

## Legal Reform in the Enforcement of Illegal Fishing Crimes

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### Abstract

Illegal, unreported, and unregulated (IUU) fishing is a growing threat to sustainable fisheries in Indonesia. This practice requires effective law enforcement, which raises the question: are fisheries regulations in Indonesia effective in enforcing measures to combat IUU fishing? This research aims to analyse the effectiveness of law enforcement in combating illegal fishing, analyse the implications of illegal fishing on sustainable fisheries development efforts, and design an ideal policy model for law enforcement in combating illegal fishing. This research applies a normative legal research method, utilising secondary data as the primary source of analysis. The approaches used include a legislative approach and a conceptual approach. This approach also serves as the foundation for formulating an ideal policy model to combat illegal, unreported, and unregulated (IUU) fishing. This study shows that, first, the fisheries legal system in Indonesia remains ineffective due to persistent weaknesses in legal substance, legal structure, and legal culture. Second, this ineffectiveness results in economic losses to the state, damage to the marine ecosystem, and a decline in the welfare of the community, especially those engaged in fishing. Third, there is a pressing need to renew the legal framework through harmonisation with international agreements, revision of the Fisheries Law to close legal gaps, institutional capacity building, and enhanced international cooperation as important steps towards establishing an effective, fair, and sustainable law enforcement model to protect Indonesia's marine resources for current and future generations.

**Keywords:** Fisheries; Illegal; Ineffective; Law Enforcement; Sustainability;



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### Introduction

Indonesia has a geographical advantage as the world's largest archipelago, comprising 17,504 islands and 5.8 million km<sup>2</sup> of marine waters, divided into 0.3 million km<sup>2</sup> of territorial sea, 2.95 million km<sup>2</sup> of archipelagic waters, and 2.55 million km<sup>2</sup> of other waters within Indonesia's Exclusive Economic Zone (EEZ). Indonesian marine fisheries have a sustainable potential of 12.54 million tons per year, distributed across Indonesia's territorial waters and EEZ. Approximately 8,500 fish species, 555 seaweed species, and 950 coral reef biota species inhabit Indonesian waters. Marine-based fisheries support 37% of the world's fish species, including tuna, shrimp, lobster, reef fish,

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various types of ornamental fish, shellfish, and seaweed.<sup>1</sup> This presents great potential in marine and fisheries sectors,<sup>2</sup> significantly impacting the community's economy, improving the welfare of fishermen, and increasing national income.<sup>3</sup>

Such conditions can have both positive and negative implications for the Indonesian state in the global community. One positive impact is that Indonesia can implement the Sustainable Fisheries Development goals.<sup>4</sup> Sustainable Fisheries Development is one of the United Nations' Sustainable Development Goals (SDGs) aimed at making fisheries management more effective and reducing overfishing.<sup>5</sup> However, the wealth of marine resources that Indonesia possesses is being exploited by foreign interests through illegal fishing or fish theft in Indonesian waters, which poses a serious threat to marine life and degrades the dignity and honour of the Indonesian nation if left unchecked.<sup>6</sup>

Illegal, unreported, and unregulated (IUU) fishing refers to fishing activities by national and international vessels that fail to report their catches to federal authorities.<sup>7</sup> According to the International Plan of Action to Prevent, Deter, and Eliminate IUU Fishing (IPOA-IUU Fishing), illegal fishing means, *first*, fishing activities by foreign persons or vessels in waters under the jurisdiction of a state, without permission, or in violation of laws and regulations; *second*, fishing activities conducted by vessels flying the flag of a state that is a member of a regional fisheries management organisation, but which are conducted in a manner contrary to the management and

<sup>1</sup> Bambang Ali Kusuma and others, 'Establishment of Indonesian Maritime Power: Regulation of Transnational Organized Crime on Illegal, Unreported, and Unregulated (IUU) Fishing', *International Journal of Criminal Justice Sciences*, 16.2 (2021), 251–66 <https://doi.org/10.5281/zenodo.4756074>

<sup>2</sup> Ridwan Arifin, Margaretha Hanita and Arthur Josias Simon Runturambi, 'Maritime Border Formalities, Facilitation and Security Nexus: Reconstructing Immigration Clearance in Indonesia', *Marine Policy*, 163 (2024), 106101 <https://doi.org/10.1016/j.marpol.2024.106101>

<sup>3</sup> Lusita Meilana and others, 'Identification of Potential Marine Protected Areas Based on Cumulative Risk Assessment: Case Study in Balikpapan Bay, Indonesia', *Ocean & Coastal Management*, 255 (2024), 107230 <https://doi.org/10.1016/j.ocecoaman.2024.107230>

<sup>4</sup> Shewit Gebremedhin and others, 'Scientific Methods to Understand Fish Population Dynamics and Support Sustainable Fisheries Management', *Water*, 13.4 (2021), 574 <https://doi.org/10.3390/w13040574>

<sup>5</sup> Michael C. Melnychuk and others, 'Identifying Management Actions That Promote Sustainable Fisheries', *Nature Sustainability*, 4.5 (2021), 440–49 <https://doi.org/10.1038/s41893-020-00668-1>

<sup>6</sup> Aris Irawan and others, 'Criminal Penalties for Foreigners Engaged in Illegal Fishing Indonesia's ZEE Impact SDGs', *Journal of Sustainable Development and Regulatory Issues (JSDERI)*, 3.1 (2025), 95–120 <https://doi.org/10.53955/jsderi.v3i1.42>

