

# Combating illegal, unreported, unregulated (IUU) fishing in Indonesia

<sup>1</sup>Nurdin Kasim, <sup>2</sup>Aris Widagdo

<sup>1</sup> Department of Capture Fisheries, Fisheries Senior High School, Bone, South Sulawesi, Indonesia; <sup>2</sup> Department of Fishing Technology, Karawang Marine and Fisheries Polytechnic, West Karawang, West Java, Indonesia. Corresponding author: A. Widagdo, ariswidagdo\_stp@yahoo.com

**Abstract.** The aim of this study is to present management of fishing capacity to combat IUU fishing in Indonesia. Data collected of this study were from the literature, seminars, and discussions. In this study, the data also was collected from the Indonesia IUU Fishing Task Force. We combined data related to management of fishing capacity, modus operandi IUU fishing, actions to prevent and combat fisheries crime, and roadmap to improve governance of fisheries business to explain how Indonesia combats IUU fishing. In this study, we would share lessons taken from IUU fishing and its challenges that can be discussed. The results of this study were (1) IUU fishing is a global, regional and national problem that threaten food security; (2) Combating IUU fishing effectively takes a collaborative approach; (3) Country specific should be wisely taken into account to implement enforcement; (4) Strengthening MCS capacity and capability, both in hard and soft structure, is urgently required; (5) Market control between importer and exporter, including consistently prevent fisheries products derived from IUU fishing, is expected to reduce IUU practices.

**Key Words:** Task Force, management, modus, actions, roadmap.

**Introduction.** Indonesia is the largest archipelagic country in the world. The potential of marine and fisheries of Indonesia must be managed, protected and conserved as a valuable asset for Indonesian development (Widodo 2015). Concerning the importance of the sea, president Jokowi stated that: "we have to strive to restore Indonesia as a maritime country. The oceans, the seas, the straits and the bays are our future. We have been turning our backs on them for far too long. Now is the time to restore all until we achieve jalesveva jayamahe; in our seas we are triumphant". As the largest archipelagic country in the world with two-thirds of its territory constituting the sea, so, of course the sea has an important meaning for the nation and the State of Indonesia. There are at least four important factors, namely: (1) Sea as a means of unifying the Republic of Indonesia; (2) Sea as a means of transportation and communication; (3) Sea as natural resources for economic development; (4) Sea as a defense medium. Because of that Indonesia has a huge interest in maritime security, among others: (1) Safe both from threats of territorial violations and from outsiders; (2) Safe from the dangers of navigation; (3) Safe from illegal exploitation of natural resources and environment pollution; (4) Safe from illegal acts (Oegroseno 2017).

Now, all aspects of development in Indonesia refer to the vision of president Jokowi to make Indonesia strong in the maritime field and to make the sea as nation future (Araujo 2015). The development of marine and fisheries under Ministry of Marine Affairs and Fisheries refers to the aspirations of president Jokowi above with a vision "Towards the independent, strong and national-based Indonesian maritime and fisheries", which the missions are "Sovereignty", "Sustainability", and "Prosperity" (Pudjiastuti S 2015). Indonesian fisheries management is currently based on; MCS (monitoring, control, and surveillance), for targeting illegal fishing activities (Spinney 2015) community based co-management, right based fisheries management and eco-system approach. To facilitate fisheries management, Indonesia divides its sea area into

11 Fisheries Management Areas (FMA). Besides that there are other rules for species-based fisheries management.

One obstacle to the effective management of fisheries in Indonesia is the existence of fisheries activities that are not reported, not regulated as part of illegal fisheries or better known as IUU fishing whether done by fishermen from other countries or Indonesia fishermen (Baird 2004). On the other hand, the public's expectation that the fisheries sector must contribute to increasing state revenues through increased production has affected the policy of increasing the number of fishing fleets which tend to be carried out without control and many illegal practices (Mous et al 2005). As an example of the practice of "markdown" the size of the GT fishing vessels in Indonesia has put pressure on fish resources in Indonesian waters. The practice of "markdown" has led to the depletion of fish resources or reduction of fish resource assets in Indonesian waters (Firdaus et al 2017). Many things need to be answered in this study, such as what kind of IUU fishing practices occurs in Indonesia, what is the modus operandi, how much are the disadvantages, and how are the actions to overcome them.

