INDONESIA'S SUSTAINABLE FISHERIES AGENDA: FROM POLICY TO PRACTICE OF INDONESIAN NATIONAL PLAN OF ACTION

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Abstract

There remain unanswered questions regarding practice of illegal fishing in Indonesia which twofolding the poses of significant threat to its biodiversity and contributes to the overexploitation of fisheries resources. Not only grapples with the imbalance between the abundant fishing potential, this practice indeed fundamentally encompasses various other violations beyond just the act of stealing fish. In order to address these pressing challenges, Indonesia has taken steps to optimize its national marine and fisheries resources. As a member of the 2007 RPOA-IUU, it shortly become matter of concern to this diverse archipelago with over 17.000 islands in Southeast Asia to then embraced the establishment of its National Plan of Action as a means to combat illegal fishing practices in the country's waters. After being implemented for almost a decade, the practice of illegal fishing still continues to occur. This socio-legal study measures legal effectiveness of the NPoA by assessing its alignment with the Fisheries Legislation Model and its capacity to address illegal fishing within the Indonesian legal framework. Key indicators include alignment with international legal standards, comprehensiveness of legal provisions, and clarity of legal language. Through the combination of statute and conceptual approaches, the research analyzes how well the NPoA addresses these issues. The persistence of illegal fishing is partly due to the lack of access to essential resources like engine fuel, fishing gear, and logistics, as well as the limited knowledge transfer to fishermen, particularly in using e-logbooks.

Keywords: Illegal Fishing, Indonesian National Plan Of Action, Sustainable Fisheries.

I. INTRODUCTION

Global fisheries management captured considerable attention in the early 1990s, which triggered international community's consciousness of the marine resource significance. The existence of the freedom of the seas principle emerging all countries to fish without regard to the sustainability of fisheries resources. *Mare liberum*, as the fundamental principle asserted by the Dutch jurist and philosopher called Hugo Grotius, stated that the seas cannot be owned by anyone.¹ Fisheries shall be open to every human kind in regards with the potential source of wealth which possibly managed by each country. Therefore, it is solely known that the seas has an open nature and is a common heritage of mankind.² Those *Mare Liberum* then implemented through the establishment of regulations and various kinds of guidelines and action that can be used by States with responsible procedures.

States in Southeast Asia and Australia agreed on a fishing guideline which adhere the principle of responsible and sustainable fishing, specifically known as the Regional Plan of Action to Promote Responsible Fishing Practices Including Combating Illegal, Unreported and Unregulated Fishing in the Southeast Asia Region 2007, or hereinafter called as RPOA-IUU Fishing 2007. Through this plan of action, a collaborative effort was undertaken by 11 states and four advisory bodies in Southeast Asia with the aim of eliminate the practice of illegal fishing.

¹Mochtar Kusumaatmadja, Hukum Laut Internasional (Bandung: Binacipta, 1978), 8.

²Tullio Scovazzi, "The Concept of Common Heritage of Mankind and the Genetic Resources of the Seabed beyond the Limits of National Jurisdiction", *Agenda Internacional*, (2007): 11.

Brunei Darussalam, Cambodia, Indonesia, Malaysia, Papua New Guinea, Philippines, Singapore, Thailand, Timor Leste, and Vietnam, a country outside the Southeast Asia, Australia, and four advisory bodies known as the Asia-Pacific Fishery Commission (APFIC), Southeast Asian Fisheries Development Center (SEAFDEC), InfoFish and Worldfish Center.³ The primary objectives of RPOA-IUU Fishing 2007 are to enhance and reinforce fisheries management on a regional scale, preserve fisheries resources and the marine ecosystem, and maximize the advantages of practicing responsible fishing and sustainable fisheries management.⁴

As a follow up to the previous initiatives, the 11 states which was agreed on, then seeks to build upon its goals by further formed a National Plan of Action To Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing, or hereinafter mentioned as NPoA, that adjusted to the fisheries conditions and regulations of each country. Between 2012 and 2016, Indonesia through the Ministry of Marine Affairs and Fisheries, or hereinafter mentioned as Indonesian MMAF, established its NPoA or hereinafter mentioned as the Indonesian NPoA. This action plan was created to provide guidance to the organizational units within Indonesian MMAF regarding efforts to prevent and combat illegal fishing in line with their duties and functions.

Additionally, the Indonesian NPoA serves as a reference for coordinating with relevant ministries or institutions to combat illegal fishing. Its formation aims to strengthen the implementation of RPOA-IUU Fishing 2007 at the national level and support orderly, responsible, and sustainable fisheries management and development. Indonesian NPoA is founded on 18 national regulations related to fisheries and environmental conservation to strengthen its role.

The practice of illegal fishing continue to occur and sky-rocketed due to the accumulation of several factors such as the type of fisheries in Indonesia maritime area which are in demand by many states and the boundary agreements not set in stone yet. In the period of five years between 2014 and 2019, number of criminal fisheries reached 659 cases. This practice is not just a thing that foreign boats do, our own boats are in on it too. Divisive effects of the latter are to some extent increase the number of illegal fishing practices. Fisheries administration management process, violations of fishing capacity, monitoring, controlling and surveillance which are still inequal, evolving to massive challenges which swirling fishermen between the unfavorable position.⁵

Indonesia has effectively implemented its NPoA during Susi Pudjiastuti's tenure as Minister of Indonesian MMAF in 2014. She took various measures to achieve sustainable fisheries management by cracking down on illegal fishing practices within Indonesia's waters. These efforts included imposing a moratorium on permits⁶ prohibiting the use of certain fishing gear⁷,

³Lilly Aprilya Pregiwati, "Indonesia Bersama SEAFDEC Dorong Penguatan Kerja Sama Regional Untuk Keberlanjutan Sumber Daya Perikanan", Indonesian MMAF, March 19, 2019.

⁴Interpol, "International Law Enforcement Cooperation in the Fisheries Sector, A Guide for Law Enforcement Practitioners", Interpol General Secretariat, February, 2018, 86.

⁵Harmin Sarana, "Desain Sistem Monitoring, Control and Surveillance Nasional dalam Pembangunan Kelautan Indonesia" (PhD diss., Postgraduate School of Bogor Agricultural Institute, 2007), 45.

⁶The moratorium on permits is carried out in accordance with the Minister of Indonesian MMAF Regulation Number 56/PERMEN-KP/2014 Regarding the Temporary Suspension (Moratorium) of Licensing for Capture Fisheries Business in the State Fisheries Management Area of the Republic of Indonesia. The enforcement of this regulation is temporary with the aim of improving and reorganizing the licensing of vessels that have been officially and legitimately recognized by the government of the Republic of Indonesia.