<sup>7</sup> Jamrud Aminuddin and others, 'Development of Convolutional Neural Network Algorithm on Ships Detection in Natuna Islands-Indonesia Using Land Look Satellite Imagery', *Remote Sensing Applications: Society and Environment*, 32 (2023), 101025 <https://doi.org/10.1016/j.rsase.2023.101025>

conservation regulations adopted by that organisation, where these provisions are binding on its member states;<sup>8</sup> *third*, fishing activities opposing to national law or international obligations; and fourth, the most common illegal fishing activities in the Indonesian Republic's Fisheries Management Area are fish theft by foreign-flagged fishing vessels, particularly from several neighbouring countries.<sup>9</sup>

Unreported fishing refers to fishing activities that are not reported or are misreported to the competent national authorities, and fishing activities conducted in the competence area of a Regional Fisheries Management Organisation (RFMO) that are unreported or misreported in contravention of that organisation's reporting procedures.<sup>10</sup> Furthermore, the meaning of Unregulated Fishing is first, fishing activities carried out in the relevant RFMO competence area by stateless vessels, or by vessels flying the flag of a country that is not a member of that organisation, or by fishing companies, which are carried out in a manner contrary to the conservation and management regulations of that organisation;<sup>11</sup> *second*, fishing activities carried out in waters or for fish stocks where there are no applicable conservation and management regulations, which are carried out in a manner contrary to the state's responsibility to conserve and manage marine living natural resources by international law.<sup>12</sup>

According to the Global Initiative Against Transnational Organised Crime, Indonesia is among the 10 countries with the highest levels of vulnerability to IUU Fishing. This practice occurs frequently in the waters of the North Natuna Sea, the Sulawesi Sea, and the Arafura Sea. The Directorate General of Marine and Fisheries Resources Surveillance (PSDKP) reports that from 2020 to 2025, a total of 191 illegal foreign fishing vessels were apprehended, primarily from Vietnam, the Philippines, and Malaysia. They operate in WPP-NRI 711 (Natuna Sea), 718 (Arafura Sea), and 716 (Sulawesi Waters), areas rich in demersal fish, shrimp, and high-value marine products. The table

<sup>8</sup> Jessica H. Ford and others, 'Incentivising Change to Beneficial Ownership and Open Registers—Holding Flag States Responsible for Their Fleets and Costs of Illegal Fishing', *Fish and Fisheries*, 23.5 (2022), 1240–48 <https://doi.org/10.1111/faf.12677>

<sup>9</sup> Chengyong Yu and Yen-Chiang Chang, 'China's Incentives and Efforts against IUU Fishing in the South China Sea', *Sustainability*, 15.9 (2023), 7255 <https://doi.org/10.3390/su15097255>

<sup>10</sup> Maurice Beseng, 'The Nature and Scope of Illegal, Unreported, and Unregulated Fishing and Fisheries Crime in Cameroon: Implications for Maritime Security', *African Security*, 14.3 (2021), 262–85 <https://doi.org/10.1080/19392206.2021.1982241>

<sup>11</sup> Kathleen Auld and others, 'The Collective Effort of the United Nations Specialised Agencies to Tackle the Global Problem of Illegal, Unreported and Unregulated (IUU) Fishing', *Ocean & Coastal Management*, 243 (2023), 106720 <https://doi.org/10.1016/j.ocecoaman.2023.106720>

<sup>12</sup> Adam Leonardo and Nowar Deeb, 'Illegal, Unreported and Unregulated (IUU) Fishing in Indonesia: Problems and Solutions', *IOP Conference Series: Earth and Environmental Science*, 1081.1 (2022), 012013 <https://doi.org/10.1088/1755-1315/1081/1/012013>

below shows data on foreign fishing vessels from the Ministry of Marine Affairs and Fisheries (KKP) during 2020 to 2025.

Table 1. Illegal Fishing in Indonesia 2020-2025

No.	Vessel Origin	Number of Vessels				
		2020	2021	2022	2023	2024
						2025 (Jan-May)
<b>1.</b>	<b>Foreign Fishing Vessels</b>					
	a. Malaysia	17	22	9	13	9
	b. Vietnam	23	25	7	1	3
	c. Philippines	12	6	2	7	17
	d. Taiwan	1	-	-	-	-
	e. Russia	-	-	-	-	1
	f. Sierra Leone	-	-	-	-	2
	g. Netherlands	-	-	-	1	-
	h. China	-	-	-	-	-
<b>2.</b>	<b>Indonesian Fishing Vessel</b>	58	114	79	252	210
	<b>Total</b>	<b>111</b>	<b>167</b>	<b>97</b>	<b>274</b>	<b>242</b>
						<b>32</b>

Source: Directorate of Violation Handling, Directorate General of Marine and Fisheries Resources Surveillance, Ministry of Marine Affairs and Fisheries 2025

Table 1 show, not only do foreign vessels engage in illegal, unreported, and unregulated (IUU) fishing practices, but Indonesian-flagged vessels are also involved. These vessels often violate permits, manipulate logbooks, use prohibited fishing gear, or fail to activate their Vessel Monitoring System (VMS). Indonesia Ocean Justice Initiative (IOJI, 2023) shows that over 30% of domestic industrial fishing vessels fail to comply with electronic reporting (e-logbook) requirements. The Directorate for Handling Violations of the Directorate General of Marine and Fisheries Resources Surveillance (Ditjen PSDKP) recorded that from 2020 to May 2025, a total of 736 Indonesian fishing vessels were sanctioned. Although the majority received administrative sanctions, the pattern of violations should not be underestimated, as the schemes are growing increasingly complex. The IUU fishing methods in the Indonesian Fisheries Management Area (WPP-NRI) are becoming increasingly sophisticated, including forging fishing permits, using the flag of convenience, avoiding surveillance by turning off ship transmitters, and transshipment, which is the practice of concealing catch.