The aim of this study is to present the management of fishing capacity to combat IUU fishing in Indonesia. This study is dedicated to supporting combating IUU fishing, where IUU fishing is a global, regional and national problem that threatens food security, fisheries resources, and the marine environment.

**Material and Method.** Data collected for the present study were from the literature, seminars, and discussions. In this study, the data source also was taken from the Indonesia IUU Fishing Task Force. We combined data related to management of fishing capacity, modus operandi IUU fishing, actions to prevent and combat fisheries crime, and roadmap to improve governance of fisheries business to explain how Indonesia combats IUU fishing. In this study, we would share lessons taken from IUU fishing and its challenges that can be discussed.

## Results and Discussion

**Modus operandi of IUU fishing.** Illegal fishers had various ways to action IUU fishing in Indonesia. The entire modus operandi of IUU fishing is identified and shown in Figure 1.

1	Forgery of vessel's document
2	Double flagging & double registered
3	Fishing without licenses
4	Illegal modification of Vessel
5	Using foreign captain and seamen
6	Deactivation of the Vessel's Transmitter
7	Illegal transshipment at sea
8	Forgery of logbook record
9	Absence of health certificate and export declaration
10	Violation of fishing ground
11	Using prohibited fishing gear
12	The unlawful landing of catches

Figure 1. Modus operandi of IUU fishing.

Illegal fishers try various ways to get as much profit illegally as they can. Like most criminals, they continue to innovate and create new ways so that the practice of IUU fishing is undetected. Today there are many new modes of illegal fishing, such as: (1) The perpetrators are not only from foreign ships but also from Indonesian-flagged vessels operating on Indonesian sea. They caught fish in the Indonesian sea, but the fish was taken to the high seas to be moved to foreign ships. (2) To camouflage Indonesian officers they used Indonesian flagged vessels bought via auction many years ago. (3) There is another case of a ship whose crew had a Batam ID card (Indonesia), but apparently was a foreigner. (4) Hundreds of ships from abroad were labeled "made in Indonesia" (Pudjiastuti 2015).

**Actions to prevent and combat fisheries crime.** Fisheries crime is a transnational crime which has a global impact (UNODC 2015). The negative impact is not only on industry sectors, but also on the environment. Sea is a source of income for 520 million peoples of the world's population. The sea is also a food source of 2.6 billion people in the world. Illegal fishing practices have reduced world fish stocks by 90.1%. Illegal fishing is also closely related to the smuggling of goods, and drugs, the cause of damage to the nature, and others (NIC 2016). Illegal fishing practice has caused Indonesia's losses of 20 billion USD per year. The practice also threatens 65% of coral reefs. Indonesia's biggest problem in fisheries management is the frequency of IUU fishing practice which is very detrimental (Santosa 2018). In this case it is necessary to analyze public policy (Simatupang 2003), which is a way or activity to formulate various relevant information and also include research results to produce public policy recommendations. According to Pudjiastuti (2015), some reasons why fisheries crimes should be combated are:

- 1) Contributing to economic loss + 20 billion USD per year to Indonesia;
- 2) Threatening 65% of Indonesia's coral reefs, more than 85% of global fish stocks, and economic activities of small scale fishermen;
- 3) Involving serious human rights crime, money laundering, corruption, and tax fraud;
- 4) Disrespecting national boundary and sovereignty.

The Ministry of Maritime Affairs and Fisheries, Susi Pudjiastuti, recently introduced various strategic policies in reducing IUU fishing. The first policy was a moratorium on ex-foreign vessels, which was implemented from October 2014 to April 2015 and then extended to October 2015. The Ministry of Maritime Affairs and Fisheries also imposed a ban on the transfer of cargo in the middle of the sea (transshipment), even though the largest production costs that can be saved through transshipment at sea are fuel costs which account for 28-60% of total operational costs (Rochman & Nugraha 2014; Sumaila et al 2008; Schau et al 2009). In addition, the Ministry of Maritime Affairs and Fisheries also issued a ban on the use of unsustainable fishing gear that could damage the marine resource ecosystem. In January 2015, the Ministry of Maritime Affairs and Fisheries formed a Task Force for Prevention and Eradication of Illegal, Unreported, Unregulated Fishing. Actions to combat IUU Fishing in Indonesia can be seen in Figure 2.

