulars Providing Detailed Implementation Guidelines

The system of decrees and circulars serves to concretize the legal provisions, illustrating the cooperation between the Government and the Ministry of Agriculture and Rural Development (MARD) in managing fisheries activities. Decree 26/2019/ND-CP offers detailed guidance on the implementation of the 2017 Fisheries Law, covering topics like registration, licensing, traceability, and reporting obligations for fishing activities. Decree 42/2019/ND-CP establishes administrative penalties for violations within the fisheries sector, including higher fines for IUU fishing violations. Circular 21/2018/TT-BNNPTNT provides guidance on maintaining fishing logs, confirming seafood origin, and establishing designated fishing ports. Circulars 19/2018/TT-BNNPTNT and 23/2018/TT-BNNPTNT regulate the protection of fishery resources, safety standards for fishing vessels, and the management of fishing vessel registration agencies. Furthermore, Circulars 24-26/2018/TT-BNNPTNT focus on enhancing the national database system, controlling risks, and managing seafood quarantine.

c) National Policies, Programs, and Action Plans

Alongside the legal documents, the government has issued several strategic decisions and directives. Decision 78/QD-TTg (2018) approves the National Action Plan to combat IUU fishing through 2025. Decision 757/QD-TTg (2020) implements the FAO Agreement on Port State Measures, while Decision 81/QD-TTg (2023) continues preparations for the fourth round of discussions with the EC regarding the lifting of the "yellow card." Directives such as 45/CT-TTg (2017) and 17/CT-TTg (2021) emphasize inter-agency coordination to tackle IUU violations and ensure consistent legal enforcement.

In summary, Vietnam's legal framework for sustainable marine fisheries has been established comprehensively, aligning with the global trend toward sustainable development and international integration. The system reflects a significant shift from administrative management to ecosystem-based management, focusing on the accountability of fishing operators and aligning more closely with FAO regulations and the international IUU Agreement.

The content reflected in Vietnam's policy and legal documents on marine fisheries management focuses on several key issues:

(1) Principles of Marine Fisheries Exploitation

The Fisheries Law of 2017 serves as the foundational legal document outlining the principles for fisheries exploitation in Vietnam. According to Article 4 of the law, fishing activities must adhere to several principles. These include the principles of sustainable development, protection, and restoration of fishery resources, as well as the preservation of the marine

ecological environment. Additionally, the law emphasizes responsible fishing practices, which are linked to the protection of national sovereignty, sovereign rights, and jurisdiction over the sea. The law also mandates compliance with Vietnamese legal regulations and international agreements to which Vietnam is a party, while ensuring the protection of the legal rights and interests of fishing organizations and individuals. The law aims to strike a balance between economic benefits and long-term conservation [23].

This law reflects the incorporation of international standards for responsible fisheries management, as established in the FAO Code of Conduct for Responsible Fisheries (1995) and the FAO Agreement on Port State Measures (PSMA, 2009). These international norms are fully integrated into Vietnam's domestic regulations.

The principles outlined in the Fisheries Law of 2017 signal a shift from a traditional model focused on "maximizing yield" to a more sustainable, ecosystem-based resource management approach. This transition forms the foundation for establishing important management measures such as catch quotas, gear restrictions, and zoning of fishing areas. These measures are further detailed in Decree No. 26/2019/ND-CP providing guidance on the Fisheries Law. The Government promulgates this Decree to detail and implement certain articles and measures for the enforcement of the Fisheries Law [22] and Circular No. 19/2018/TT-BNNPTNT providing guidelines on the protection and development of aquatic resources, issued by the Minister of Agriculture and Rural Development.

One of the key principles, "responsible fishing", is central to the government's strategy of "responsible fisheries – sustainable development." This principle underpins Vietnam's commitment to ensuring that its fisheries sector grows in a way that is economically viable and ecologically sustainable in the long run.

(2) Entities Engaged in Fisheries Exploitation

According to Articles 42 and 43 of the Fisheries Law 2017, the entities involved in fisheries exploitation include both Vietnamese organizations and individuals, as well as foreign organizations and individuals who are permitted to operate in Vietnam's maritime zones under international agreements.

The conditions for engaging in fisheries exploitation are as follows: Having a valid fisheries exploitation permit issued by the competent authority; The fishing vessel must be registered, inspected, and equipped with a Vessel Monitoring System (VMS); The captain and crew members must hold professional certificates and comply with safety and environmental protection regulations (Articles 50–56, Fisheries Law 2017)[23].

According to Decree 26/2019/ND-CP, the entities involved in fisheries exploitation are divided into three categories: Small-scale fishing (vessels under 12 meters) – primarily operating in coastal areas; Inshore fishing (vessels 12–15 meters) – subject to provincial management; Offshore fishing (vessels over 15 meters) – subject to central management and must be equipped with VMS.

These regulations help clearly define the rights and responsibilities of the fishing entities, preventing the issue of "free-for-all" exploitation that could lead to resource depletion. Furthermore, linking the responsibility of entities to the installation of VMS is a legal mechanism that allows the government to control production volumes, detect violations, and prove the legal origin of seafood exports—crucial in the fight against IUU (Illegal, Unreported, and Unregulated) fishing.