The prevalence of IUU fishing is one of the most serious global problems and harms the environment. The negative impacts include endangering ecosystems, habitats, and the diversity of marine fisheries resources. Additionally, illegal fishing also has negative economic consequences, such as losses in local food supply, unfair competition among fisheries subsectors, and financial losses for the country.<sup>13</sup> In Indonesia, losses due to illegal fishing have reached US\$4 billion or over US\$374 million per year. This is a

<sup>13</sup> Blaise Kuemlangan and others, 'Enforcement Approaches against Illegal Fishing in National Fisheries Legislation', *Marine Policy*, 149 (2023), 105514 <https://doi.org/10.1016/j.marpol.2023.105514>

factor hindering the maximum potential utilisation of Indonesian fisheries. IUU control in the Exclusive Economic Zone remains inadequate, effecting fishermen and the nation.<sup>14</sup>

Several factors contribute these problems, with many scholars identifying the weakness of the law enforcement system in Indonesian waters as a key issue.<sup>15</sup> A weak law enforcement and monitoring system has led to several crimes in Indonesian waters, including illegal fishing. Indonesia must urgently improve its maritime security system. Regulations regarding law enforcement in fisheries management in Indonesia have been established, which is Law Number 31 of 2004, as amended by Law Number 45 of 2009. However, this is a complex and widespread issue. This relates to the regulatory framework and institutional arrangements for all maritime law enforcement activities.<sup>16</sup> It is essential to note that, from a law enforcement perspective, criminal syndicates in the fishing industry are involved in a variety of criminal offences classified as transnational organised crime.<sup>17</sup> This classification is due to crimes committed by individuals who do not comply with regulations regarding the conservation and management of fishery resources, and who also fail to comply with other social, labour, fiscal, or commercial regulations throughout the production and marketing chain of illegally caught products.<sup>18</sup> This naturally has implications for the process of sustainable fisheries development.<sup>19</sup>

Previous studies have widely acknowledged the existence of IUU fishing practices as a serious threat to fisheries resources, but have not yet addressed their implications for sustainable fisheries development. For example, research by Kathleen Auld reviewed instruments and evaluated specific UN bodies in addressing IUU fishing, but did not discuss its implications for the development of sustainable fisheries management.<sup>20</sup> Maria Konstantino discusses IUU fishing using illegal fishing gear, which naturally has implications for the threat to marine habitats and increased marine pollution. However, this research also does not address the

<sup>14</sup> Aminuddin and others.

<sup>15</sup> Dirhamsyah, 'IUU Fishing in Indonesia's Live Reef Fisheries', *Australian Journal of Maritime & Ocean Affairs*, 4.2 (2012), 44–52 <https://doi.org/10.1080/18366503.2012.10815700>

<sup>16</sup> Dirham Dirhamsyah, Saiful Umam and Zainal Arifin, 'Maritime Law Enforcement: Indonesia's Experience against Illegal Fishing', *Ocean & Coastal Management*, 229 (2022), 106304 <https://doi.org/10.1016/j.ocecoaman.2022.106304>

<sup>17</sup> Tapiwa Victor Warikandwa, 'Fighting Fisheries Crimes in the Fisheries Industry: Practical Training Reflections of the Efficacy of Namibia's Fisheries Law Enforcement', *Cogent Social Sciences*, 9.2 (2023) <https://doi.org/10.1080/23311886.2023.2286043>

<sup>18</sup> Isabel Artime García, 'Spain: A Pioneering Country in the Fight against the Infringement of the International Legal Regime for Fisheries', *Marine Policy*, 144 (2022), 105230 <https://doi.org/10.1016/j.marpol.2022.105230>

<sup>19</sup> Honghong Liu and others, 'Exploring the Evolution of Sustainable Fisheries Development: Focusing on Ecological, Environmental and Management Issues', *Ecological Informatics*, 75 (2023), 102004 <https://doi.org/10.1016/j.ecoinf.2023.102004>

<sup>20</sup> Auld and others.



development of sustainable fisheries management.<sup>21</sup> Mohammad Mojibul Hoque Mozumder argues that IUU Fishing can lead to loss of income, environmental damage, and economic losses for coastal communities, as well as a reduction in fish stocks.<sup>22</sup> Elizabeth R. Selig revealed that IUU fishing has implications for labour exploitation on the vessel, which is a human rights violation, endangers food security, and deprives governments of revenue.<sup>23</sup> Alin Kadfak (2021) revealed that there are implications for the workforce in the IUU fishing policy.<sup>24</sup>

This research addresses a critical gap by offering an ideal policy renewal to combat the criminal act of IUU Fishing, which poses significant harm to both society and the state. The urgency of this research lies in the three threats posed by this practice: first, the risk to the sustainability of fisheries resources, leading to declining fish stocks and damage to marine ecosystems; second, the threat to national sovereignty from foreign vessels fishing illegally in Indonesian waters; and third, the impact on the economic stability of coastal communities that rely heavily on the fisheries sector. Considering these threats, this research aims to analyse the effectiveness of law enforcement in combating illegal fishing, analyse the implications of illegal fishing on sustainable fisheries development efforts, and design an ideal policy model for law enforcement in combating illegal fishing. This research aims to enhance the legal framework for fisheries and marine management in Indonesia.