⁷The prohibition on the use of certain dangerous fishing gear such as trawl nets and seine nets is carried out based on the Minister of Marine Affairs and Fisheries Regulation Number 2/PERMEN-KP/2015 Regarding the Prohibition of the Use of Trawl Nets and Seine Nets in the State Fisheries Management Area of the Republic of Indonesia.

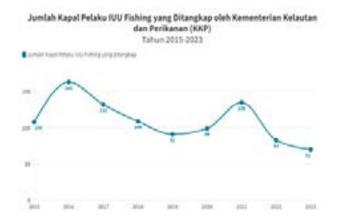
and resorting to vessel sinkings for those engaged in illegal fishing practices.⁸ However, illegal fishing practices in Indonesia still persisted and continued to grow.

Grotius argues that there is a fundamental difference between the ownership of marine and freshwater fish.⁹ He suggests that fish in rivers, due to the confined nature of freshwater bodies, can have their ownership determined by local or national regulations. In contrast, in the open sea, where clear boundaries are absent, ownership of marine fish is determined by the captor,¹⁰ as influenced by the *mare liberum* principle, which advocates for the freedom of the seas. This principle has influenced modern legal frameworks, such as the UNCLOS, which regulates the use and ownership of marine resources, emphasizing that in areas beyond national jurisdiction, resources are often considered free for capture by any nation, provided they comply with international regulations.

The economic and political factors will also taking a role in making these traits expand continuously. Growth of world community is increasing nowaday, it is undoubtedly will soared the demand of source of protein, which one of them come from fish.¹¹ As the desire of fish constantly shooting up, it then led another factor to comes into the whirlpool. Indonesia's unresolved boundary of maritime territory generate the existence of ambiguous area on Indonesia marine surveillance.¹²

In mid-2018, Indonesian MMAF successfully captured around 109 fishing vessels engaged in illegal fishing. Among them, 38 were foreign fishing vessels, and the rest were Indonesian fishing vessels.¹³ Throughout 2018, the Directorate General of Surveillance for Fisheries and Marine Resources, in collaboration with the Attorney General's Office, the Indonesian Navy, the Water Police, and other relevant agencies coordinated by Task Force 115, sank a total of 125 fishing vessels. This included 121 foreign fishing vessels and four Indonesian fishing vessels.¹⁴

Graph 1. The Number of IUU Fishing Vessels Caught by Indonesian MMAF (2015-2023)



Source: Indonesian MMAF 2023

⁸In accordance with Article 69 Paragraph (4) of Law Number 45 of 2009 Concerning Amendments to Law Number 31 of 2004 Concerning Fisheries.

⁹Rachel J. Baird, "Aspects of Illegal, Unreported, and Unregulated Fishing in The Southers Ocean, *Springer* (2006): 37. ¹⁰ Sri Asih Roza Nova, "Illegal, Unreported, and Unregulated Fishing: The Impacts And Policy for its Completion in Coastal West of Sumatera", *Indonesian Journal of Internasional Law (Maritime Affairs)*, Volume 14 Number 2 (2017): 243.

¹¹Sri Asih Roza Nova, "Illegal, Unreported, and Unregulated Fishing," 244.

¹²Sri Asih Roza Nova, "Illegal, Unreported, and Unregulated Fishing," 245.

¹³Foreign fishing vessels caught by the Fisheries Surveillance Vessel which dominantly flagged under Vietnam, totaling 29 vessels, followed by 7 vessels flagged under Malaysia, and 5 vessels flagged under the Philippines, Directorate General of Surveillance and Enforcement of Marine and Fisheries Resources Indonesian MMAF, "Kapal Pengawas KKP Tangkap 106 Kapal Illegal Fishing di 2018", Indonesian MMAF, January 28th, 2019.

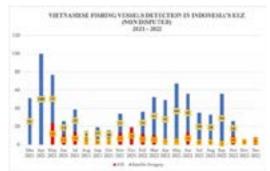
¹⁴Those foreign fishing vessels consist of 83 Vietnamese vessels, 22 Malaysian vessels, 15 Philippine vessels, and one Thai vessel, Lilly Aprilya Pregiwati, "Hari Kemerdekaan, Pemerintah Tenggelamkan 125 Kapal Pelaku Illegal Fishing", Indonesian MMAF, August 21st, 2018.

Based on the number of illegal fishing practice in 2016, this figure is actually could be classified as a good step in the milestone, as there has been a significant decrease from previous years. Since the peaked in 2016, the number of illegal fishing practice plunged by 72 vessels and hitting a trough to 91 vessels over the period of 3 years. This number then experienced a significant growth to 135 vessels in 2021 before falling back to only 70 vessels, which implies positive, in the following two years.

In terms of the fishing vessels which frequently dealt with illegal fishing practices in Indonesia Exclusive Economic Zone, Vietnamese foreign vessels were found to be the main actors of illegal fishing practices in Indonesian waters. Agus Suherman from Indonesian MMAF stated that the vessels originating from Vietnam are the ones that dominate in the practice of illegal fishing in Indonesian waters. This is proven by data from the Indonesian MMAF, which as of early April 2019, 13 Vietnamese fishing vessels were involved in cases of illegal fishing in the Indonesian Republic's State Fisheries Management Area, also known as WPP-NRI. The details are as follows:

- 1. 7 vessels in the investigation phase, located at the PSDKP Station in Pontianak;
- 2. 2 vessels in the investigation phase, located at the Satwas SDKP in Natuna;
- 3. 2 vessels in Phase II, located at the Satwas SDKP in Natuna;
- 4. 2 vessels in the preliminary examination phase, located at the PSDKP Base in Batam.

Graph 2. The Number of Non-Disputed Vietnamese Fishing Vessels Caught by Indonesian MMAF in Indonesia's EEZ (2021-2022)



Source: Indonesian MMAF (2022)

The number of foreign fishing vessels caught by Indonesian Maritime Security Agencies continued to rise, with 75 vessels ranging between 2021 and 2022, nearly half of which flew the Vietnamese flag. Vietnam has consistently been the largest contributor to illegal fishing in Indonesian waters, with other neighboring countries also left mark on this cases. However, Vietnam has carrying a main role year after year in Indonesia illegal fishing cases. Despite fluctuations in the number of vessels caught, the persistence of illegal fishing raises critical concerns about the effectiveness of Indonesia's NPoA to combat illegal fishing. This ongoing issue highlights the need to reassess whether the NPoA, as a national guideline, is effectively addressing the complexities of illegal fishing, particularly given the significant role of foreign vessels. The study therefore focuses on evaluating the real effectiveness of the NPoA in mitigating illegal fishing practices within Indonesia's jurisdiction.