(3) Prohibited Acts in Fisheries Exploitation

Article 7 of the Fisheries Law 2017 specifies 13 categories of prohibited acts, which include: Fishing without a permit or fishing in prohibited areas or using illegal methods; Fishing during closed seasons, in closed areas, or fishing species on the prohibited list; Using explosives, electric shocks, toxins, or destructive fishing gear; Fishing undersized fish; Engaging in illegal fishing activities in foreign waters; Falsifying documents or certification of the origin of caught seafood; Obstructing inspection or monitoring activities conducted by authorized state agencies.

Additionally, the Environmental Protection Law 2020 (Article 27) and the Biodiversity Law 2008 (Article 30) explicitly prohibit the destruction of marine habitats, coral reefs, seagrasses, and other vital marine ecosystems.

Circular 19/2018/TT-BNNPTNT and Circular 21/2018/TT-BNNPTNT provide detailed guidelines on the publication of prohibited fishing gear lists, species banned from fishing for a certain period, and the designated ports for certifying the legal origin of seafood.

These regulations reflect a preventive approach, aiming to address the root causes rather than just the consequences. The prohibition of using destructive tools and fishing in sensitive areas is integral to the protection of marine biodiversity and the restoration of marine populations. This aligns with the Ecosystem-based Fisheries Management (EAF) approach recommended by the FAO in 2003 [5].

(4) Sanctions for Violations in Fisheries Exploitation

The system of sanctions for violations in fisheries exploitation in Vietnam consists of three main types: administrative sanctions, criminal sanctions, and civil sanctions. These sanctions play a crucial role in protecting fisheries resources, preventing, and addressing violations, especially illegal, unreported, and unregulated (IUU) fishing.

i) Administrative Sanctions: Administrative violations in the fisheries sector are handled according to Decree No. 42/2019/ND-CP, which stipulates penalties such as fines, revocation of fishing permits, suspension of operations, confiscation of violating equipment, and remedial measures such as releasing live seafood back into the sea, restoring the marine environment, or destroying illegal fisheries products. The fines can be as high as 2 billion VND for organizations and 200 million VND for individuals. The statute of limitations for imposing penalties is one year, with violations related to fishing vessels and fish species having a statute of limitations of up to two years. Fisheries surveillance officers play an important role in law enforcement and controlling fishing activities, as well as conducting inspections to ensure compliance by fishermen.

ii) Criminal Sanctions: Fishing activities that cause serious damage to fisheries resources can lead to criminal prosecution under the Criminal Code 2015, specifically Article 242, which addresses the crime of destroying fisheries resources. Penalties for this offense include fines, non-custodial labor, or imprisonment ranging from 6 months to 10 years, depending on the extent of the damage. For commercial legal entities, the primary penalty can be a fine or suspension of operations, with fines potentially reaching up to 5 billion VND. These legal entities may also be prohibited from conducting business or raising capital if violations occur.

iii) Civil Sanctions: Acts of fishing that cause environmental pollution must compensate for damages under the Civil Code 2015 and the Environmental Protection Law 2020. Specifically, organizations or individuals who violate these regulations are required to compensate for the costs of environmental restoration and damage mitigation. Disputes may be resolved through negotiation, mediation, arbitration, or the courts.

The mechanism for handling violations in the fisheries sector is outlined in legal documents such as Decree No. 42/2019/ND-CP on administrative violations in the fisheries sector, the Criminal Code 2015 (Article 242), and the Law on Administrative Penalties 2012 (amended in 2020). This sanction system aims to create a strong deterrent against illegal fisheries exploitation, while protecting and ensuring the sustainable development of fisheries resources.

The highest administrative fines can reach 1 billion VND for organizations and 200 million VND for individuals. Serious violations, such as illegal fishing in foreign waters, using explosives, or causing environmental destruction, may result in criminal liability, with imprisonment ranging from 6 months to 7 years.

The sanction system serves not only as a deterrent but also as an essential tool in combating IUU fishing (illegal, unreported, and unregulated). Strengthening inspections and enforcement as stipulated in Directive No. 45/CT-TTg (2017) and Directive No. 17/CT-TTg (2021) helps improve compliance with the law by fishermen and related organizations while enhancing the reputation of Vietnamese seafood products on the international market [28].

In conclusion, Vietnam's legal system for offshore fisheries exploitation demonstrates a relatively complete structure with four essential pillars: principles of responsible and sustainable exploitation, internalizing international standards; clearly defining the subjects and legal conditions of exploitation activities; prohibiting acts that harm fisheries resources and marine ecosystems; and establishing strong sanctions that combine administrative and criminal penalties, ensuring deterrence. However, challenges remain in law enforcement, especially in monitoring offshore fishing vessels, tracing the origin of seafood products, and integrating national fisheries data. In the context of international integration, Vietnam needs to continue enhancing its management capacity, digitizing the licensing system, and strengthening VMS monitoring to work towards lifting the IUU "yellow card" and achieving the goal of sustainable fisheries development by 2030.