## Methodology

This research applies a normative legal research method.<sup>25</sup> The approach includes a statutory examination of positive legal provisions, particularly Law Number 31 of 2004, as amended by Law Number 45 of 2009 concerning Fisheries. Additionally, a conceptual approach aims to analyse legal system concepts to assess the effectiveness of fisheries management policies in Indonesia, utilising Lawrence M. Friedman's legal system theory, including legal substance, legal structure, and legal culture. This approach serves as the

<sup>21</sup> Márcia Maria Constantino and others, 'Impacts of Illegal Fishing in the Inland Waters of the State of Santa Catarina –Brazil', *Marine Pollution Bulletin*, 180 (2022), 113746 <https://doi.org/10.1016/j.marpolbul.2022.113746>

<sup>22</sup> Mohammad Mojibul Hoque Mozumder and others, 'Governance of Illegal, Unreported, and Unregulated (IUU) Fishing in Bangladesh: Status, Challenges, and Potentials', *Frontiers in Marine Science*, 10 June (2023), 1–16 <https://doi.org/10.3389/fmars.2023.1150213>

<sup>23</sup> Elizabeth R. Selig and others, 'Revealing Global Risks of Labor Abuse and Illegal, Unreported, and Unregulated Fishing', *Nature Communications*, 13.1 (2022) <https://doi.org/10.1038/s41467-022-28916-2>

<sup>24</sup> Alin Kadfak and Sebastian Linke, 'More than Just a Carding System: Labour Implications of the EU's Illegal, Unreported and Unregulated (IUU) Fishing Policy in Thailand', *Marine Policy*, 127 (2021), 104445 <https://doi.org/10.1016/j.marpol.2021.104445>

<sup>25</sup> Rustamaji Muhammad and others, 'The Reduction of Criminal Justice Policy in Indonesia: Justice versus Virality', *Journal of Human Rights, Culture and Legal System*, 5.2 (2025), 442–72 <https://doi.org/10.53955/jhcls.v5i2.637>

foundation for formulating an ideal policy model to combat Illegal, Unreported, and Unregulated (IUU) Fishing. The data consist of primary legal materials such as national legislation and relevant international conventions or regulations, as well as secondary legal materials including scientific journals, books, and another scholarly research.<sup>26</sup>

## Results and Discussion

### *Ineffectiveness of Law Enforcement in Combating Illegal Fishing*

The existence of IUU Fishing practices is closely related to the enforcement of the legal system in combating illegal fishing crimes. A legal system is considered adequate when human behaviour within society aligns with the applicable legal rules.<sup>27</sup> For a legal system to be effective, it must meet key conditions. Firstly, legal rules should be clear and easily understood. Secondly, their content needs to be known within society. Thirdly, the mobilisation of the legal rules should be efficient and effective. Additionally, there should be an accessible and effective dispute resolution mechanism available to all members of society. Finally, it is essential that the public has a strong belief in the capability and effectiveness of legal rules and institutions.<sup>28</sup>

First, legal substance, as one of the important elements in the theory of legal systems, determines the extent to which rules can regulate community behaviour and prevent violations.<sup>29</sup> In the context of IUU Fishing, the current regulations do indeed prohibit and sanction such activities, as stipulated in the Fisheries Law. However, from a content perspective, several weaknesses make law enforcement less than optimal. First, these regulations are not entirely consistent with international legal provisions, such as the 1982 United Nations Convention on the Law of the Sea (UNCLOS) and the Port State Measures Agreement (PSMA), which regulate port state actions to prevent the entry of illegal catches. This inconsistency makes Indonesia less than optimal in establishing international cooperation to prevent and prosecute cross-border perpetrators.<sup>30</sup> The formulation of criminal sanctions

<sup>26</sup> Ni Komang Sutrisni and others, 'The Compliance of Governance on Family Data Protection Regulation', *Journal of Human Rights, Culture and Legal System*, 4.3 (2024), 706–41 <https://doi.org/https://doi.org/10.53955/jhcls.v4i3.293>

<sup>27</sup> Raphael J. Heffron, 'Applying Energy Justice into the Energy Transition', *Renewable and Sustainable Energy Reviews*, 156 (2022), 111936 <https://doi.org/10.1016/j.rser.2021.111936>

<sup>28</sup> Andrew Adewale Alola, Glory Chiyoru Dike and Uju Violet Alola, 'The Role of Legal System and Socioeconomic Aspects in the Environmental Quality Drive of the Global South', *Social Indicators Research*, 163.2 (2022), 953–72 <https://doi.org/10.1007/s11205-022-02920-x>

<sup>29</sup> Ana Fauzia, Fathul Hamdani and Deva Octavia, 'The Revitalization of The Indonesian Legal System in the Order or Reaizing the Ideal State Law', *Progressive Law Review*, 3.01 (2021), 12–25 <https://doi.org/10.36448/plr.v3i01.46>

<sup>30</sup> Lonna Bethel, Henning Jessen and Johan Hollander, 'Implementing the Port State Measures Agreement to Combat Illegal, Unreported and Unregulated Fishing in the Caribbean', *Marine Policy*, 132 (2021), 104643 <https://doi.org/10.1016/j.marpol.2021.104643>

and fines in the fisheries law is often too lenient, failing to deter, especially for foreign vessels with significant capital and international networks. In some cases, the fines imposed are much smaller than the value of the illegal catch they obtained.<sup>31</sup> The existence of legal loopholes that allow perpetrators to escape criminal prosecution through administrative mechanisms or parole. This condition not only weakens law enforcement efforts but also sends a signal that violations of IUU Fishing do not always result in severe punishment.<sup>32</sup>

*Second*, the legal structure includes law enforcement agencies and personnel involved in implementing the rules.<sup>33</sup> In handling IUU Fishing, there are several institutions with authority, such as the Ministry of Marine Affairs and Fisheries (KKP), the Indonesian Navy, the Water Police, the Attorney General's Office, and the courts. Although this structure is theoretically complete, its effectiveness in the field still faces obstacles. The number of fisheries supervisors is still limited compared to the vastness of Indonesia's waters, which cover 6.4 million km<sup>2</sup>. This limitation has implications for weak monitoring in areas prone to IUU Fishing, especially in border regions far from the centre of government.<sup>34</sup> Surveillance facilities and infrastructure, such as patrol boats, surveillance radar, and vessel monitoring systems, are still insufficient. Patrol boats are often slower than the offending vessels, while monitoring technology is not yet optimally integrated across agencies.<sup>35</sup> Coordination between law enforcement agencies is still weak. Sectoral ego and differences in case handling procedures often hinder the effectiveness of law enforcement. In some cases, the legal process is hampered at the investigation stage due to inconsistencies in documents or evidence between agencies.<sup>36</sup> The long and convoluted judicial process leads to many cases ending with light sentences

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<sup>31</sup> Paula Satizábal and others, 'Theatre of Enforcement at Sea: The Global Fight Against "Illegal Fishing" and the Criminalisation of Fisher Peoples and Exploitation of Fish Workers', *Journal of Agrarian Change*, 25.3 (2025) <https://doi.org/10.1111/joac.70009>

<sup>32</sup> Dirhamsyah, Umam and Arifin.

