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"Transforming Communities towards Sustainable Development and Livelihoods"

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Universiti Malaysia Terengganu (UMT)

Organized By:

Kenyir Research Institute

& School of Fisheries and Aquaculture Sciences, Universiti Malaysia Terengganu



EDITORS:

DR. MARHANA MOHAMED ANUAR

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FISHERIES SURVEILLANCE IN THE OUTER ISLANDS IN ADDRESSING IUU FISHING TO PERFORM FISHERIES GOVERNANCE in INDONESIA (STUDIES IN ENGGANO, NORTH BENGKULU, INDONESIA)

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ABSTRACT

Under article 47 of UNCLOS 1982 Indonesia as an archipelago state is entitled to draw archipelagic baselines from the outermost points of the outermost islands, hence, the presence of the outer islands is very important not only in defense and security, but also in economy and ecology. One of the outer islands of Indonesia is Enggano located in Bengkulu province which is directly adjacent to the Indian ocean. The fish there is very potential, consequently it must be used responsibly to secure and it can benefit the future generation interests as well. To direct the actors to do responsible fisheries and comply to the governing laws, surveillance plays a substantial role. A field survey showed that apart from local fishers, there were also foreign-flagged fishing vessel in Enggano waters. As IUU fishing happens frequently in Indonesian waters, it is important to know how the fisheries surveillance carried out in the island, therefore this research aims to get to know the legality of fishing conducted by foreign-flagged vessels; the constraints faced and solutions envisaged. This is a normative legal research. Interviews were conducted to legal officers involved directly to fisheries surveillance to complement the existing primary data. The results showed that the surveillance on Enggano waters cannot be performed optimally due to shortage of human resources in both quantity and quality (lack of legal knowledge of the inspectors), facilities (poor condition of surveillance vessels, supplies of fuel), the weather. To address these problems, there should be an enhancement of legal knowledge of the officers, cooperation and coherence among related institutions and involvement of community. The success of surveillance, laws, officers and community to manage enforce the law will result in a fisheries governance.

KEYWORDS: Fisheries Surveilance, outermost island, IUU Fishing, fisheries governance.

1. INTRODUCTION

Indonesia is an archipelagic country in the world. As an archipelago, Indonesia is entitled to draw archipelagic baselines by making the outer islands became the starting point. Currently there are 183 base point located on the 92 outermost islands, the rest are in the outer headlands and in coastal areas.¹

The outer islands are usually remote areas, not even inhabited and away from the attention of the government. The existence of these islands are geographically very strategic, because it is based on the island is determined and the limits of our country should get serious attention and supervision. As reported either through the electronic media and the mass media, the Indonesian waters are particularly vulnerable to the practice of illegal fishing by foreign-flagged fishing vessel. To overcome this problem, the Indonesian government sinking the vessels conducting IUU fishing. Similarly, the waters in Bengkulu, the rampant practice of IUU fishing in the waters of Bengkulu cause Minister for Fisheries Susi Pudjiastuti threatened to cut off aid in the field of fisheries and marine to Bengkulu Province. Fishing using illegal fishing gear or illegal fishing. According to fishing, in this way not only undermine the livelihoods of other fishers, but also damage the marine ecosystem itself. He expressed his fishing together in such a government should be able to repel and prevent foreign fishermen use a powerful tool but not that friendly.²

Bengkulu province sea area is 12335.20 km². North Bengkulu district's maritime territory 2118.2 km². (Including Enggano island 397.2 km² and Mega Island 3.1 km²) is the district with the widest ocean areas. The potential of the fishery resources in the island very well, the type of fish the waters are of export quality fish species such as tuna, mackerel, snapper, grouper, gebur, and other types. There are also coral reefs, mangroves and seagrass.³ Enggano people are usually become fisherman when the current is calm, but when the current is

¹ http://infokuk.kkp.go.id/index.php/hukum/download/27/?type_id=1

² http://rri.co.id/post/berita/121937/nasional/menteri_susi_pudjiastuti_desak_pemda_bengkulu_hentikan_illegal_fishing.html

³ http://www.ppk-kp3k.kkp.go.id/direktori-pulau/index.php/public_c/pulau_info/295

swift, then the fishers turn to be farmers.⁴ However, distance 156 km or 90 mil from the main land cause the attention on fisheries and control over the sea become a special obstacle.⁵ Dozens of large tonnage ships suspected to originate from foreign fishermen, such as Thailand and the Philippines, often doing illegal fishing in the waters of Batu Layar, Enggano Islands. Theft carried out foreign fishermen using longline gear, trawling, even, in a way bombed. Mode used in the attempted theft of the fish by using Indonesian flag, but the whole crew are foreign nationals. Location livelihood of fish from foreign vessels in the west to the northern waters of stone screen, or approximately 17 kilometers from the islands Enggano. The location was used as a hiding place dozens of foreign vessels are located on the island of the archipelago Enggano or reversed. Alleged illegal fishing by foreign vessels known to have been going on since the 1990s. However, there has been no decisive action from the concerned officials suspected of illegal fishing has been going on since the 1990s to the present.⁶