IUU fishing law enforcement is carried out using a multi-regime legal approach or multi-door, where criminal law enforcement is executed not only based on the Fisheries Law, but also other related laws and regulations, such as the Shipping Law, Protection and Management Law of the Environment, up to the Corruption Eradication Act and the Law on Prevention and Eradication of Money Laundering (Figure 3). Some reasons why Legal Multi-Disciplinary approach for IUU Fishing enforcement is used are: (1) Crime in marine and fishery sector is a cross-sector crime; (2) Statutory limitation makes it necessary to use another regulation to capture IUU Fishing perpetrators; (3) IUU Fishing usually involves money laundering, bribery and gratification, and tax evasion/fraudulence. Law enforcement efforts are carried out not only through administrative sanctions, but also through criminal law enforcement processes (Widjadja S 2018).

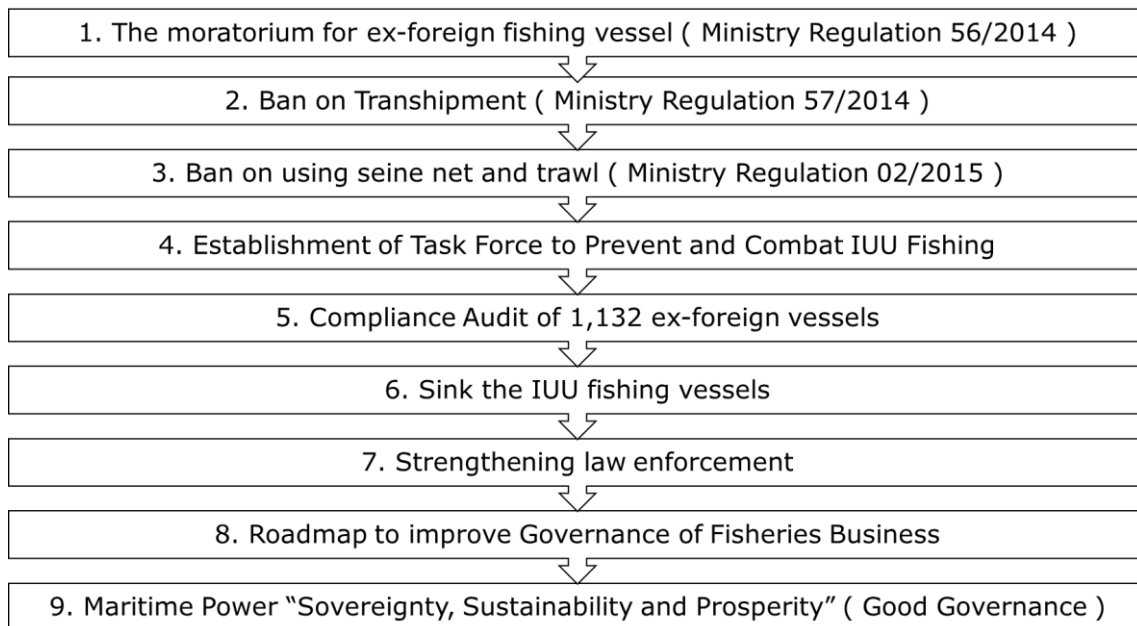


Figure 2. Actions to prevent and combat fisheries crime.