<sup>33</sup> Lisanne Kleygrewe and others, 'Police Training in Practice: Organization and Delivery According to European Law Enforcement Agencies', *Frontiers in Psychology*, 12 (2022) <https://doi.org/10.3389/fpsyg.2021.798067>

<sup>34</sup> Tomy Budi Mulianto, Asropi Asropi and Ridwan Rajab, 'Strategy to Fulfill The Need For Fisheries Supervisors To Support The Ministry Of Marine Affairs And Fisheries' Blue Economy Policy', *Eduvest - Journal of Universal Studies*, 4.12 (2024), 12199–220 <https://doi.org/10.59188/eduvest.v4i12.50133>

<sup>35</sup> Xinyuan Chen and others, 'A Patrol Routing Problem for Maritime Crime-Fighting', *Transportation Research Part E: Logistics and Transportation Review*, 168 (2022), 102940 <https://doi.org/10.1016/j.tre.2022.102940>

<sup>36</sup> Gidion Arif Setyawan and others, 'Urgency of Institutionalizing Collaborative Governance in the Legal System for the Protection of Children in Conflict With the Law', *Jurnal Hukum Unissula*, 41.2 (2025), 346–65 <https://doi.org/10.26532/jh.v41i2.46413>



or even acquittal. This has led to low public trust in the government's seriousness in combating IUU Fishing.<sup>37</sup>

*Third*, the legal culture refers to the attitudes, perceptions, and values that society holds towards the law.<sup>38</sup> The low legal culture in the context of IUU Fishing is an important factor that exacerbates the problem. Some coastal communities, particularly small-scale fishermen, sometimes engage in illegal fishing practices due to economic pressures. The lack of understanding regarding the long-term impact of IUU Fishing on the sustainability of marine resources leads them to prioritise short-term profits.<sup>39</sup> In some regions, there are still instances of tolerance or leniency by certain officials towards violations, whether due to social connections or economic motives. This phenomenon creates the perception that the law can be negotiated, thereby reducing its deterrent effect. The value of sustainability has not been fully internalized in fishing practices, both among large-scale businesses and local governments. The focus on economic profit often disregards the principle of conservation.<sup>40</sup>

### ***Implications of Weak Law Enforcement on Sustainable Fisheries in Indonesia***

Illegal fishing practices has been a serious challenge in achieving sustainable fisheries development in Indonesia.<sup>41</sup> The largest archipelago in the world has suffered significant losses from this practice. The losses amount to IDR300 trillion and are a factor hindering the maximum potential utilisation of Indonesia's fisheries. According to Rio's three-pillar concept of sustainable development, sustainable fisheries management is based on the economically, socially, and environmentally sustainable use of the sea. The complex and widespread implications of fisheries crime severely hamper Indonesia's efforts to achieve sustainable fisheries management development.<sup>42</sup> The implications of the ineffectiveness of IUU Fishing law enforcement in Indonesia are as follows.

<sup>37</sup> Rebecca Strating, Sunil Rao and Sallie Yea, 'Human Rights at Sea: The Limits of Inter-State Cooperation in Addressing Forced Labour on Fishing Vessels', *Marine Policy*, 159 (2024), 105934 <https://doi.org/10.1016/j.marpol.2023.105934>

<sup>38</sup> Hasanudin, Kamsi and Ahmad Yani Anshori, 'The Contestation of Legal Foundations in the Resolution of Islamic Economic Disputes in Religious Courts', *Al-Manahij: Jurnal Kajian Hukum Islam*, 18.2 (2024), 271–88 <https://doi.org/10.24090/mnh.v18i2.11934>

<sup>39</sup> Almudena Cánovas-Molina and Eduardo García-Frapolli, 'A Review of Vulnerabilities in Worldwide Small-scale Fisheries', *Fisheries Management and Ecology*, 29.5 (2022), 491–501 <https://doi.org/10.1111/fme.12538>

<sup>40</sup> Berchie Asiedu and others, 'Fishers' Migration in the Small Pelagic Fishery of Ghana: A Case of Small-Scale Fisheries Management', *Ocean & Coastal Management*, 229 (2022), 106305 <https://doi.org/10.1016/j.ocecoaman.2022.106305>

<sup>41</sup> Alexander M.A. Khan and others, 'Illegal Fishing Threatens the Sustainability of Future Tuna Commodities in Indonesia', *Marine Policy*, 159 (2024), 105936 <https://doi.org/10.1016/j.marpol.2023.105936>

<sup>42</sup> Warikandwa.

*First*, it harms the country's economy. Nationally, the state is the party directly harmed by this illegal fishing crime, because the fish resources located in Indonesian waters belong to the state and are controlled for the most significant benefit of the people, as mandated in Article 33 paragraph (3) of the 1945 Constitution.<sup>43</sup> His crime demonstrably eliminates the potential for state revenue, particularly from Non-Tax State Revenue (PNBP) in the fisheries sector, while also damaging the balance of the marine ecosystem.<sup>44</sup> Here is the data on economic losses due to IUU Fishing in Indonesia.