3.2.2. Comparison of U.S. and Vietnamese Laws on Sustainable Offshore Fisheries Exploitation

Sustainable fisheries exploitation is an important issue in marine resource management, aimed at ensuring a balance between economic development and environmental protection. Both Vietnam and the United States recognize the importance of managing fisheries resources sustainably. However, their legal frameworks, policies, and enforcement mechanisms differ significantly, reflecting differences in management levels, economic structures, and monitoring capabilities. In the context of overfishing pressures and climate change, a comparative study of the policies of the two countries will provide a basis for improving the law and resource management in Vietnam.

One of the clear similarities between Vietnam and the United States is that both countries have developed legal frameworks and policies aimed at protecting fisheries resources, controlling overfishing, and conserving biodiversity. Both nations set fishing quotas for each species to ensure the sustainability of resources, and they require the registration, licensing, and monitoring of fishing vessel activities in their waters to prevent illegal exploitation. Additionally, both Vietnam and the U.S. focus on establishing marine protected areas and no-fishing zones to protect endangered species, maintain marine ecosystems, and ensure the long-term sustainability of fisheries resources. These similarities show that both countries rely on scientific foundations and environmental protection principles when formulating fisheries exploitation policies.

In addition to these similarities, there are clear differences between Vietnam and the U.S. in terms of legal mechanisms and the level of detail in regulations. The United States has a strict fisheries legal system with specific federal laws, such as the Magnuson-Stevens Fishery Conservation and Management Act, which clearly defines management responsibilities, fishing quotas, monitoring, and penalties for violations in each region and for each species. In contrast, Vietnam's fisheries legal system consists of the Fisheries Law, decrees, and guiding circulars, which are more general and depend heavily on local regulations for implementation. This leads to less detailed and less uniform legal enforcement in Vietnam compared to the U.S.

Regarding management and monitoring methods, the U.S. applies modern technologies such as satellite tracking systems, electronic devices on vessels, surveillance cameras, and electronic reporting mechanisms to monitor fishing activities and ensure compliance with regulations. On the other hand, Vietnam primarily relies on direct inspections, manual registration, and reporting by fishing vessels, which results in more limited monitoring and violation detection capabilities. This difference not only affects the efficiency of fisheries resource management but also creates discrepancies in preventing illegal exploitation.

Sanctions for violations are also a prominent area of difference. The U.S. applies stringent sanctions, including administrative fines, confiscation of fishing equipment, suspension of operations, and criminal prosecution for violations. In contrast, Vietnam primarily uses administrative fines, temporary suspension of fishing activities, or revocation of licenses, with a less deterrent effect. This leads to less effective law enforcement and a lower ability to prevent illegal fishing in Vietnam compared to the U.S.

In general, both Vietnam and the United States aim for sustainable fisheries exploitation through policies and laws that manage fisheries resources. However, there are clear differences in the level of detail, monitoring mechanisms, and enforcement sanctions between the two countries. The U.S., with its stringent legal system, modern monitoring technologies, and strict sanctions, can offer valuable lessons for Vietnam in improving the effectiveness of fisheries resource management. At the same time, Vietnam needs to adjust solutions that are suitable for its socio-economic conditions, infrastructure, and enforcement capabilities to ensure long-term sustainable exploitation.

3.2.3. Factors Affecting Sustainable Offshore Fisheries Exploitation

Sustainable offshore fisheries exploitation is influenced by many different factors, with the most prominent being the following:

Firstly, the Institutional Framework

The legal system and policies are fundamental factors that determine the sustainability of fisheries exploitation. A robust, transparent legal framework with clear regulations on fishing quotas, no-fishing zones, fishing seasons, licensing of fishing vessels, and penalties for violations will create a solid legal foundation to control exploitation [7]. In Vietnam, the Fisheries Law and its guiding decrees provide a basic legal framework but remain general and lack specific details for individual species and fishing areas, leading to inconsistent implementation. In contrast, the United States, through the Magnuson-

Stevens Fishery Conservation and Management Act, clearly defines management principles, fishing quotas, the responsibilities of regulatory agencies, and monitoring processes, thus improving management efficiency and protecting fisheries resources [13]. Therefore, the institutional framework not only establishes the legal structure but also directly affects the ability to enforce and ensure compliance with regulations.

Secondly, Management Capacity

The management capacity of relevant authorities, including their ability to monitor, inspect, collect data, and handle violations, is a decisive factor for the implementation of sustainable fisheries policies. The United States has invested heavily in monitoring technologies such as satellite tracking, electronic devices on vessels, electronic reporting, and surveillance cameras in critical fishing areas, which help detect violations in a timely manner and ensure regulatory compliance [3]. On the other hand, Vietnam primarily relies on direct inspections and manual reporting, and its inspection capacity is still limited, leading to less effective violation detection and enforcement. Low management capacity also reduces the effectiveness of quota systems and conservation policies, thereby directly affecting the sustainability of fisheries resources.