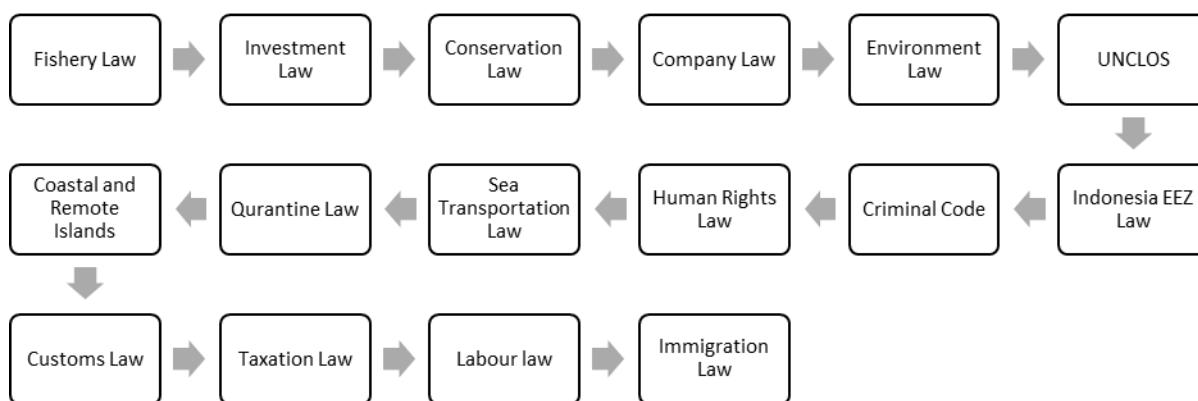


Figure 3. Multi-doors approach in fisheries law enforcement.

The regional plan of action (RPOA) to promote responsible fishing practices including reducing illegal, unreported and unregulated fishing in the region was endorsed by Ministries responsible for fisheries in Bali, Indonesia, May 2007. Eleven countries i.e.: Australia, Brunei Darussalam, Cambodia, Indonesia, Malaysia, Papua New Guinea, Philippines, Singapore, Thailand, Timor-Leste and Vietnam and four regional fisheries organizations provide technical advice and assistance. The objectives of RPOA are to enhance and strengthen the overall level of fisheries management in the region, in order to sustain fisheries resources and the marine environment, also to optimize the benefit of adopting responsible fishing practices (RPOA-IUU 2018).

Another effort taken by the Indonesian government is to fight fisheries crime as an organized transboundary crime (TOC) as regulated in the UN convention against Transnational Organized Crime (UNTOC) which has been ratified by Indonesia through Law Number 5 of 2009. Based on the experience, fisheries crimes used to involve more than one country and are related to other crimes such as human trafficking and drug smuggling (Santosa 2018).

**Roadmap to improve governance of fisheries business.** IUU fishing activity is a big challenge for fisheries management efforts (FAO 1995), therefore it needs efforts to improve fisheries regulation to combat IUU fishing. The ecosystem approach to fisheries

management is very important to be implemented in Indonesia as one of the important management references, towards sustainable Indonesian fisheries for the welfare of the community.

As a step to prevent the re-occurrence of IUU fishing after the moratorium, the IUU fishing task force set a "Roadmap for Reform of Capture Fisheries Business Governance in Indonesia". This Roadmap is one form of systemic improvement measures to achieve the vision of Indonesia's sovereignty, sustainability, and marine welfare development and to prioritize prosperity (Santosa 2018). This road map covers eight strategic issues that can be seen in Figure 4.