Table 2. Economic Losses Due to Illegal Fishing in Indonesia (2020-2024)

Year	Economic Losses
<b>2020</b>	IDR6.000.000.000.000
<b>2021</b>	IDR5.000.000.000.000
<b>2022</b>	IDR5.000.000.000.000
<b>2023</b>	IDR4.000.000.000.000
<b>2024</b>	IDR3.700.000.000.000

Source: Ministry of Marine Affairs and Fisheries 2024

The table above illustrates the economic losses in Indonesia due to illegal fishing during the period 2020-2024. Along with the implementation of the ship sinking policy and the strengthening of maritime patrols, the value of economic losses continues to decline significantly. This decline indicates that the government's decisive actions have had a positive impact on reducing illegal fishing practices by foreign vessels. Despite the decrease in economic losses, challenges remain. IUU fishing practices continue, although on a smaller scale. Oversight and law enforcement efforts must be strengthened to reduce losses.<sup>45</sup>

From a legal perspective, IUU fishing not only contravenes the provisions of Law Number 31 of 2004 concerning Fisheries but also violates other relevant laws. Law Number 45 of 2009 on Fisheries infringes upon the sovereign rights, as recognised in the United Nations Convention on the Law

<sup>43</sup> Triyan Febriyanto and Mukhamad Luthfan Setiaji, 'Illegal Fishing by Other Countries: Complicated Law Enforcement in Indonesia', *Indonesian Journal of Environmental Law and Sustainable Development*, 1.2 (2022), 189–212 <https://doi.org/10.15294/ijel.v1i2.58123>

<sup>44</sup> Muhammad Farrel Arkan and Haula Rosdiana, 'Enhancing Fisheries Sustainability in Indonesia: A Critical Review of Post-Production Non-Tax Revenue Policy and Reform Proposals', 1.2 (2024), 66–75 <https://doi.org/https://doi.org/10.61511/jmarpt.v1i2.2024.1664>

<sup>45</sup> Urrifatul Choירו, Ulfa Qurni Lindasari and Umar Al Faruq, 'Dampak Penenggelaman Kapal Illegal Fishing Di Wilayah Indonesia Ditinjau Dari Perspektif Hukum Internasional', *Begawan Abioso*, 15.2 (2025), 51–59 <https://doi.org/10.37893/abioso.v15i2.1000>

of the Sea (UNCLOS) 1982.<sup>46</sup> Foreign vessels fishing without permission have violated the coastal state's jurisdiction and reduced the country's economic rights over its natural resources.<sup>47</sup> The loss decreases state revenue and national fishing competitiveness while threatening fish sustainability and harming local fishermen. Therefore, legally and economically, illegal fishing should be regarded as a serious violation of national sovereignty, national interests, and the principle of justice in the management of natural resources.<sup>48</sup>

fisheries crime threatens fish sustainability by harming marine ecosystems,<sup>49</sup> especially through illegal, unreported, and unregulated (IUU) fishing practices.<sup>50</sup> This crime has evolved into a form of transnational organized crime that overexploits marine resources.<sup>51</sup> Illegal fishing activities involving (the use of destructive fishing methods in specific area, the use of illegal fishing gear explicitly determined by the administration, the harvesting of protected species, and fishing in prohibited fishing areas or during prohibited fishing periods will disrupt the marine ecosystem.<sup>52</sup> From an environmental law perspective, this violates the principles of sustainable development and precautionary, as recognised in various international instruments, including the FAO's Code of Conduct for Responsible Fisheries.<sup>53</sup>

<sup>46</sup> Ninin Ernawati and others, 'Legal Enforcement for Iuu Fishing in Indonesian Sovereignty and Jurisdiction: A Case Analysis of the Capture of Foreign Vessels By the Indonesian Government', *Jurnal IUS Kajian Hukum Dan Keadilan*, 10.3 (2022), 448-61 <https://doi.org/10.29303/ius.v10i3.1078>

<sup>47</sup> Belardo Prasetya Mega Jaya, Afandi Sitamala and Danial, 'State Exclusivity of Fisheries Resources on Exclusive Economic Zone in Efforts to Support the Fisheries Availability as a Means of Increasing Food Security for the State', in *The 3rd International Conference on Food Security Innovation* (Atlantis Press, 2021) <https://doi.org/10.2991/absr.k.210304.039>

<sup>48</sup> Xidi Chen, Qi Xu and Lun Li, 'Illegal, Unreported, and Unregulated Fishing Governance in Disputed Maritime Areas: Reflections on the International Legal Obligations of States', *Fishes*, 8.1 (2023), 36 <https://doi.org/10.3390/fishes8010036>

<sup>49</sup> Anup Phayal and others, 'All Maritime Crimes Are Local: Understanding the Causal Link between Illegal Fishing and Maritime Piracy', *Political Geography*, 109 (2024), 103069 <https://doi.org/10.1016/j.polgeo.2024.103069>

<sup>50</sup> Eréndira Aceves-Bueno, Andrew J. Read and Miguel A. Cisneros-Mata, 'Illegal Fisheries, Environmental Crime, and the Conservation of Marine Resources', *Conservation Biology*, 35.4 (2021), 1120-29 <https://doi.org/10.1111/cobi.13674>

<sup>51</sup> Ascensión García Ruiz, Nigel South and Avi Brisman, 'Eco-Crimes and Ecocide at Sea: Toward a New Blue Criminology', *International Journal of Offender Therapy and Comparative Criminology*, 66.4 (2022), 407-29 <https://doi.org/10.1177/0306624X20967950>

<sup>52</sup> Hushun Zhang and others, 'Assessment of Ecological Damage from Illegal Fishing and Judicial Practice for Damage Compensation', *Ocean & Coastal Management*, 246 (2023), 106909 <https://doi.org/10.1016/j.ocecoaman.2023.106909>