Thirdly, the Scale of Fisheries

The scale of the fishing industry, including the number of vessels, types of exploitation, and operational areas, significantly impacts the pressure on fish stocks and their ability to regenerate. Vietnam has a fragmented and small-scale fleet, but with a large number of vessels, most of which operate near shore, making overfishing, especially of vulnerable species, more likely [21]. In contrast, the United States has a large-scale fishing industry that is tightly controlled by species and marine zones, which helps reduce the risk of resource depletion [12]. The scale of fisheries not only affects exploitation pressure but also relates to the application of sustainable measures, such as fishing spacing, seasonal rotations, and the use of environmentally friendly technologies [1].

Fourthly, Fishermen's Awareness and Behavior

Fishermen's awareness and behavior are key factors in the implementation of sustainable regulations and policies. When fishermen are well-informed about resource protection, comply with quotas, fishing seasons, and no-fishing zones, they contribute to reducing overfishing and protecting marine ecosystems [9]. In Vietnam, some fishermen still prioritize short-term economic benefits and lack information or understanding about sustainable fishing methods, leading to quota violations or illegal fishing in restricted areas. In the United States, training programs, consultations, and policies encouraging fishermen's participation in community-based management help raise awareness, which in turn improves compliance and the effectiveness of sustainable measures. Thus, the awareness of fishers is not only a social factor but also has a direct impact on the success of fisheries exploitation policies and laws [2].

3.2.4. Relevance to the Practical Context of Vietnam – Difficulties and Challenges in Implementing Policies and Laws on Sustainable Marine Fisheries Exploitation

In the context of being warned with a "yellow card" by the European Commission (EC), Vietnam has implemented various solutions to address the issue of Illegal, Unreported, and Unregulated (IUU) fishing and meet the EC's requirements [11]. These include improving the monitoring system for fishing vessels, enhancing coordination between relevant authorities, and improving the inspection and traceability of seafood. However, the process of removing the yellow card still faces many challenges. One of the main reasons is the lack of synchronization between regulations at the local levels and the absence of a unified national fisheries database. The information technology and monitoring systems are still limited, and there is no integration between the management agencies at different levels. This makes detecting and handling violations difficult and slow.

Moreover, improving fishermen's awareness and changing their fishing practices remains a significant challenge [10]. Although relevant authorities have conducted campaigns to raise awareness and provided training for fishermen on the importance of sustainable fishing, the short-term benefits of non-regulated exploitation still dominate the behavior of some fishermen. Changing fishermen's awareness and practices requires a long-term strategy, combined with incentives and strict penalties for violations.

In addition to issues related to IUU and law enforcement, Vietnam also faces challenges in sustainably developing its fisheries sector. Environmental pollution, overexploitation, and climate change are directly affecting marine ecosystems,

diminishing fishery resources. In recent years, coral reefs, seagrass beds, and other important marine ecosystems have been severely damaged, affecting the regeneration of fishery resources. Although there are regulations for marine environmental protection in laws such as the 2020 Environmental Protection Law and the 2008 Biodiversity Law, the implementation of measures to protect and restore marine ecosystems still faces many limitations. Monitoring fishing vessels, especially those operating far offshore, encounters many challenges. The shortage of resources, modern monitoring equipment, and a synchronized database system are factors hindering the full implementation of legal regulations [14].

Meanwhile, Vietnam is under significant pressure from the international market, where there are increasing demands for higher seafood product quality, especially regarding traceability and certification of sustainable fishing practices. This requires Vietnam to not only improve management and monitoring capacities but also ensure the sustainable development of the fisheries sector, balancing environmental protection with economic benefits.

3.3. Lessons Learned and Recommendations for Vietnam

3.3.1. Lessons Learned for Vietnam from the Study of the United States' Policies and Laws on Sustainable Marine Fisheries Exploitation

First, the lesson of establishing a clear and consistent legal framework. The United States is considered one of the countries with the most complete and stable fisheries management legal systems in the world, with the Magnuson-Stevens Fishery Conservation and Management Act (MSA) serving as the central legal foundation. This law creates a unified legal framework from the federal to regional and local levels, comprehensively regulating fishing activities within the Exclusive Economic Zone (EEZ) and clearly defining the roles, responsibilities of regulatory bodies, as well as the mechanisms for monitoring and coordination across levels. The lesson for Vietnam is to consider developing or amending the Fisheries Law in a comprehensive, unified, and long-term stable direction, ensuring compatibility with international standards for sustainable fishing and combating illegal, unreported, and unregulated (IUU) fishing, thus providing a solid legal foundation for marine resource management.

Second, the lesson of managing fisheries based on scientific evidence. The U.S. fisheries management system is built on a strong scientific foundation, with policies and regulations on catch quotas, fishing seasons, and fishing areas based on species stock assessments and regularly collected, accurate fisheries monitoring data. Management decisions are only made after independent scientific agencies review them to ensure objectivity and sustainability. From this experience, Vietnam needs to focus on investing in the development of fisheries data infrastructure, building modern Vessel Monitoring Systems (VMS), and strengthening marine scientific research capacity, linking with international research institutes to ensure that policy decisions are based on data and scientific evidence.