Indeed, control of fisheries resources is the mandate of the provisions of some international instruments.⁷ This oversight is operational activities for the management of fisheries resources are managed so that fishery resources are not damaged due to excessive utilization of fishery resources (overfishing) or IUU fishing. Supervision of fisheries resources is unequal prosperity scrutiny as police or military personnel with only a law enforcement approach (surveillance) but a comprehensive and integrated Monitoring systems, Controlling, and Surveillance (MCS).

Normative juridical, fisheries surveillance provided for in Article 66 of Law No. 45 of 2009 on the Amendment Act No.31 of 2004 on fisheries which provides that the fisheries surveillance carried out by fisheries inspectors. However, given that there are several agencies that have operational area in the sea, the Navy and the Police are overlapping authority between the institutions in carrying out their duties, especially in preventing and combating IUU fishing. It is becoming more complex with the birth of Presidential Decree (Decree) 115 2015 Task Force on Fishing In Ilegal.yang involving several ministries. Circulating opinion stating that the regulation bertetangan with other perpres ie Presidential Regulation No. 63 of 2015 concerning the Ministry of Maritime Affairs and Fisheries, Law Number 32 Year 2014 concerning Marine, Law No. 45 of 2009 on Fisheries, and Ministry of Marine Fisheries No. 17 of 2014 on Implementation Task Fisheries Supervisor.

Other laws that need to be considered is Law No. 27 Year 2007 on the Management of Coastal Areas and Small Islands and Law No. 1 Year 2014 on amendment because termask Enggano island on a small island zone. In accordance with Article 27 of Law No. 23 of 2014 on Regional Government (hereinafter abbreviated as the Regional Government Law), as a province that has the sea, Bengkulu province was given the authority to manage the natural resources in the sea is in its territory. The authorization includes the exploration, exploitation, conservation and management of marine resources beyond oil and gas, administrative arrangements, the spatial arrangement, participating maintain maritime security and participate in maintaining state sovereignty.⁸

Fisheries surveillance in the Enggano island is very important to do, negligence against it would lead to overfishing that will have a direct impact on the economy of society, therefore, the team chose this topic to be used as research material so that the results can be used as inputs by the authorities to take appropriate steps associated with the monitoring of perpetrators of IUU fishing to fisheries governance can be realized.

2. RESULT AND DISCUSSION

2.1 Regulation on Fisheries Surveillance

Under the supervision of Fisheries Marine Fisheries Ministerial Decree No. 17 of 2014 on Implementation Task Fisheries Supervisor. This regulation was made This ministerial regulation made pursuant to the Article 66 and paragraph (2) Uu 45 of 2009 on amendments to the Law No. 31 of 2004 on Fisheries. The scope of this regulation includes the Supervisory Fisheries; procedures for the implementation of the tasks; up of the supervisory; reporting; and coaching.

⁴ Ibid.

⁵<http://www.arahmah.com/read/2009/10/28/5956-kapal-ikan-asing-sering-beroperasi-di-pulau-enggano.html>.

⁶<http://news.okezone.com/read/2015/12/19/340/1271189/puluhan-kapal-asing-bebas-curi-ikan-di-pulau-enggano>.

⁷The instruments are United Convention on The Law of Sea (UNCLOS), 1982; FAO Compliance Agreement, 1993; UN Fish Stocks Agreement, 1995; FAO Code Conduct Responsible Fisheries (CCRF), 1995; FAO International Plan of Action (IPOA) to Prevent, Deter, and Eliminate Illegal, Unreported, and Unregulated (IUU) Fishing, 2001; FAO Agreement on Port State Measures, 2005; Voluntary Guideline for Flag State performance 2011.

⁸ More details can be seen in the concurrent Matrix Government Affairs Division Between National And Provincial And District / City Law 23 Year 2014 on Regional Government (Regional Government Law)

Based on the ministerial regulation, fisheries surveillance carried out by the Fisheries Supervisor who is a civil servant who has the task of overseeing the orderly implementation of the provisions of the legislation in the field of fisheries. Fisheries watchdog charged with overseeing the orderly implementation of the provisions of the legislation in the field of fisheries.