B. RESEARCH METHODOLOGY

This research is a socio-legal study that measures the legal effectiveness of the Indonesian NPoA in combating illegal fishing by evaluating its alignment with the Fisheries Legislation Model and its capacity to address illegal fishing within the Indonesian legal framework. The study employs a combination of the statute approach and the conceptual approach to conduct a comprehensive analysis. The statute approach involves a detailed examination of primary

data, which includes the NPoA document itself, along with relevant national legislation and international agreements that govern fisheries management in Indonesia. The conceptual approach allows for a comparative analysis, utilizing secondary data such as literature, legal principles, and established concepts in legal sciences.

Key indicators used in this study include the degree of alignment of the NPoA with international legal standards, such as those articulated in the RPOA-IUU, the comprehensiveness of its legal provisions, and the clarity and enforceability of its legal language. By integrating these indicators within the dual framework of statute and conceptual approaches, the research aims to provide a rigorous assessment of how well the NPoA addresses the persistent challenges of illegal fishing. The study not only seeks to determine the NPoA's effectiveness as a legal instrument but also to identify any gaps or areas for improvement within its framework, ensuring that it is sufficiently robust to meet both national and international legal standards.

C. RESULT AND DISCUSSION

1. Key Concept of Sustainable Fisheries Management

It is been admitted by global scholars regarding the formal interpretation of the term sustainable fisheries which remains absent.¹⁵ Yet, sustainable fisheries is possible to be interpreted as fishing methods and activities which adhere to and relevantly implement international pacts, guidelines, and optimal practices established under entities like the UNCLOS 1982, the FAO, and the IMO.¹⁶

The core differentiating factor of the sustainable fisheries concepts is application of responsibility as a fundamental element in its management approach. Fisheries management is carried out not only efficiently, but also wisely, all thanks to a solid management system in place.¹⁷ Based on the fundamental element it hold, it could certainly assure us that brought the sustainable fisheries management up is essential for preserve and secure the long-term availability of vital resources from the ocean. In Indonesia, the adoption of sustainable fisheries management is critical to balancing the existence of nutrition, jobs, and income since fisheries is key sector for Indonesia's ability to achieve sustainable development.¹⁸

The significance of ensuring the sustainability of fisheries is something that everyone knows and agrees on, both within our country and on the global stage. According to the Strategic Plan 2020-2024 of Indonesian MMAF, the government seeks to enhance the fisheries sector's role in the national economy while concurrently enhancing the preservation of marine resources and safeguarding biodiversity.¹⁹ On the global stage, Indonesia has endorsed the United Nations Sustainable Development Goals (SDGs), including SDG 14, which mandates governments to conserve and responsibly use oceans, seas, and marine resources for sustainable development.²⁰ Within this SDG, there exists a specific objective pertaining to subsidies (Target 14.6), aiming to disallow specific forms of fisheries subsidies contributing to overcapacity and overfishing, as well as to eliminate subsidies contributing to illegal fishing.²¹

¹⁵United Nations Conference on Trade and Development, *Sustainable Fisheries: International Trade, Trade Policy, and Regulatory Issues*, (Geneva: United Nations Publication, 2016), 5, UNCTAD Official Document.

¹⁶United Nations Conference on Trade and Development, *Sustainable Fisheries*, 5.

¹⁷Lukman Adam, "Kebijakan Pelarangan Penangkapan Ikan Tuna Sirip Kuning: Analisis Dampak dan Solusinya", *Jurnal Ekonomi dan Kebijakan Publik*, Volume 7 Number 2 (Desember 2016): 198.

¹⁸ International Institute for Sustainable Development, *Supporting Marine Fishing Sustainably: A Review of Central and Provincial Government Support for Marine Fisheries in Indonesia*, (Canada: International Institute for Sustainable Development, 2021), 1, Global Subsidies Initiative.

¹⁹International Institute for Sustainable Development, Supporting Marine Fishing Sustainably, 1.

²⁰International Institute for Sustainable Development, Supporting Marine Fishing Sustainably, 1.

²¹International Institute for Sustainable Development, Supporting Marine Fishing Sustainably, 1.

Global attempts to criss-crossing sustainable fisheries into action come in various forms, such as ban on fishing in a certain seasons, closing certain fishing areas, regulating permits and limiting the total of allowance catch. Sustainable fisheries management refers to fisheries management that seeks to meet today's needs without reducing the ability of future generations to gather their necessity. This idea emerge during the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro back in 1992 with three main things it focused on: economic growth, social progress, and taking care of the environment.²²

Agenda 21 is one of the four documents produced in UNCED 1992 which put sustainable development as the core concern of sustainable fisheries management. Through differs regulation served, this treaty lay its core concern as the top-tier priority on the international community agenda. Chapter 17, which focuses on the management and protection of resources in the oceans and coastal areas, by means of the Article 17.1, it states that countries have an obligation to establish frameworks for sustainable fisheries management at international, regional, and national levels.²³ The evolution of Chapter 17 of Agenda 21 later gave rise to the inception of the CCRF in 1995, which serves as a technical guide for responsible practices in sustainable fisheries management, ensuring the conservation and preservation of marine resources.

2. Illegal Fishing

Illegal fishing deserved to be nominated as the major reason of fish gradual exhaustion across the world. It is estimated that illegal fishing constituted for almost one-third of the total catch in some important fisheries and may represent an overall cost to developing countries ranging between USD2 billion to USD15 billion a year.²⁴ It posses a wide range of implication to fisheries, both within a country's borders and on the open seas. Over 3 billion individuals worldwide depend on fish as a crucial source of animal protein.²⁵ This number then highlights the significance of promoting sustainable fishing practices to ensure global food security. Too hard to be true, yet the number of fish populations exploited at levels that are ecologically unsustainable has increased significantly in the last 40 years.²⁶ The genuine abilities of illegal fishing in disrupts the objectives of fisheries management strategies grave collateral threat to smaller coastal fishing operations that directly contribute to the livelihoods of people in developing nations and small island states.²⁷

Not only an act of stealing fish, illegal fishing possible to involve a variety of activities that essentially fall under the categories of illegal, unreported, unregulated fishing. Hence, individuals engaged in illegal fishing practices are not solely confined to foreign vessels; rather, they encompass local vessels as well, adhering to a procedural approach. Basically, illegal fishing is derived from the term from Illegal, Unreported, Unregulated Fishing (IUU Fishing), but in this study it will be referred to as illegal fishing because the unreported and unregulated elements in IUU Fishing have been accommodated by illegal practice indeed.