Third, the lesson of effective decentralization of management and enhancing community participation. The U.S. has established a decentralized management mechanism through eight Regional Fishery Management Councils, which are empowered to create fishing plans suited to the ecological characteristics, resources, and local community culture. This model not only improves management effectiveness but also fosters social consensus, as fishermen, businesses, and scientific organizations are directly involved in policy formulation. Vietnam can learn from this by increasing the decentralization of management to local governments, and establishing regional or inter-provincial Fisheries Councils, facilitating community involvement and stakeholder participation in planning, monitoring, and evaluating fishing activities.

Fourth, the lesson of ensuring transparency and strict monitoring in fisheries management. In the U.S., data related to fisheries activities, including catch volumes, regional council decisions, environmental and ecological assessment reports, are publicly available on government portals. This transparency mechanism not only enhances the accountability of regulatory agencies but also allows social organizations, the scientific community, and the public to participate in monitoring, helping reduce the risk of legal violations. The lesson for Vietnam is to continue promoting transparency in the permitting process for fishing, managing catch volumes, inspection and monitoring, especially in export activities and seafood traceability – a key factor in meeting international market requirements.

Fifth, the lesson of integrating resource conservation with sustainable economic development. The U.S. fisheries management system is designed to be integrated, where the goal of conserving marine resources is balanced with the development of livelihoods and improving the quality of life for coastal communities. Programs such as establishing marine protected areas, restoring species populations, or implementing catch shares have helped harmonize the interests of the state, businesses, and fishermen, ensuring sustainability both ecologically and economically. Vietnam can learn from this

experience by developing marine protected areas linked with alternative livelihood models, applying catch share mechanisms for fishing communities, thus encouraging them to actively protect and sustainably exploit marine resources.

3.3.2. Proposals for Improving Vietnam's Legal Framework on Sustainable Marine Fisheries Exploitation

Sustainable fisheries exploitation not only contributes to the protection of marine resources but also ensures the long-term development of Vietnam's fisheries sector. However, the current legal system related to fisheries exploitation has several limitations, leading to overfishing and the depletion of marine resources. Therefore, improving the legal framework for sustainable fisheries exploitation and enhancing the effectiveness of management and resource protection to meet the requirements for sustainable development in the context of international integration is an urgent need.

Vietnam's fisheries legal system has seen significant improvements in managing exploitation activities. In particular, the provisions in the 2017 Fisheries Law are more detailed and complete compared to the 2003 Fisheries Law, and are also better aligned with key international agreements. The application of these provisions has helped improve management efforts and reduce the negative impacts of illegal, unreported, and unregulated (IUU) fishing, bringing Vietnam closer to lifting the "yellow card" from the European Commission (EC). However, to protect marine resources and promote sustainable development, the current legal system still needs to be supplemented and perfected. Specifically, more detailed regulations should be developed regarding fisheries zoning, monitoring, and management, especially in areas with endangered or rare species. These regulations should be based on accurate and regularly updated data and align with the international commitments Vietnam has made. Additionally, it is necessary to amend and supplement the provisions related to the classification of endangered and rare species in the 2017 Fisheries Law to support authorities in managing and conserving marine resources. Furthermore, it is essential to clarify the responsibilities between the Ministry of Natural Resources and Environment and the Ministry of Agriculture and Rural Development regarding the management of these species to avoid overlap and improve coordination effectiveness.

Next, regulations on the management and monitoring of fishing vessels at sea need to be adjusted. As mentioned, regulations related to the reporting requirements for foreign vessels entering Vietnam's ports and waters need to be clarified. The term "entering Vietnam," as defined by the 2017 Fisheries Law, has not been explained clearly, which leads to ambiguity in its application and enforcement. Revising and supplementing these provisions will allow authorities to apply the law more accurately, avoiding improper penalties and ensuring that the rights of foreign vessels are protected, while also maintaining diplomatic relations with countries whose vessels operate in Vietnam's waters. In addition, requiring fishing vessels to report and log their fishing activities in either Vietnamese or English, or provide an official translation, will help prevent errors in inspections and monitoring.

Another important aspect is improving the quality and effectiveness of monitoring equipment. While the Vessel Monitoring System (VMS) plays a key role in controlling IUU fishing, the regulations on monitoring equipment in the 2017 Fisheries Law still need to be supplemented and detailed, particularly regarding technical standards and penalties for violations related to equipment quality. Using substandard monitoring equipment can lead to inaccurate data and difficulties in controlling and handling violations [29]. Therefore, regulations on monitoring devices need to be perfected to ensure that equipment meets standards and that strict penalties are imposed on individuals or organizations that intentionally violate these regulations.

In addition to monitoring equipment, regulations related to the management and monitoring of fishing vessels by authorities also need to be revised. Currently, these regulations lack synchronization and coordination between the responsible agencies, particularly in handling violations related to marine fisheries exploitation. Therefore, updating and amending the inter-agency coordination regulations is necessary to ensure tighter and more effective monitoring, as well as to maintain consistency in handling violations related to fishing activities.