<sup>53</sup> Md Syful Islam and A. S. M. Mahmudul Hasan, 'International Legal Arrangements for Illegal, Unreported, and Unregulated Fishing: Legal Mechanisms and Challenges in Bangladesh', *Marine Development*, 2.1 (2024), 28 <https://doi.org/10.1007/s44312-024-00039-w>

In addition, the practice of IUU Fishing is undoubtedly contrary to Law Number 32 of 2009 concerning Environmental Protection and Management, as well as the Fisheries Law, which mandates the sustainable utilisation of fish resources.<sup>54</sup> If left unchecked, the damage to the marine ecosystem caused by this crime will drastically reduce fish stocks, threaten biodiversity, and eliminate the ocean's ecological function as a support for human life.<sup>55</sup> The fight against illegal, unreported, and unregulated fishing must be seen not only as an economic and sovereignty issue but also as a critical effort to protect the marine ecosystem for future generations..<sup>56</sup>

*Third*, the prevalence of IUU fishing in Indonesia will affect the welfare of the community, especially fishermen, thus contradicting Indonesia's national development goals.<sup>57</sup> This crime significantly reduced fish stocks in the waters due to uncontrolled overfishing, causing local fishermen to lose their primary source of livelihood. The decline not only reduces fishermen's incomes but also triggers an increase in fish prices in the market, which will ultimately burden consumers. From a legal perspective, this condition contradicts the mandate of Article 33 of the 1945 Constitution, which states that the management of natural resources must be used for the greatest possible prosperity of the people.<sup>58</sup>

On the other hand, IUU fishing practices also violate the principle of equitable benefits and social justice, which are the basis of national development policy, as reflected in the Fisheries Law and various derivative regulations. In socio-economic perspective, the decline triggers a domino effect, including increased unemployment in the fisheries sector, labour migration to other less productive informal sectors, and weakened marine-based food security. Therefore, combating IUU Fishing is important for protecting sovereignty and the environment and significant as a legal and

<sup>54</sup> Agus Suherman and others, 'Transformation of Indonesian Capture Fisheries Governance: Review and Prospects', *Marine Policy*, 174 (2025), 106619 <https://doi.org/10.1016/j.marpol.2025.106619>

<sup>55</sup> Annette Hübschle and Jade Lindley, 'Blue Crimes and Ocean Harmscapes: Strategies for Tackling Transnational Maritime Environmental Crimes in the Global South', *Frontiers in Conservation Science*, 5 (2024) <https://doi.org/10.3389/fcsc.2024.1448316>

<sup>56</sup> Kuan-Hsiung Wang, 'From Fishery Resources Conservation to Labor Protection: RFMOs and the Development of Combating IUU, An Essay in Honor of Ted L. McDorman', *Ocean Development & International Law*, 55.4 (2024), 579-94 <https://doi.org/10.1080/00908320.2024.2413610>

<sup>57</sup> Rizal Rifai, 'A Regulated Fishing Policy to Support Food Security in the Marine and Fisheries Sector', *Journal of National Paradigm-Based Resilience Strategy*, 2.1 (2025), 35-52 <https://doi.org/https://doi.org/10.61511/napbres.v2i1.2025.1791>

<sup>58</sup> Chrispine Sangara Nyamweya and others, 'Response of Fish Stocks in Lake Victoria to Enforcement of the Ban on Illegal Fishing: Are There Lessons for Management?', *Journal of Great Lakes Research*, 49.2 (2023), 531-44 <https://doi.org/10.1016/j.jglr.2023.01.001>

public policy strategy to safeguard the well-being of coastal communities and traditional fishermen.<sup>59</sup>

This situation is inseparable from the enforcement of laws against IUU Fishing. Law enforcement plays a key role in this regard because it is the main instrument for ensuring that the country's sovereign rights over fisheries resources are protected, the sustainability of the marine environment is maintained, and the economic benefits of utilising these resources can be felt equally by the community. Therefore, it is necessary to determine whether the legal system for combating IUU fishing is effective.

### ***Law Enforcement Model for Illegal Fishing and Sustainable Fisheries***

Law enforcement against IUU Fishing crimes is one of the strategic elements in achieving sustainable fisheries development. The challenges include weaknesses in the substance of the law, limitations in enforcement structures, a legal culture that is not yet optimal, and the limited effectiveness of international cooperation. Therefore, the ideal model of law enforcement needs to be built upon legal and political reform, harmonisation with international legal instruments, and the strengthening of national capacity.

The first step is to ratify and implement international agreements relevant to combating illegal fishing. The United Nations Convention on the Law of the Sea (UNCLOS) 1982 provides a foundation for managing and conserving marine resources, which helps prevent Illegal, Unreported, and Unregulated (IUU) fishing. For example, Article 73 allows coastal states to take action against foreign vessels that violate regulations in their Exclusive Economic Zones (EEZ).<sup>60</sup> Additionally, other international agreements like the FAO Compliance Agreement 1993, the IPOA-IUU Fishing 2001, and the Agreement on Port State Measures 2009 provide both binding and voluntary technical guidelines for states in preventing, deterring, and eliminating IUU Fishing practices.<sup>61</sup> The existence of RFMOs also needs to be utilised optimally.<sup>62</sup> However, the harmonisation of national laws is not limited to ratification but also ensures that international provisions are integrated into national legislation. The principle of *pacta sunt servanda* obligates Indonesia to implement the contents of international treaties consistently. This implementation must align with the commitment to sustainable development

<sup>59</sup> Tarek Ben Hassen and Hamid El Bilali, 'Unlocking the Marine Potential: Sustainable Blue Economy for SDG Advancement in the MENA Region', in *Handbook of Sustainable Blue Economy* (Cham: Springer Nature Switzerland, 2024), pp. 1-18 [https://doi.org/10.1007/978-3-031-32671-4\\_2-1](https://doi.org/10.1007/978-3-031-32671-4_2-1)

<sup>60</sup> Agustina Merdekawati, Taufiq Adiyanto and Irkham Afnan Trisandi Hasibuan, 'UNCLOS 1982 and The Law Enforcement Against Illegal Fishing in Indonesia: Judges' Diverging Perspectives', *Mimbar Hukum*, 33.1 (2021), 39-62 <https://doi.org/10.22146/mh.v33i1.1954>

<sup>61</sup> Bethel, Jessen and Hollander.