2.2 Procedures for Conducting Duties

Supervisory Fisheries carry out tasks in: fishery fishing ground of Indonesia republic; fishing boats; fishing ports and / or other designated ports; Tangkahan port; centers of fishing activities; fish hatchery area; fish breeding area; UPI; and / or water conservation.

Furthermore, implementation Supervisory duties carried out on: fish catching; fish breeding and hatchery fish; transport and distribution out of the fish; protection of species of fish; the pollution caused by human activity; the use of germplasm; and research and development of fisheries.

Implementation supervisory tasks Fisheries referred to in paragraph (1) conducted by: patrolling; and monitoring the movement of fishing boats.

The aim of the surveillance patrols is to prevent fishing activities are illegal, unreported, and unregulated and destructive activity of fish resources and the environment; check the completeness and validity of the permit to use of germplasm; check the level of pollution caused by human activity; check the completeness and validity of permit fisheries research and development; and conduct other actions by law responsible.

Monitoring the movement of fishing vessels carried out to determine the position, movement and activity of fishing boats; detecting operational compliance of fishing boats; and rescue (save and rescue) to the fishing vessel in the sea facing problems.

If the fishing vessel patrolling are trying to escape and / or against and / or endanger the safety of the fishery patrol ship and / or crew of the fishing vessel, Fisheries Supervisor can perform specific actions in accordance with the legislation.

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In performing its duties, fisheries inspectors check the completeness and validity of SIPI and / or SIKPI, Surat Eligible Operations, and Sailing Approval Letter; check the completeness and validity of permit fisheries research and development; checking equipment and liveliness SPKP; inspect fishing vessels, fishing gear and / or fishing tools; check the suitability of the composition of the crew of fishing with the Crew List; check the presence of observers on board catcher or fish transport vessel for the size and specific fishing gear; check the suitability of the handling of fish on fishing boats; check the suitability of the fish with fishing gear; check the suitability of the type and amount of fish being transported; check the suitability of the port of loading / haven for fish transport vessel catches with SIKPI; check the suitability of the port of loading / layover and the last check point for farmed fish carrier vessel with SIKPI; check compliance with SIPI fishing areas; and examine the implementation of the fishing log book.

Fisheries surveillance in the fishing port, the other designated ports, landing port, and centers of fishing activities carried out on: the ship that will carry out fishing activities; fishing boats when entering the fishing port, the other designated ports, port Tangkahan, and centers of fishing activities; and a fishing vessel dismantling and / or loading of the fish or fish Farmed.

Implementation Supervisory tasks Fisheries referred to in paragraph performed by: issuing Letters Eligible Fishing Vessel Operations; verification of fish landings in order to issue certificates Catch Fish; examining the distribution of imported fish; check the suitability of the number and type of fish with fishing gear used; check compliance with the base port of SIPI or SIKPI; and check the suitability of the number and type of live fish cultivation.

2.3 Follow up the Supervision

If in the implementation of fisheries surveillance found or suspected criminal activity fisheries and their sufficient preliminary evidence, Fisheries Supervisor shall follow up by submitting to the investigator in the field of fisheries for further processing.

2.4 Reporting

Supervisor conducting fisheries surveillance shall make a report and documentation of the results of the implementation of tasks to the coordinator POS / Work Unit Head / Head of Technical Implementation Unit (UPT) Monitoring of Marine Resources and Fisheries.

POS Coordinator / Head of PIU to recapitulate and analyze the results of the implementation of the monitoring activities and report to the Head of Unit who will then recapitulate, analyse and compile the results of the implementation of the monitoring activities and report to the Director General.

If the violation found, the Director General shall make recommendations to officials of the licensor to impose sanctions (can be subject to administrative sanction) in accordance with the provisions of the legislation.

2.5 Coaching

Coaching is done by the Director General, governors and regents / mayors, including technical guidance and coaching administration. Technical guidance to the Supervisory Fisheries conducted by the Director General. Technical assistance as referred to in paragraph (2) is done through: improved technical capability supervisor; socialization; and supervision.

From the interview with the fishery supervisor for Enggano there hasn't been any IUUF by foreign fishing vessels. While fishermen from Enggano stating that dozens of large tonnage ships suspected to originate from foreign fishermen, such as Thailand and the Philippines, often doing illegal fishing in the waters of stone screen, Enggano Islands, District Enggano, North Bengkulu, Bengkulu Province. Theft carried out foreign fishermen using longline gear, trawling, even, in a way of bombing. Harun (the head of fishermen) said the fishermen of Enggano had tried to get closer to one of the foreign fishing vessels. From the observations of fishermen, all crew are foreigners. According to Harun, the mode used in the attempted theft of the fish by using Indonesia flag. The location of foreign vessels fishing in the west to the northern waters of Batu Layar, or approximately 17 kilometers from the island. The location used as a hiding place dozens are located on Satu island or behind Enggano island. IUUF by foreign vessels known to have been going on since the 1990s. However, there has been no decisive action from the concerned officials suspected of illegal fishing has been going on since the 1990s to the present.