Regulations related to fishing licenses should also be adjusted to better reflect reality. Current regulations on licensing and quotas do not accurately reflect the actual state of fisheries exploitation and the capacity of fishermen. For instance, the criteria for determining which vessels and areas are eligible for exploitation are not ideal, leading to unsustainable fishing practices and lack of control over marine resources. Therefore, these regulations need to be adjusted to align with reality, allowing fishermen to exploit resources sustainably while ensuring a stable income.

Furthermore, the penalties for illegal fishing should be strengthened. Currently, the highest fine for IUU fishing in Vietnam is 1 billion VND for individuals and 2 billion VND for organizations, which is insufficient to deter violations. IUU fishing

continues to occur because the fines do not correspond to the profits gained from illegal exploitation. Countries such as Indonesia and Thailand have implemented stricter penalties for IUU fishing and have seen positive results in reducing violations. Vietnam should consider adjusting its penalties to be stricter, potentially including measures such as confiscating or destroying violating tools and equipment, especially for repeat offenders. Criminalizing IUU fishing may also be considered, but such measures should be applied flexibly and in line with practical circumstances.

Finally, Vietnam needs to improve regulations regarding the traceability of seafood products and fishing logs. The current provisions on origin traceability in the 2017 Fisheries Law are not mandatory, creating a legal loophole for IUU fishing. Vietnam could learn from Thailand's experience by requiring mandatory seafood product traceability and fishing logbooks. This would not only help control product origins but also prevent illegal fishing and encourage fishermen to comply with the law.

By combining all of these measures, Vietnam will build a stronger and more effective legal system, thereby enhancing the management and conservation of marine resources and ensuring the sustainable development of the fisheries sector in the future.

3.3.3. Solutions to Strengthen the Effectiveness of Law Enforcement in Vietnam's Sustainable Marine Fisheries Exploitation Management

Sustainable fisheries exploitation management is a strategic objective in the development of Vietnam's fisheries sector, not only to protect the national fishery resources but also to contribute to marine environmental protection, maintain biodiversity, and enhance the economic value derived from the sea. However, law enforcement in this field faces several challenges, including inconsistent policies, gaps in monitoring, controlling, and managing, as well as a lack of awareness among some fishers. To address these issues, comprehensive solutions are needed from both government agencies and the fishing community to improve the effectiveness of law enforcement. Below are specific solutions:

First, Strengthening Fisheries Management and Monitoring

One of the key elements for managing and protecting sustainable fishery resources is the monitoring system of fishing activities. Currently, the monitoring systems for fishing vessels and inspections at fishing ports are limited, leading to illegal, unreported, and unregulated (IUU) fishing. To address this, there is a need to develop and expand satellite-based vessel monitoring systems (VMS) and automatic identification systems (AIS) to track fishing vessels' activities 24/7. This technology helps to promptly detect violations, reduce IUU fishing, and ensure fishers comply with legal regulations.

In addition, the inspection systems at fishing ports should be improved with modern equipment to control the origin of seafood products and prevent the entry of illegally caught products. This will not only protect marine resources but also create transparency in the seafood supply chain.

Second, Reforming Policies to Encourage Fishers to Participate in Sustainable Fishing

To promote fisher participation in sustainable fishing activities, appropriate incentive policies need to be developed, including financial and technical support for fishers to transition from traditional fishing methods to environmentally friendly practices. The government can provide preferential loans, organize technical training programs, and encourage the adoption of clean technology in fishing.

Additionally, fishers should be encouraged to participate in sustainability certification systems such as the Marine Stewardship Council (MSC). Participating in these certifications will help fishers enhance the value of Vietnamese seafood products in international markets while also contributing to the protection of fishery resources.

Third, Improving and Completing the Legal Framework for Sustainable Fisheries Management

To achieve the goal of sustainable fisheries management, the legal framework needs to be updated. It is essential to update regulations related to the protection of fishery resources, particularly in sensitive areas such as marine protected areas and aquaculture zones. There should be regulations prohibiting fishing activities in marine protected areas or other no-fishing zones [20].

Furthermore, sustainable management measures need to be developed, such as regulations on fishing seasons, restrictions on the number of fishing vessels, and the allocation of fishing zones for different types of fisheries. These measures must be detailed in legal documents to ensure proper enforcement.

Strengthening penalties for violations should also be a priority. Applying strict penalties for illegal and non-compliant fishing activities will not only protect fishery resources but also ensure fairness in the fishing industry.

Fourth, Strengthening International and Regional Cooperation

International cooperation in sustainable fisheries management is crucial for Vietnam to meet international requirements for protecting fishery resources. Vietnam needs to strengthen cooperation with international organizations such as FAO, the European Commission (EC), and other marine conservation organizations to improve monitoring systems and enforce fishery protection measures [6].

In addition to international cooperation, Vietnam should also increase regional collaboration with ASEAN countries and other nations with shared maritime borders to develop strategies for sustainable fishery resource protection and implement international commitments to marine resource conservation.

Fifth, Enhancing Public Awareness and Community Engagement

Public awareness and education on marine resource protection and sustainable fisheries are vital in changing the mindset of fishers and local communities. The government should organize awareness campaigns on sustainable fishing methods and the negative impacts of overfishing. This will help fishers understand the benefits of complying with legal regulations and encourage them to participate in activities that protect fishery resources.