<sup>62</sup> Valentin Schatz, 'Provisions for Nullification of Conservation and Management Measures in RFMO Objection Procedures', *Marine Policy*, 166 (2024), 106230 <https://doi.org/10.1016/j.marpol.2024.106230>



as outlined in Presidential Regulation No. 59 of 2017 concerning the SDGs,<sup>63</sup> which connects fisheries management with community welfare and environmental sustainability.<sup>64</sup>

The second point highlights the need to update the enforcement provisions of the Fisheries Law due to the shortcomings of Law Number 31 of 2004. This law needs amendment in several key areas, improving coordination among investigating agencies in tackling fisheries crimes; clarifying sanctions, including criminal penalties and fines; refining procedural laws for case examination deadlines; and enhancing law enforcement facilities in the fisheries sector, potentially allowing actions such as sinking foreign vessels in Indonesia's fisheries management area.<sup>65</sup> Fisheries management issues include fishing ports, conservation, licensing, and harbour master services.<sup>66</sup> There is a need to expand the jurisdiction of fisheries courts to cover the entire fisheries management area of the Republic of Indonesia. In addition, the amendments to Law Number 31 of 2004 concerning Fisheries also aim to favour small-scale fishermen and fish farmers, particularly in aspects such as licensing, the obligation to implement provisions regarding the fishing vessel monitoring system, fisheries levies, and the imposition of criminal sanctions.

Third, enhancing global cooperation is essential. Illegal fishing often resembles Transnational Organized Crime (TOC), involving multiple countries, dual-flagged vessels, and prohibited gear. Therefore, international cooperation should be strengthened through extradition to return perpetrators to their country of origin; Mutual Legal Assistance (MLA) for the exchange of information and evidence; and the transfer of criminal investigation processes and the transfer of convicted persons for judicial efficiency. Asset recovery to recover state losses. Instruments such as the United Nations Convention against Transnational Organised Crime (UNTOC) or the 2000 Palermo Convention provide a comprehensive framework for cross-border collaboration. The principles of good faith and *pacta sunt servanda* in the 1969 Vienna Convention serve as the ethical and legal

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<sup>63</sup> Lego Karjoko and others, 'Indonesia's Sustainable Development Goals Resolving Waste Problem: Informal to Formal Policy', *International Journal of Sustainable Development and Planning*, 17.2 (2022), 649–58 <https://doi.org/10.18280/ijstdp.170230>

<sup>64</sup> Indra Jaya and others, "Are the Working Principles of Fisheries Management at Work in Indonesia?", *Marine Policy*, 140 (2022), 105047 <https://doi.org/10.1016/j.marpol.2022.105047>

<sup>65</sup> Luqman Aldi Perdana and others, 'Inhibiting Factors in Enforcement Law of Illegal Fishing Indonesian Seas Based on International Maritime Law', 2023, 686–91 [https://doi.org/10.2991/978-2-494069-49-7\\_114](https://doi.org/10.2991/978-2-494069-49-7_114)

<sup>66</sup> Kate Kauer and others, 'Advancing Fisheries Sustainability and Access through Community Fisheries Trusts', *Marine Policy*, 165 (2024), 106210 <https://doi.org/10.1016/j.marpol.2024.106210>

foundation for the success of this treaty.<sup>67</sup> Based on formulations, Law enforcement should prioritise resource recovery, marine protection, and empowering fishing communities, in addition to punishing offenders. The sustainability of national fisheries can be secured through fair, consistent law enforcement that aligns with sustainable development goals.<sup>68</sup>

## Conclusion

This study concludes that the enforcement of laws against Illegal, Unreported, and Unregulated (IUU) fishing in Indonesia is currently ineffective due to several factors. These include legal weaknesses, such as inconsistencies with international standards, lenient sanctions, and loopholes that allow offenders to evade punishment. Additionally, structural weaknesses like insufficient fisheries supervisors, inadequate monitoring facilities, poor inter-agency coordination, and a lengthy judicial process hinder effective enforcement. A low legal culture within society, characterised by a tolerance for illegal fishing practices and a focus on short-term economic gains, further exacerbates the issue. Consequently, this ineffectiveness results in significant economic losses for the state, environmental damage to marine ecosystems, and declining welfare for fishing communities. To address these problems, it is essential to renew and strengthen the legal framework through harmonisation with international treaties, revision of the Fisheries Law, enhancement of institutional capacity, and improved international cooperation. These steps are vital for creating a fair and sustainable model for protecting Indonesia's marine resources for both present and future generations.

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<sup>67</sup> Aryuni Yuliantiningsih and others, 'From Illegal, Unreported and Unregulated Fishing to Transnational Organised Crime in Fishery from an Indonesian Perspective', in *ASEAN International Law* (Singapore: Springer Nature Singapore, 2022), pp. 481–502 [https://doi.org/10.1007/978-981-16-3195-5\\_27](https://doi.org/10.1007/978-981-16-3195-5_27)

<sup>68</sup> Kevern L. Cochrane, 'Reconciling Sustainability, Economic Efficiency and Equity in Marine Fisheries: Has There Been Progress in the Last 20 Years?', *Fish and Fisheries*, 22.2 (2021), 298–323 <https://doi.org/10.1111/faf.12521>

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