As regulated in Chapter II, Article 3.1 of IPOA-IUU Fishing 2001, the practice of illegal

²⁷Food and Agriculture Organization of the United Nations, "IUU Fishing".

²²"Background," United Nations Conference on Environment and Development, 3-14 June 1992, <u>https://www.un.org/en/conferences/environment/rio1992</u>.

²³Agenda 21.

²⁴Mary Ann Palma, Martin Tsamenyi, William Edeson, *Promoting Sustainable Fisheries: The International Legal and Policy Framework to Combat Illegal, Unreported, and Unregulated Fishing*, (Leiden: Martinus Nijhoff Publishers, 2010) 5, quoted from Environmental Justice Foundation, "Pirates and Profiteers: How Pirate Fishing Fleets are Robbing People and Oceans," *Environmental Justice Foundation*, 2005.

²⁵Food and Agriculture Organization of the United Nations, "IUU Fishing is A Great Threat to Sustainable Fisheries", *Food and Agriculture Organization*, June 7th, 2020.

²⁶Food and Agriculture Organization of the United Nations, "IUU Fishing".

fishing refers to several fulfillment elements, namely:

- a. Illegal, refers to the following activities that are :
 - 1) Carried out by national or foreign vessels in waters under the jurisdiction of a country, without permission from that country, or contrary to laws and regulations;
 - 2) Carried out by vessels that fly the flags of countries that are parties to relevant regional fisheries management organizations but their operations conflict with conservation and management measures adopted by those organizations which are countries bound by these conservation and management measures, or related provisions of the international legal regime; or
 - 3) Violations to national law or international obligations, including those committed by countries cooperating with relevant regional fisheries management organizations.
- b. Unreported, refers to fishing activities which are :
 - 1) Not reported or reported but does not meet the requirements as regulated in the national law of the country;
 - Carried out in order to the Regional Fisheries Management Organizations or hereinafter reffered as RFMO, however that does not meet Conservation Management Measures of the RFMO.
- c. Unregulated, refers to fishing activities that are :
 - 1) Executed within the RFMO competence, yet without flying the flag which shows the real nationality of the ship;
 - 2) Carriedoutwithoutconsideringconservationactivitiesorresponsiblefisheriesmanagement.

Definition of IUU Fishing can also be found in the 1995 CCRF Article 6.3 that countries must prevent the practice of over-fishing that will culminate in damage to fisheries resources in the world. Although not explained in detail, this regulation also indirectly opposes the existence of illegal fishing practices, considering that illegal fishing is always accompanied by over-fishing or destruction of the marine environment because of fishing gears which are not environmentally friendly. In Article 7.1.8, the 1995 CCRF requires countries to take action to prevent over-fishing and must ensure that fishing efforts are compatible with the use of sustainable fisheries resources. Furthermore, in Article 7.5.1 regarding the regulation of the precautionary approach as an effort to excessive fisheries exploration, countries should implement this approach to avoid any damages to the seas.

3. Sustainable Fisheries on Global Fisheries Instruments

a. United Nations Convention on the Law of the Sea (UNCLOS) 1982 – penomoran belum selesai dan belum jelas secara keseluruhan

Misconception of the *Mare Liberum* doctrine will transform the sea into an easily overexploited object. Way back then, countries around the world which mostly were still in the form of kingdoms, considered fish as an inexhaustible marine resource.²⁸ This fallacy then transform into global consciousness to develop proper fisheries management in written form. The Convention on Fishing and Conservation of the Living Resources of the High Seas which constituted on April 29th 1958 was the first United Nations convention that took fisheries scope into account. This convention was formed based on the consideration of the progressive modern techniques development for exploiting biological resources, especially fisheries. As a

²⁸Emmy Latifah, "Perkembangan Pengaturan Pengelolaan Perikanan Berkelanjutan Berdasarkan Hukum Internasional", *Jurnal Bina Mulia Hukum*, Volume 1 Number 2, (March 2017): 127-128.

follow-up to this convention, UNCLOS 1982 then was formed after negotiated for nearly 14 years with collection of countries interests in regulating maritime.²⁹

As an effort to tackle the misinterpretation of the doctrine, UNCLOS 1982 through its enhancement imposes limitations on state jurisdiction and restrictions on the use of the seas and the potential resources. This is one of the manifestations of sustainable fisheries management considering that the sea is a common heritage of mankind for future generations. UNCLOS 1982 provides arrangements regarding maritime zone restrictions, rights also obligations of a country. It divided the sea area into several zone:

- 1. Maritime zones which are under the full sovereignty of a country: internal waters; archipelagic waters for archipelagic country; and territorial sea;
- 2. Zones that are not include as sovereignty but have rights and jurisdiction over certain activities: contiguous zones; exclusive economic zones; and continental shelfs;
- 3. Maritime zones that are outside the jurisdiction national: high seas; and areas.

This instrument provides regulations which clarifying the rights and obligations of a country in the maritime zone that have been specified in UNCLOS 1982. The regulations concerning these maritime zones can subsequently serve as guidelines for member states to determine territories that fall under a nation's jurisdiction and those that do not.

b. Agenda 21

The concept of sustainable fisheries management was agreed at UNCED 1992 in Rio de Janeiro and one of the result is Agenda 21.³⁰ Through this instrument, we can clearly see the commitment of about three-quarters of countries worldwide in addressing environmental issues through the sustainable development practices. Agenda 21 was formed to prepare countries to face the challenges of the 21st century. Its implementation requires active involvement of non-governmental organizations and other groups that have the same focus, namely on development and environmental conservation. Agenda 21 consists of four parts, which are programs related to the socio-economic dimension, resource management and pollution, programs for strengthening main groups also developing means of implementation.³¹

Chapter 17 regulate the way to protecting marine and coastal resources, it covers the protection and management of the environment including the marine environment with the principle of sustainable development. The principle of sustainable development gives obligations and responsibilities to the future generations and to each other in one generation by making efforts to preserve the carrying capacity of ecosystems and improve the quality of the environment.³²

c. Food And Agriculture Organization (FAO) Compliance 1993

In 1993 a regulation of marine resource conservation was established by FAO through The FAO Conference at its 27th Session with Resolution 15/93 which approved the issuance of the Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas or FAO Compliance Agreement 1993. This regulation was formed in the awareness that all countries have the right to be involved in fishing in the high seas and obey to relevant international sea law as reflected in UNCLOS 1982 (*Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas*, Food and Agriculture Organization). The 1993

²⁹Dina Sunyowati and Enny Narwati, Buku Ajar Hukum Laut, (Surabaya: Airlangga University Press, 2013), 10.