Relevant authorities should collaborate with professional organizations, fisher associations, and social organizations to conduct training and workshops on fisheries laws, helping fishers understand the regulations protecting fishery resources and sustainable fishing practices [19].

Sixth, Reforming and Improving the Fishing License System

An important part of improving the management of fishery resources is reforming the fishing license system. Regulations on issuing fishing licenses, fishing quotas, and conditions for fishing vessels should be clear and transparent, especially for vessels targeting endangered and valuable fish species.

Fishing quota adjustments and real-time monitoring should be based on scientific research about fishery resources in each marine area to ensure that fishing does not exceed the capacity for resource renewal, thus ensuring the long-term sustainability of the fisheries sector.

Seventh, Enhancing the Capacity of Fishers in Applying Sustainable Fishing Practices

Enhancing the capacity of fishers is crucial for them to adopt environmentally friendly fishing methods. Relevant authorities should organize training sessions to guide fishers in using modern fishing technology and techniques, such as using nets with appropriate mesh sizes to avoid catching juvenile fish or non-target species.

Providing financial and material support for fishers to apply sustainable fishing practices is essential. At the same time, fishers should be guided on how to implement measures to protect the marine environment, such as using waste filtration equipment and protecting spawning areas for fish species.

Eighth, Developing Community-Based Models for Fishery Resource Management and Protection

Developing community-based models for managing and protecting fishery resources is an important solution. Fishers can form community groups to manage fishing activities within their own areas. This will help fishers protect fishery resources and address violations within the community, creating a more effective environment for protecting marine resources.

These models can be combined with forms of benefit-sharing from the protection and regeneration of fishery resources, thereby motivating fishers to actively participate in marine environmental protection efforts.

Ninth, Strengthening Coordination Among Regulatory Agencies

Close coordination among government agencies is essential to enhance the effectiveness of law enforcement. Agencies such as the Ministry of Agriculture and Rural Development, the Ministry of Natural Resources and Environment, the police, the Navy, and local authorities need to work together in building, implementing, and overseeing policies and regulations related to fisheries management.

This coordination will help address complex issues in managing Vietnam's vast and biodiverse marine areas while reducing overlap in regulatory responsibilities.

Ten, Applying Technology in Fisheries Management and Monitoring

The application of modern technology is indispensable for monitoring and managing fisheries. Technologies such as satellite surveillance, GPS systems, and data management systems can help track fishing activities, detect violations, and support inspection and enforcement in a precise and timely manner.

Implementing these comprehensive solutions will create a favorable legal and practical environment for sustainable fisheries enforcement in Vietnam, helping to protect fishery resources and the marine environment in the long term.

IV. CONCLUSION

Sustainable marine fisheries exploitation is one of the key factors in protecting and developing the country's marine resources. To achieve this goal, Vietnam needs a comprehensive, coherent, and effective legal system, while also enhancing management capacity, monitoring, and training for fishermen. The experience of the United States in building and enforcing a legal framework for sustainable fisheries management can provide valuable lessons for Vietnam, particularly in implementing sustainability principles, applying strict penalties for violations, and improving management mechanisms.

Although the legal framework and enforcement processes in the United States are very effective, the differences in institutional structures, management capacities, the scale of the fisheries sector, and public awareness between the two countries require Vietnam to adopt a flexible approach that is suited to its own realities. Legal solutions need to focus on improving regulations regarding fisheries exploitation, strengthening international and regional cooperation, increasing public outreach, raising fishermen's awareness of sustainability principles, and applying technology in monitoring fisheries activities.

At the same time, Vietnam needs to focus on enhancing management capacity and law enforcement, creating a robust monitoring mechanism, and ensuring that inspection and violation enforcement are carried out effectively. These solutions will not only help Vietnam protect its national aquatic resources but also promote the sustainable development of the fisheries sector, protect the marine environment, and fulfill international commitments.

By combining lessons learned from the United States and practical solutions that are suited to Vietnam's conditions, we can hope that sustainable fisheries exploitation efforts will become increasingly effective, benefiting the fishing community and ensuring the protection of marine resources for future generations.

REFERENCES

- [1] Auster, P.J., & Langton, R.W. (2018), *The Ecology of Fisheries: Implications for Fisheries Management*, Journal of Marine Science, 75(1), 120-130.
- [2] Béné, C., et al. (2015), *The Role of Fish in the Sustainable Development of the Global Fisheries Sector*. Fish and Fisheries, 16(2), 315-339.
- [3] Cao, C. (2021), *Challenges of Fisheries Management in Vietnam: Current Status and Strategic Solutions*. Journal of Fisheries Science and Technology, 58(3), 45-60.
- [4] Cornell Law School, *150 CFR § 600.740 - Enforcement policy*, <https://www.law.cornell.edu/cfr/text/50/600.740>.
- [5] FAO (2003), *Ecosystem Approach to Fisheries Management*, Rome: FAO.
- [6] FAO (2018), International Cooperation for Sustainable Fisheries, *FAO Fisheries and Aquaculture Department*.
- [7] FAO (Food and Agriculture Organization of the United Nations) (2020), *The State of World Fisheries and Aquaculture 2020*, FAO.
- [8] FiskerForum (2022), *US agencies launch IUU strategy*, <https://fiskerforum.com/us-agencies-launch-iuu-strategy/>
- [9] Harris, C., & Smith, T. (2022), *Fishermen's Awareness and Compliance with Fisheries Management Policies*. Marine Policy, 129, 104375
- [10] Le, H. T. (2019), The Yellow Card of the EU and its Impact on Vietnam's Fisheries Sector, *Vietnam Law Journal*, 32(5), 102-115.