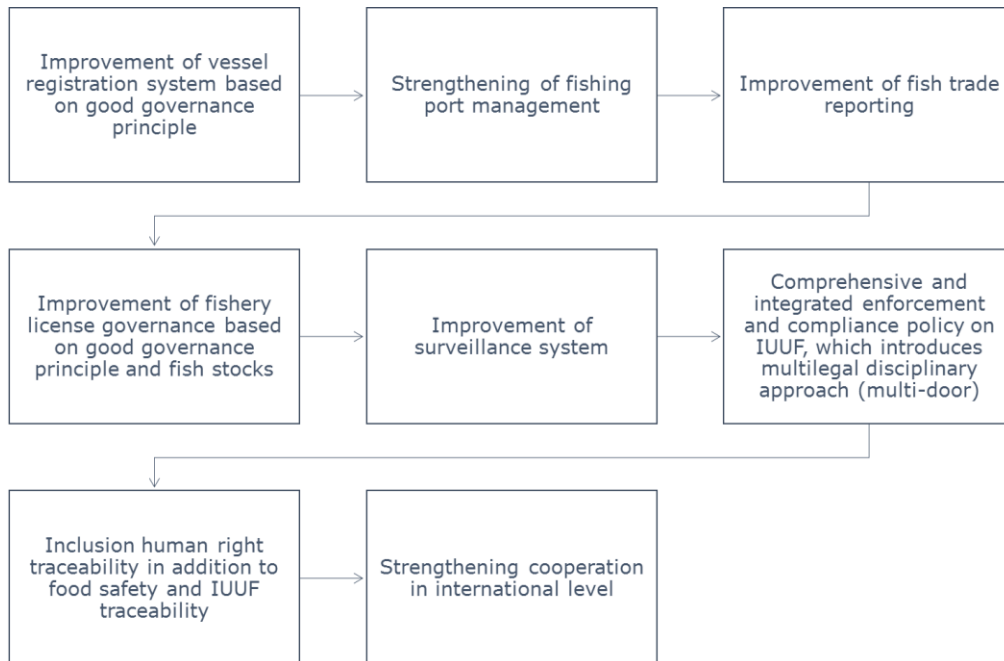


Figure 4. Roadmap to improve governance of fisheries business.

To improve governance of fisheries business, the regulations below are legal frameworks and management actions plan for fisheries management (Widjadja 2018):

International:

- 1) UNCLOS' 1982 Law of the Sea Convention
- 2) FAO, Code of Conduct for Responsible Fisheries (CCRF), 1995
- 3) FAO, International Plan of Action (IPOA) to Prevent, Deter, and Eliminate IUU Fishing, 2001 (Seabirds, Sharks, Capacity, IUU)
- 4) FAO, Compliance Agreement, 1993
- 5) FAO, Fish Stocks Agreement, 1995
- 6) EC 2008 Regulation 1005
- 7) FAO, Port State Measures, 2005.

National:

- 1) Law no. 31 year 2004: Fisheries, as amended by Law no. 45 year 2009;
- 2) Law No. 23/2016 on coastal and small islands management;
- 3) Law No 7/2016 on Protection and Empowerment;
- 4) Ministerial Decree no 32/PERMEN-KP/2016 regarding Amendment to the Minister of Marine Affairs and Fisheries Decree no 15 / PERMEN-KP / 2016 regarding Live Fishing Vessel;
- 5) Ministerial Decree no PER.09/MEN/2007 regarding Terms of Inclusion of Carrying Media in the form of Live Fish as the Congenital Goods into the territory of the Republic of Indonesia;
- 6) Ministerial Decree Number 71/2016 which manage fishing gear in general, and specific for trawl is managed through Ministerial Decree 2/2015;

- 7) Ministerial Decree Number 56/2016 on Minimum legal size on lobster, mud crab and blue swimming crab;
- 8) Ministerial Decree Number 4/2015 on Protection of Breeding and Spawning Ground of Yellow Fin Tuna (*Thunnus albacares*) at FMA 714;
- 9) Ministerial Decree no. 26 year 2013: Capture Fisheries;
- 10) Ministerial Decree no. 48 year 2014: Logbook;
- 11) Ministerial Decree no. 71 year 2016: Fishing Area and Fishing Gears;
- 12) Ministerial Decree no. 10 year 2012: Vessel Monitoring System;
- 13) Ministerial Decree no. 7 year 2012: Legal Form for Fishing Operation;
- 14) Ministerial Decree no. 50 year 2012: National Plan of Action (NPOA) to Prevent, Deter, and Eliminate IUU Fishing 2012-2016.