³⁰Maret Priyanta and Nadia Astriani, *Buku Ajar Hukum Lingkungan Fakultas Hukum Universitas Padjajaran*, (Bandung: Kalam Media, 2015), 45.

³¹Tjuk Kuswartojo, "Agenda 21, GEF dan Alih Teknologi", *Jurnal Teknologi Lingkungan*, Volume 3 Number 3, (September 2002): 174.

³² Maret Priyanta and Nadia Astriani, Buku Ajar Hukum Lingkungan, 68.

FAO Compliance Agreement serves as one of the regulations aimed at encouraging countries to take effective actions to realize conservation and fishing activities in the high seas based on international law.³³

FAO Compliance Agreement 1993 emphasized the obligations of the States through Article 17.52 in Agenda 21 to consistently prevent the practice of vessel reflagging by citizens of each country, as a step to realize the rights possessed by these countries in fishing on the high seas. FAO Compliance Agreement 1993 requires every country to commit to implementing conservation and sustainable use of biological resources in the high seas.

d. The United Nations Agreement on Management of Straddling and Highly Migratory Fish Stocks (UNFSA) 1995

UNFSA 1995 was formed to follow up on Chapter 17 Agenda 21 regarding the sustainable use and conservation of marine life resources in the high seas, specifically regulating the issues of illegal fishing, fleet size, vessel reflagging, and adequate cooperation between countries regarding fisheries databases. This is as the implementation of UNCLOS 1982 which has established a comprehensive legal regime governing the guidelines for good fisheries management in maritime zones that have been regulated therein, such as the rules regarding fish stocks with limited and high seas. Leading fish stocks such as tuna are included in the category of highly migratory species so because they often migrate from the territorial sea under national jurisdiction to the high seas. The substance contains the mechanism of international cooperation, both bilateral and multilateral related to fisheries activities in the high seas through fisheries management organizations.³⁴

The establishment of a fisheries management organization is regulated in Article 20 (1) of the UNFSA 1995 which stated that the countries must cooperate either directly or through regional fisheries management organizations, to ensure compliance and enforcement of conservation and management of limited and far-ventured fish. Basically, countries cannot continuously oversee the high seas because they have more priority sea areas which fall under jurisdiction. However, if not monitored, then the high seas will be exploited by irresponsible parties with the reason of applying the principle of freedom high seas as regulated in Article 87 (1) Part VII of UNCLOS 1982.

Regional fisheries organizations in the field of fishing management in the high seas are the Regional Fisheries Management Organization or RFMO. The formation of the RFMO is also based on the mandate of Article 117 of UNCLOS 1982 which states that on the basis of fulfilling its obligations in carrying out conservation and management of biological resources in the high seas, countries must work together to form a regional fisheries organization to achieve this goal.

e. Code of Conduct on Responsible Fisheries (CCRF) 1995

To promote long-term fisheries conservation and management activities a guideline was established which strengthens the international legal framework so that desired goals in the fisheries sector can be created. CCRF 1995 is an international regulation that is soft law and not binding.³⁵ There are several provisions in the CCRF 1995 that are based on binding international legal rules such as UNCLOS 1982 and FAO Compliance Agreement 1993 - Resolution Number 15/93. This regulation began at the Committee on Fisheries (COFI) meeting, and produced the

³³Food and Agriculture Organization, "Corporate Document Repository", Food and Agriculture Organization, December 21st, 2019.

³⁴Rachma Indriyani, "Otoritas Internasional Dalam Konservasi dan Pengelolaan Sumber Daya Perikanan di Laut Lepas Melalui Forum Regional Fisheries Management Organization (RFMO) dan Implikasi Bagi Keanggotaan Indonesia", Layanan Hukum UNS, November 15th, 2019, 7.

³⁵Chomariyah, *Hukum Pengelolaan Konservasi Ikan*, (Malang: Setara Press, 2014), 65, quoted from Anthony D'Amanto, *International Law Anthology*, (USA: Anderson Publishing, 1994), 148-157.

Cancun Declaration 1992 which mandated the FAO to create a code of conduct for responsible fishing activities.³⁶

The standards contained in the CCRF 1995 were applied at the national, subregional and regional levels to be a guideline for carrying out more responsible fisheries management activities. Through the CCRF 1995 the international community worked together to strengthen the international legal framework undertaken for more effective conservation, fisheries management and sustainable fisheries management.

f. International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported, and Unregulater Fishing (IPOA-IUUF) 2001

IPOA-IUUF 2001 is a special regulation in combating illegal fishing. This regulation exists due to the issues of illegal fishing which is starting to become a major problem in the fisheries sector in many countries. The practice of illegal fishing causes excessive fishing, which can lead to insufficient human needs for fish. Besides, the practice of illegal fishing in its development can also damage the marine ecosystem, because the perpetrators of illegal fishing practices use fish aggregating devices that can damage the marine environment. For example by using fish bombs, the use of cyanide poisons, anesthesia, the use of prohibited fishing gear and methods that can exploit marine habitats.³⁷

g. Port State Measures (PSM) Agreement 2009

In 2009, the Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing or the 2009 Port State Measures Agreement or indeed known as PSM Agreement 2009, was approved in the FAO Conference at its 26th session as a form of setting minimum standards used by the port country to ensure that a ship leaning on the port is not involved in illegal fishing practices.³⁸ The PSM Agreement 2009 is an agreement that has been discussed since 2005 by the FAO with the aim of increasing coordination between countries to eradicate illegal fishing through port state policies.³⁹ This regulation governs that the States has the capacity to act decisively and effectively against foreign vessels carrying out illegal fishing practices, which enter ports or stop temporarily at the ports of a country.