- [11] Ministry of Agriculture and Rural Development (2019), Report on the Implementation of Regulations on Fisheries Exploitation, Hanoi.
- [12] National Marine Fisheries Service (NMFS), (2018), *Fisheries Monitoring and Enforcement Program*, NOAA
- [13] National Oceanic and Atmospheric Administration (NOAA) (2021), *Magnuson-Stevens Fishery Conservation and Management Act*, <https://www.fisheries.noaa.gov/topic/laws-policies>.
- [14] Nguyen, M. T., & Tran, T. H. (2021), The Role of Vessel Monitoring Systems in Combating IUU Fishing in Vietnam, *Marine Policy Review*, 45(3), 111-121.
- [15] NOAA (2022), *Fisheries 2022-25 Strategic Plan*, <https://www.fisheries.noaa.gov/s3/2022-12/NOAA-Fisheries-2022-25-StrategicPlan.pdf?>
- [16] NOAA Fisheries, *Laws & Policies: Magnuson-Stevens Act*, <https://www.fisheries.noaa.gov/topic/laws-policies>.
- [17] NOAA Fishery (2022), *U.S. Fisheries Management: Sustainable Fisheries, Sustainable Seafood*, <https://media.fisheries.noaa.gov/dam-migration/fisheries-management-msa-factsheet.pdf>.
- [18] Office of Marine Conservation (2025), *Illegal, Unreported, and Unregulated Fishing*, <https://www.state.gov/illegal-unreported-and-unregulated-fishing>
- [19] Pham, T. H. (2021), Improving Compliance with Fisheries Regulations: The Role of Public Awareness Campaigns, *Asian Fisheries Science Journal*, 28(4), 125-140.
- [20] Pham, T. K., & Nguyen, T. H. (2020), Challenges and Measures in Implementing Fisheries Laws in Vietnam, *Vietnam Fisheries Review*, 21(3), 42-57.
- [21] Prime Minister of the Government (2024), *Decision No. 389/QĐ-TTg dated May 9, 2024, approving the Fisheries Protection and Exploitation Planning for the period 2021 - 2030, with a vision towards 2050*, <http://vifep.com.vn/5/vi-VN/phe-duyet-quy-hoach-bao-ve-va-khai-thac-nguon-loi-thuy-san-thoi-ky-2021--2030--tam-nhin-den-nam-2050.aspx>.
- [22] The Government (2019), *Decree No. 26/2019/ND-CP dated March 8, 2019, detailing and providing measures for the implementation of the Fisheries Law*, <https://vanban.chinhphu.vn/default.aspx?pageid=27160&docid=196438>
- [23] The National Assembly (2017), *Fisheries Law (Law No. 18/2017/QH14)*, <https://vanban.chinhphu.vn/default.aspx?pageid=27160&docid=192336>.
- [24] The National Oceanic and Atmospheric Administration (NOAA) (2019), *Policy for the Assessment of Civil Administrative Penalties and Permit Sanctions NOAA Office of General Counsel – Enforcement Section June 24, 2019*, <https://www.gc.noaa.gov/documents/Penalty-Policy-FINAL-June242019.pdf?>
- [25] The National Oceanic and Atmospheric Administration (NOAA) (2025), *Understanding Fisheries Management in the United States*, <https://www.fisheries.noaa.gov/insight/understanding-fisheries-management-united-states>
- [26] The National Oceanic and Atmospheric Administration (NOAA), *Enforcement*, <https://www.fisheries.noaa.gov/topic/enforcement?>
- [27] The National Oceanic and Atmospheric Administration (NOAA), *Sustainable Fisheries: Management*, <https://www.fisheries.noaa.gov/topic/sustainable-fisheries/management>.
- [28] The Prime Minister (2021), *Directive No. 17/CT-TTg dated June 24, 2021, on strengthening inter-agency coordination in combating IUU fishing*, <https://vanban.chinhphu.vn/default.aspx?pageid=27160&docid=203438>.
- [29] To Van Phuong (July 2022), "Removing the EC Yellow Card for Vietnam's Fisheries: Causes and Solutions to Address Illegal Exploitation in Foreign Waters," International Scientific Conference on "International and Vietnamese Legal Framework for Sustainable and Responsible Fisheries Exploitation," Ho Chi Minh City, July 15, 2022, University of Economics and Law, Ho Chi Minh City.
- [30] U.S Regional Fishery Management Council, *About the Councils*, <https://www.fisherycouncils.org/about-the-councils>.