**Lessons learned on IUUF & its challenges.** The biggest challenge in eradicating IUU fishing or fisheries crimes is in the law enforcement sector. Efforts to improve management of fishing capacity to combat IUU fishing in Indonesia still experience many obstacles and challenges (Widjadja 2018), namely:

- 1) Compliance monitoring do not function properly leading to ineffective administrative enforcement;
- 2) Inadequate ability to detect, respond, and punish the violator;
- 3) International cooperation is not fully utilized;
- 4) Limited jurisdiction under the current Special Fishery Court (do not have the power to try crimes covered outside the scope of Fishery Law);
- 5) Need to apply "multi-doors" approach in Fisheries Law Enforcement.

If these obstacles can be overcome, eradication of fisheries crimes will be more effective so that Indonesia can get even greater benefits from efforts to eradicate IUU fishing.

Firmness and consistency in the implementation of law enforcement of course must be balanced with various remedial efforts in the capture fisheries business governance sector, for example the issuance of permits based on the carrying capacity of marine ecosystems in certain areas, the improvement of licensing services, and the implementation of periodic compliance monitoring and compliance. Simultaneously, the socio-economic empowerment of the fishing community needs to be prioritized (SEAFISH 2012; SEAFDEC 2015).

Thus, a combination of strong and strict law enforcement in preventing and reducing fisheries crime, in improving governance in the field of fisheries business, in empowering fishing communities, and marine protection efforts are the four main actions that needs to be done to prevent and eradicate IUU fishing, fisheries crime, and organized cross-border crimes related to fisheries to safeguard the world's marine health, including Indonesia (Santosa 2018).

The Indonesian government's efforts to eradicate IUU fishing for approximately 4 years have had a positive impact that can be enjoyed by the people of Indonesia. In the last 4 years since 2013 to 2017, Indonesian fish stocks continued to increase from 7.31 million tons (2013) to 12.54 million tons (2017) (Santosa 2018). Indonesian fish consumption also substantially grew, in the 2014-2016 period, from 38.14 kg/capita/year to 46.49 kg/capita/year (Santosa 2018). The increase in fish stocks also affects the welfare of fishermen, increasing the financial ability of Indonesia fishermen to buy products and services. This means that in 2017 fishermen's financial ability has increased compared to 2014 (Santosa 2018). In addition, the Indonesian income from fisheries industry increased up by 51.64% from 2015 to 2016, and reached the highest record in 2017, which was ±36 million USD (Santosa 2018). From 2015 to 2016, the fish trade in Indonesia kept growing. Not only reaping the benefits in the growth of the fisheries sector, eradication of IUU fishing has also saved several workers being victims of trafficking, forced labor, and violence on board. The International Organization for Migration (IOM) and the Indonesian government assisted in the repatriation of these victims (Santosa 2018).

In several international forums, Indonesia is recognized as one of "the champion" in eradicating IUU fishing. Indonesia plays a role in the efforts to eradicate IUU fishing at the global level, for example through the establishment of INTERPOL Multilateral

Investigative Support Team (MIST), INTERPOL Regional Investigation and Analytical Case Meeting (RIACM), and Annual FishCrime Symposium which is an international fisheries law enforcement meeting, as well as providing influence on the 5<sup>th</sup> June determination as International Day for the Fight Against Illegal, Unreported, and Unregulated Fishing by the United Nations (Santosa 2018).

**Conclusions.** Some aspects that can be concluded from the present study are:

- 1) IUU fishing is a global, regional and national problem that threaten food security;
- 2) Reducing IUU fishing effectively takes a collaborative approach;
- 3) Country specific should be wisely taken into account to implement enforcement;
- 4) Strengthening MCS capacity and capability, both in hard and soft structure, is urgently required;
- 5) Market control between importer and exporter, including consistently prevent fisheries products derived from IUU fishing, is expected to reduce IUU practices.

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Authors:

Nurdin Kasim, Fisheries Senior High School, Department of Capture Fisheries, Indonesia, South Sulawesi, 92701 Bone, e-mail: [lenterabone71@gmail.com](mailto:lenterabone71@gmail.com)

Aris Widagdo, Karawang Marine and Fisheries Polytechnic, Department of Fishing Technology, Indonesia, 41315 West Java, e-mail: [ariswidagdo\\_stp@yahoo.com](mailto:ariswidagdo_stp@yahoo.com)

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