The PSM Agreement 2009 regulates the effective schemes used by countries to eradicate illegal fishing through ports. Coastal ports are required to impose restrictions on entering ports, landings / anchoring, trans-shipment and refusing other port services for vessels engaging in illegal fishing practices.⁴⁰ Therefore, port state control is urgently needed for fisheries conservation and management.⁴¹ When the ship will be dock at the port of a coastal State, they must have the standards that the vessels is capable to conserve the marine environment, especially in terms of fisheries management. Controls carried out by coastal States according

³⁶ Food And Agriculture Organization, "Background to the Origin and the Elaboration of the Code", *Food and Agriculture Organization*, December 21st, 2019, 39.

³⁷Abdul Qodir Jaelani and Udiyo Basuki, "Illegal Unreported and Unregulated (IUU Fishing): Upaya Mencegah dan Memberantas Illegal Fishing dalam Membangun Poros Maritim Indonesia", *Jurnal Supremasi Hukum*, Volume 3 Number 1 (Juni 2014): 181, quoted from Wisnu Arya Wardana, *Dampak Pencemaran Lingkungan*, (Yogyakarta: Andi Offset, 1995), 74.

³⁸ Food And Agriculture Organization, "Background of Port State Measures Agreement", Food and Agriculture Organization, December 21st, 2019.

³⁹Dina Sunyowati, "Port State Measures dalam Upaya Pencegahan terhadap IUU Fishing di Indonesia" in Etty R. Agoes, *Peran Hukum Dalam Pembangunan Indonesia (Kenyataan, Harapan Dan Tantangan)*, (Bandung: Remaja Rosdakarya, 2003), 438-451.

⁴⁰Desima Ramalia, "Analisis Praktik IUU (Illegal, Unreported, And Unregulated) Fishing Dan Upaya Penanganannya Melalui Adopsi Mekanisme Port State Measures Di Pelabuhan Perikanan Samudera Nizam Zachman Jakarta" (Bachelor Degree Thesis, Faculty of Fisheries and Marine Science, Bogor Agricultural University, 2012) 15, quoted from A., V. Gascon Fabra, M. Marrero, S. Lieberman, and K. Sack, "Closing the Gap: Comparing Tuna RFMO Port State Measure with The FAO Agreement on Port State Measure", *The Pew Charitable Trusts*, August 23rd, 2011.

⁴¹T. Lobach, Port State Measure (Norway: Directorate for Food, Agriculture and Fisheries, 2004), Fisheries Committee.

to the PSM Agreement 2009 are implemented in the form of inspections, qualification requirements for inspectors and agreed consequences for fishing vessels that do not comply with the regulation. Ships that have an intend to access the port must register the fishermen and the vessels which will be used. Furthermore, it is also required to provide detail information on the purpose of entering the ship, a copy of the authority of the catch, details of the capture trip, the amount and type of catch. These steps are taken to prevent and eradicate illegal fishing through a country's harbor.

h. Regional Fisheries Management Organization (RFMO) in Global Fisheries

In the high seas, countries are obliged to conserve and prevent overfishing so as to ensure the availability of fisheries stocks in the high seas for future generations. The formation of RFMO is based on the nature of fish that migrating and crossing borders between countries. Increased public awareness about the impact of irresponsible fishing in the future will also be a factor in the formation of cooperation in RFMO. Until now, there are 13 RFMOs worldwide, including:⁴²

- a) In the Atlantic Ocean region are (North-West Atlantic Fisheries Organization (NAFO); North-East Atlantic Fisheries Convention (NEAFC); North Atlantic Salmon Conservation Organization (NASCO); International Commission for the Conservation of Atlantic Tuna (ICCAT); Fishery Committee for the Eastern Central Atlantic (CECAF); Western Central Atlantic Fishery Commission (WECAFC), and South-East Atlantic Fisheries Organization (SEAFO).
- b) In the Mediterranean region has General Fisheries Council for the Mediterranean (GFCM).
- c) the Indian Ocean there are The Indian Ocean Tuna Commission (IOTC) and Commission for the Conservation of Southern Bluefin Tuna (CCSBT).
- d) In the Antarctic region has the Commission for the Conservation of Marine Living Resources (CCAMLR) In the Pacific Ocean region there are The Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean (WCPFC), and The Inter-American Tropical Tuna Commission (IATTC).

The nature of fish migrating and crossing borders between countries will lead to inefficiencies in fisheries management if a regional fisheries organization is not formed that can help the management of fisheries in the high seas.⁴³ The presence of RFMO can help countries to improve and coordinate their research related to the fisheries sector and can then be recommended an appropriate conservation measure by the state when fishing in the high seas.

The basis of the establishment of RFMO is that one of them is legitimized by the principle of freedom of the high seas in UNCLOS 1982. Based on the principle of freedom of the high seas, all countries, whether they are coastal States or not, can use the high seas on condition which is it must be complies with the regulation by the convention or other international law.⁴⁴ As stated in Article 87 (1) of UNCLOS 1982, the principle of freedom of the high sea includes freedom of navigation; freedom of overflight; freedom to lay submarine cables and pipelines, subject to Part VI; freedom to construct artificial islands and other installations permitted under international law, subject to Part VI; freedom of fishing, subject to the conditions laid down in section 2; and freedom of scientific research, subject to Parts VI and XIII.

⁴²Hari Yulianto, "Quo Vadis Arah Kebijakan Perikanan Indonesia? Tantangan Dalam Perspektif Hukum Dan Kepentingan Nasional (Bagian I)", *Opinio Juris* Volume 1 (January-March 2010): 12.

⁴³Purwito Martosubroto, "Perkembangan Pengelolaan Perikanan Global", *Jurnal Hukum Internasional*, Volume 1 Number 3 (April 2004): 472.

⁴⁴Dian Khoreanita Pratiwi, "Pelaksanaan Prinsip Yurisdiksi Universal Mengenai Pemberantasan Kejahatan Perompakan Laut Di Wilayah Indonesia", *Jurnal Selat*, Volume 5 Number 1 (October 2017): 37.

The six elements in the principle of freedom of the high seas must be implemented by each country by taking into account the rights of other countries. Although, there are principles of freedom of the high seas, especially freedom of fishing in the high seas, States cannot arbitrarily fishing. The misinterpretation of countries in the application of the principle of freedom of the high sea will cause demand for the numbers of fish continues to increase, so it has an impact on overlapping use of fishing rights in the high seas. RFMO in this case has the role to manage and distribute fishing quotas to countries in the high seas. Quotas given to countries are based on justice and the ability of these countries to explore fisheries.