Implementation of Fisheries Monitoring and Optimization Efforts Prevention of Illegal, Unreported and Unregulated Fishing in Enggano.

1. Coordination of Law Enforcement at Sea Region

The number of institutions or agencies involved in law enforcement in the sea area creates a difficult situation on the ground. One of the problems is very obvious is that it often overlap between the law enforcement agencies. This happens because each law enforcement agency is granted authority related to law enforcement at sea by the legislation as an attributive authority. So that each runs his own law-enforcement sendiri. Dalam such conditions, coordinated steps to prevent overlapping law enforcement in marine areas.

Bengkulu Province itself has a Coordination Forum Crime in the Field of Fisheries established pursuant to Decree No. Bengkulu Governor D. 319.XXIV In 2013 issued on August 22, 2013. With the organizational structure:

Patrons: Governor of Bengkulu Steering:

1. Provincial Secretary Bengkulu
2. The Chief Prosecutor Bengkulu
3. Police Chief Bengkulu
4. Base Commander Navy Bengkulu province.

Chairman: Head of Marine and Fisheries Bengkulu Province

Secretary: Coordinator of Civil Servant Investigators Bengkulu Provincial Marine and Fisheries Agency of Bengkulu province.

Member:

1. The Head Office of the Ministry of Law and Human Rights Bengkulu province
2. The Director of Water Police Regional police forces Bengkulu
3. The Director of the Special Criminal Investigation Police Bengkulu
4. The Head of the Regional Environmental Management Agency Bengkulu Province
5. The Head of Legal and Legislation Provincial Secretariat Bengkulu
6. Special Crimes Prosecutor's Assistant High Bengkulu

7. Head of the Port Administration Pulau Baai Bengkulu
8. Work Unit Head of Marine Fisheries Resources Monitoring Center Fishing Port Baai Island Bengkulu
9. Head of Fish Quarantine Bengkulu.
10. Head of the Fishery Port Baai Island, Marine and Fisheries Agency of Bengkulu province.

Coordination Forum handlers Crime in the Field of Fisheries have the duty to:

- a. Coordinate the activities of criminal investigation in the field of fisheries in Bengkulu
- b. Streamlining the communication and exchange of data, information and things that are required in the settlement of criminal acts in the field of integrated fishery;
- c. Support for the convenience of the investigator.

In addition to having the duties as described above, it has a function as a coordination forum:

- a. Coordinating the activities of criminal investigation in the field of fisheries;
- b. identification of the type, modus operandi, volume and deployment practices criminal offenses in the field of fisheries;
- c. The determination of priorities of curbing abuses in the field of fisheries;
- d. Extension and development of community activities to prevent criminal acts in the field of fisheries;
- e. Analyzing, identifying and measuring the significance of criminal acts in the field of fisheries to the implementation of investigators and streamline communication tasks based on the data and information on a periodic basis;
- f. Planning the coordination of eradication in the field of fisheries;
- g. formulation and updating of eradication strategies in the field of fisheries;
- h. Monitoring and reporting peyajian implementation of eradication in the field of fisheries;
- i. Assessment and evaluation of the effectiveness of the eradication strategy in the field of fisheries.

This forum is held at least 5 times a year to synergize enforcement in the sea area of Bengkulu province.

Coordination model, as established by the decree of the Governor of Bengkulu, is an answer to the lack of coordination between law enforcement agencies in the sea area in Indonesia. Policies issued by the Bengkulu province should be able to be a breath of fresh air for law enforcement in marine areas. It is due to the establishment of coordination between law enforcement agencies in the sea area, especially in combating crime is not the fishery in the province of Bengkulu.

In the 4th meeting held at the Department of Marine and Fisheries of Bengkulu province, is about the Coordination Forum of law enforcement related to criminal offenses fisheries conducted by each member of a forum for communication.⁹ Coordination Forum members who attended the meeting all four are: the Department of Marine and Fisheries province of Bengkulu, Bengkulu Province Navy, Police Bodies Bengkulu, Unit, and others.