RFMO is an organization that regulates the management of fisheries stocks in the high seas with members of countries that have the same purpose to realize global goals and bridge the interests of one country with another country.⁴⁵ For this reason, States are obliged to effectively work together to ensure the conservation and management of limited and far-reaching fish. RFMO will control and make the application of the principle of freedom of the seas in a sustainable corridor. Limitation of fisheries stocks in the high seas is important to do so that fishing does not become a competition that makes countries compete to each other for the needs of fish in the market.

Membership in an RFMO is based on a country's real interest so it is very likely that the membership will continue to increase. The addition of the number of member countries has an impact on the allocation of fisheries quotas. If a country has a good fishing track record and is able to utilize technology to accommodate fishing quotas provided by RFMO, fishing quotas for those countries on the high seas will continue to grow. As the fishing quota increases for the country it can be assumed that the quota of other countries will decrease every time a new RFMO member joins. This is done to keep the fisheries stock stable.

If fishing is done continuously it can cause fisheries resources, especially fish with certain species will be threatened with extinction in the high seas. The presence of RFMO is still considered ineffective in stopping excessive fishing in the high seas considering that RFMO only regulates certain species, so there are still many fish stocks that are at risk of being exploited. RFMO also has not carried out effective monitoring and law enforcement of agreed regulations.

4. Principles of International Fisheries Management

a. Freedom of Fishing on the High Sea Principle

In the regulation of the high seas, the principle of freedom of the high seas is known as a form of affirmation that no country should be able to apply the jurisdiction of its country on the high seas, but rather for actions with the aim of peace. This also causes a ship that sails on the high seas to be based on regulations that apply in the jurisdiction of its flag or also referred to as the floating portion of the flag state.

The regulation does not only apply to ships but also applies to the crew or persons on board.⁴⁶ The principle of freedom of the high seas is one embodiment of the *mare liberum* doctrine that has been recognized since Hugo Grotius declared the doctrine.⁴⁷ Freedom on the high seas is intended for peaceful purposes so that freedom in the principle of freedom of the high seas cannot be interpreted as absolute freedom since freedom that is not balanced by supervision

⁴⁵Bianca Haas, Jeffrey McGee, Aysha Fleming, Marcus Haward, "Factors Influencing the Performance of Regional Fisheries Management Organizations", *International Council for the Exploration of the Sea Journal of Marine Sciences*, Volume 113 (March 2020): 2.

⁴⁶Boer Mauna, *Hukum Internasional: Pengertian, Peranan dan Fungsi dalam Era Dinamika Global* (Bandung: Alumni, 2003), 314.

⁴⁷Melda Kamil Ariadno, "Kepentingan Indonesia Dalam Pengelolaan Perikanan Laut Bebas", *Jurnal Hukum Internasional*, Volume 2 Number 3 (April 2005): 503.

will disrupt the course of that freedom. The implementation of this principle must be carried out with due regard to the rights of other countries on the high seas.

The principle of freedom of the high seas as stipulated in Part VII, especially Article 87 (1) UNCLOS 1982 regulates freedom of fishing by taking into account the cooperation and conservation and management of living natural resources in the high seas (Articles 116, 117 and 118). As confirmed in this Article, the principle of freedom of fishing in UNCLOS 1982 is subject to the provisions set out in Section 2 of UNCLOS 1982 which discusses conservation and management of living resources in the high seas.

b. Sustainable Fisheries Development Principle

The principle of sustainable fisheries management stems from the principle of sustainable development developed by Agenda 21 to prepare States for 21st century challenges. This principle is applied in various national strategies, plans and policies to realize equitable development in all lines. Agenda 21 is one of the regulatory products from UNCED 1992 which aims to balance approaches that can be used to address issues concerning the environment and development in all aspects of life.

The implementation of sustainable development through Agenda 21 is based on three pillars, that is : economic growth; social welfare; and environmental protection.⁴⁸ Sustainable development is a long-term vision of development that relies on a balance between meeting the economic and social needs of humans with the ability of resources found above or in the earth to meet present and future needs. This principle was adopted to be applied in various sectors, one of them is the marine and fisheries sector. The state is obliged to manage its fishery resources with the right management principles so that they can continue to grow and not become scarce in the future. The mindset that fish is a renewable resource is one of the thoughts that led to the management of fisheries resources to the point of failure.

The principle of sustainable fisheries management is a management concept that puts forward responsibilities so as management must be done wisely in preserving fish resource supplies. Fisheries management must be carried out efficiently and based on a capable management system.⁴⁹ The Government's role is to stabilize the activities of utilizing fish resources through its policies and national legislation so that fish resources do not have the potential for instability.

c. Precautionary Principle

Countries in carrying out environmental management, both on land and at sea, must apply the precautionary principle. The precautionary principle is a precautionary and anticipatory principle, not a reactive one. This principle is applied to prevent the emergence of environmental problems, not to overcome environmental problems that have occurred.

The precautionary principle requires the state to count every development activity that impacts the environment.⁵⁰ Through these calculations, States can find out what activities have a negative impact on the environment, for this matter countries are obliged to eliminate these activities to prevent further environmental damage.

The precautionary principle in Agenda 21 can be utilized to overcome problems that are usually faced in developing countries, like related to the limitations of scientific information about marine and fisheries conditions and the potential within them that can be utilized. The application of this principle can be used as an option for countries, especially developing

⁴⁸Hira P. Jhamtani, "Pembangunan Berkelanjutan di Tengah Globalisasi: Adakah Harapan?", *Global*, Volume 5 Number 1 (November 2002): 1.

⁴⁹Lukman Adam, "Kebijakan Pelarangan Penangkapan Ikan Tuna Sirip Kuning: Analisis Dampak dan Solusinya", *Jurnal Ekonomi dan Kebijakan Publik*, Volume 7 Number 2 (December 2016): 198.

⁵⁰Chomariyah, *Hukum Pengelolaan Konservasi Ikan*. Malang: Setara Press, 2014, 82.

countries, to prevent the condition of over exploite fish resources and rebuild marine and fisheries potential so that they can benefit sustainably for humanity. Article 6 of the 1995 UNFSA states that countries must adopt a broad precautionary approach for the purpose of conservation, management and exploitation of fish with limited and remote populations to protect marine resources.

In the regulation of the General Principles, in Article 6, the 1995 CCRF regulates the precautionary principle as set out in Agenda 21. The regulation of this principle is specifically stated in Article 6.5 which states that in order to managing and conserving fisheries resources, each country and Regional fisheries organizations must adopt a precautionary approach. Hereinafter, in Article 7.5 of the CCRF 1995 also states that countries must implement a comprehensive precautionary approach to manage, conserve and utilize fish resources.

d. Responsible Fisheries Principles

CCRF 1995 Article 6 sets out some general principles used in carrying out conservation and management of fisheries. The basic principle used in the CCRF 1995 is the principle of responsible fisheries management. States and parties that exploit of biological resources in the sea must preserve the ecosystems in the seas in a responsible manner, to ensure that conservation and management is carried out effectively.

The application of the principle of fisheries management is responsible for ensuring that fisheries management carried out today can accommodate the needs of fisheries by generations living today and in the future. Thus this principle is a form of correlation and follow-up to the principle of sustainable fisheries management. This principle is also intended to prevent overfishing that is not commensurate with the conservation carried out to ensure the availability of fish stocks that have been captured. As a form of implementation of the principle of responsible fisheries management, Article 6.17 of the 1995 CCRF emphasizes that countries must ensure that fishing facilities and equipment as well as all fishery activities support the creation of safe working and living conditions and meet internationally agreed standards. The principle of responsible fisheries is closely related to the principle of sustainable fisheries are complementary principles.

5. Principles of Sustainable Fisheries Management in Indonesia

Referring to several international fisheries management principles, fisheries management in Indonesia also applies these principles. This is showed by the existence of laws and regulations regarding fisheries and their responsible management. For example in 1976 the Minister of Agriculture through Minister of Agriculture Decree Number 607 / Kpts / Um / 9/1976 concerning Fishing Tracks regulates the establishment of fishing lines and the use of means and transportation for fishing. This regulation is intended to prohibit the use of dangerous fishing gear such as trawling to prevent damage to coral reefs and depletion of fish stocks in the sea.

The ratification carried out by Indonesia towards UNCLOS 1982 is a form of achievement for the development of the fisheries sector in Indonesia. There are several rights and obligations granted by UNCLOS 1982 to member States in managing sea areas. Indonesia has formulated several national regulations guided by UNCLOS 1982 to further regulate the use of fisheries resources in the Indonesian sea areas, and ratified the results of the 1992 UNCED Convention.

Fisheries in Indonesia are regulated in Law Number 31 of 2004 concerning Fisheries. This law includes the principle of sustainability as adopted from the principle of sustainable development in Agenda 21, as well as the general principles contained in the 1995 CCRF. In its application at the national level, Indonesia positioned the 2001 IPOA-IUUF as a global action

plan to prevent endangered fisheries resources to ensure the availability of fishery-sourced food for current and future generations. come. As a form of adoption of IPOA-IUUF 2001, in the Decree of the Minister of Maritime Affairs and Fisheries of the Republic of Indonesia Number KEP.50 / MEN / 2012 concerning the National Action Plan for the Prevention and Control of IUU Fishing, efforts taken by Indonesia to prevent damage to fisheries resources, including the formation of National Plan of Action, integrated approach in overcoming the problem of illegal fishing, and protection of natural resources and conservation of fish resources.

6. How the Indonesian National Plan of Action Going

In the Article 5 Paragraph (1) Law Number 45 Year 2009 concerning Amendment to Law Number 31 Year 2004 concerning Fisheries has determined the scope of WPP-NRI. The extent of WPP-NRI provides an important role for the sea area to supply national food, provide jobs for coastal communities and improve the welfare of Indonesian people. Thus to control and maintain the condition of fish resources in Indonesia, a guideline for fisheries management in Indonesia is needed that is supported by sustainable principles in order to maintain the availability of fishery stocks for the next generation.

As a follow-up to Indonesia's participation in the RPOA-IUUF, Indonesia made a Model of Fisheries Legislation and a national action measure called the Indonesian National Plan of Action. The establishment of the Fisheries Legislation Model is based on the ability of each country to manage fisheries in its territory. The Fisheries Legislation Model is an instrument established by the State as a benchmark in categorizing actions into responsible fisheries management. There are 9 benchmarks used as a reference in the formation of the Indonesia Model Fisheries Legislation.

Subsequently, as a follow up to the implementation of the Indonesian NPoA, Indonesia has ratified the 2009 PSM Agreement through Presidential Regulation No. 43 of 2016 concerning Ratification of the Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing to integrate tracking the results of illegal fishing practices with the port.

The Indonesian National Plan of Action is intended to develop regionally and nationally developed action plans. Management of fisheries resources in WPP-NRI is the responsibility of Indonesia to be able to utilize the stock of fisheries with distant and limited resources. The Indonesian National Plan of Action has been prepared with reference to 18 national laws concerning fisheries management that apply in Indonesia, starting with the Law, Government Regulations and Ministerial Regulations / Decrees.

The efforts made by Indonesia to strengthen national and international regulations relating to fisheries, aimed at preventing and repressing illegal fishing, are indeed significant. These regulations are intended to provide law enforcement officers with a solid foundation for combating illegal fishing. However, despite the enactment of the Indonesian National Plan of Action and the observed increase in capture fisheries production from 2013-2018, illegal fishing remains rampant. This ongoing issue highlights a critical contradiction that needs to be take into account.⁵¹ The root cause of illegal fishing in Indonesia needs to be reassessed and aligned with the necessary adjustments to the National Plan of Action.

D. CONCLUSION

The study identifies five key principles for managing fisheries: the principle of the common heritage of mankind, the principle of freedom to conduct fishing activities on the high seas

⁵¹Indonesian MMAF, *Laporan Kinerja Kementerian Kelautan dan Perikanan Tahun 2015* (Jakarta: Indonesian MMAF, 2016), 36.

(freedom of fishing), the principle of sustainable fisheries management, the precautionary approach, and the principle of responsible fisheries. Among these, the principle of sustainable fisheries management is particularly crucial for Indonesia, given the ongoing strategic issue of illegal fishing. While Indonesia has made strides in implementing this principle, notably through achieving nine benchmarks in the Fisheries Legislation Model as outlined in the National Plan of Action (NPoA), the persistence of illegal fishing raises critical concerns. Despite some successes, such as the reduction in illegal fishing practices up to 2019, the fluctuations in the number of vessels caught and the significant role of foreign vessels suggest that the effectiveness of the NPoA needs to be reassessed. Indonesia must not only focus on the productivity and competitiveness of its marine and fisheries sector, which is still dominated by small-scale actors but also ensure that fundamental needs such as access to engine fuel, fishing gear, boat engines, and logistics are met. Furthermore, there is an urgent need for knowledge transfer to fishermen, especially in the use of e-logbooks, to enhance the effectiveness of the NPoA in combating illegal fishing.

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