The agenda of the meeting was to collect data of law enforcement carried out by each agency. Law enforcement has been done among others:

1. Department of Marine and Fisheries
2. Throughout 2015, the Department of Marine and Fisheries Bengkulu Province has rejected nine (9) fishing ships licences, because allegedly the size of their fishing gear (nylon) did not comply with the rules. Reports to the Department of Marine and Fisheries is related disputes between fishermen and the fishing gear Malabrough / nets cut by the larger vessels. Bengkulu Navy
3. Naval Station Bengkulu province limited security patrol in the province of Bengkulu. By infringing on the use of fishing gear that is carried out by fishermen settled through coaching by members of the Navy's Bengkulu province. Directs fishermen to abandon fishing gear prohibited. Barriers that occur in the field is related to the sea conditions Bengkulu that was never quiet, making it difficult for the troops who were on patrol. Then, alustista inadequate conditions also an obstacle to law enforcement in the territory of the province of Bengkulu.
4. Waters Police of Bengkulu

⁹ Forum Koordinasi Penangan Tindak Pidana Perikanan dilaksanakan pada 24 November 2015 bertempat di Dinas Kelautan dan Perikanan Provinsi Bengkulu.

5. During 2015, Police Bodies Bengkulu has handled three (3) criminal acts of fisheries based on public and direct action by the Police Bodies Bengkulu. The third thing is P21 and decided by the Court. Related barriers faced by police enforcement Bengkulu waters are associated with local government policies that allow fishermen trawling for Bengkulu until 2016.
6. Harbor's Office and Port Authority
7. Throughout the year 2015 has not indicated any criminal offense fishery in the province of Bengkulu.
8. Constraints faced by officers are fishing boats that are not in accordance with licences, neither is the size of the ship.
9. Quarantine
10. Throughout the year 2015 be disseminated size allowable catch to fishermen.
11. In addition to the foregoing, coordination forum such as this can reduce the overlap of authority between law enforcement agencies in the sea because in practice coordinate their work in advance related to the competencies of their respective law enforcement agencies. Thus, the establishment of greater coordination forum and more concerning all aspects of the law of the sea may become a new force in law enforcement in the sea area. The function of law enforcement coordination in sea areas such coordination can fill the void after Bakorkamla dissolved and also mebgisi void of areas that have not established such Bakamla representative Bengkulu Province.

2.6 Public Participation in Combating IUU Fishing Enggano

In addition to the coordination established to address IUU fishing in the waters Enggano, steps can be done next is to involve people around Enggano to participate in fisheries surveillance in the region. The reasons are:

1. The proximity of public surveillance area with Enggano.

One of the major hindrance in fisheries surveillance is the absence of facility to control the waters around enggano. Another problem is the distance and the safety reason such as the strong wavy on Indian Ocean.

2. Sense of Belonging to marine resources around Enggano

Enggano community involvement in fisheries surveillance can be established because of strong community needs Enggano itself on the sustainability of marine resources in the waters Enggano. So this will be a positive impact for government and society Enggano.

Community involvement around Enggano be key in addressing the problems-problems that occur related to IUU fishing around Enggano. In Article 67 of Law No. 45 of 2009 concerning amendments to the Law No. 31 of 2004 on Fisheries provide opportunities for people to engage in fisheries inspectors.

3. CONCLUSION

1. Regulations on fisheries surveillance can be found in article 66b paragraph (2) of the Act No.45 of 2009 on the amendment of Act No. 31 of 2004 on Fisheries and the Minister of Marine and Fisheries No. 17 Year 2014 concerning Implementation Supervisory Fisheries Project.
2. Implementation fisheries surveillance in the island Enggano hasn't been optimal because there is an overlap between enforcement agencies because there are several laws that give authority to the agencies for law enforcement at sea. For this matters, every agencies involved need to coordinate to one each other in doing their tasks.

REFERENCES

http://infohukum.kkp.go.id/index.php/hukum/download/27/?type_id=1

http://rri.co.id/post/berita/121937/nasional/menteri_susi_pudjiastuti_desak_pemda_bengkulu_hentikan_illegal_fishing.html

http://www.ppk-kp3k.kkp.go.id/direktori-pulau/index.php/public_c/pulau_info/295

<http://www.annah.com/read/2009/10/28/5956-kapal-ikan-asing-sering-beroperasi-di-pulau-enggano.html>.

<http://news.okezone.com/read/2015/12/19/340/1271189/puluhan-kapal-asing-bebas-curi-ikan-di-pulau-enggano>.

<http://sp.beritasatu.com/home/menteri-susi-bantah-tugas-satgas-tumpang-tindih/100590>

Act No. 23 of 2014 on Regional Government

Interview of the Head of Maritime Security Operations Navy Bengkulu held on January 4, 2016 in Lanal Bengkulu.