



INDONESIA
OCEAN JUSTICE
INITIATIVE

DETECTION AND ANALYSIS REPORT

MARITIME SECURITY

IN INDONESIAN WATERS

AND JURISDICTION

APRIL 2023 TO JANUARI 2024 PERIOD



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Indonesia Ocean Justice Initiative (IOJI)



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Executive Summary

During the period April 2023 to January 2024, Indonesia Ocean Justice Initiative (IOJI) has observed and analyzed several maritime security threats in Indonesia waters. These include: (i) Marine Scientific Research (MSR) activities by foreign vessels, (ii) transboundary oil pollution (oil slicks), and (iii) allegations of illegal fishing by foreign fishing vessels and Indonesian fishing vessels. IOJI makes use of official and open data sources from various credible institutions. The data sources include Automatic Identification System (AIS), fishing vessel registration database from the Ministry of Maritime Affairs and Fisheries of the Republic of Indonesia (MMAF), and satellite data (Sentinel 1, Sentinel 2, and Unseenlabs). We also use data and information produced by some research institutions and organizations, such as Asia Maritime Transparency Initiative Center for Strategic and International Studies (AMTI CSIS), Skytruth, and Global Fishing Watch (GFW).

In May 2023, IOJI observed the trajectory **of two Chinese-flagged marine research vessels in the North Natuna Sea (NNS)**. The two research vessels are Nan Feng and Jia Geng. Each ship was detected in NNS area for three days, Nan Feng was observed in the period of 1 to 3 May 2023 and Jia Geng from 29 April to 1 May 2023.

Nan Feng is a fisheries resources research vessel while Jia Geng is a Moving Vessel Profiler (MVP) research vessel which can conduct deep water oceanographic research at high speed. These two vessels' operation in Indonesia's Exclusive Economic Zone (EEZ) is a part of China's marine research activities covering the entire South China Sea. In January 2024, the Chinese Government announced major achievements for marine scientific research in the South China Sea in the past 25 years. The research



successfully and comprehensively produces information on topography, geology, layers and sedimentation, types and distribution of geological structure evolution, mineral resources and dangerous marine environments throughout the South China Sea. The findings provide important theoretical support for the exploration and exploitation of natural resources such as minerals, petroleum, natural gas and heavy metal deposits at the bottom of the South China Sea. The CSIS report states that marine scientific research by China is not only used for commercial and scientific purposes, but also to pursue strategic and military objectives in order to implement China's geopolitical agenda.

IOJI also observed the presence of **marine pollution caused by oil spills from vessels activities in East of Johor, Malaysia** on 10, 16 and 28 April 2023. Data from the Indonesia Meteorology, Climatology and Geophysics Agency (BMKG) shows that ocean currents in the area on 28 April 2023 until 6 May 2023 are moving south (from waters east of Johor, Malaysia towards territorial waters of the Riau Islands province, Indonesia - transboundary). The oil spill might be washed by ocean currents and polluted Indonesian waters in the coastal areas of Batam Island and Bintan Island in the Riau Islands Province.

Indonesia continues to view **illegal fishing** as a serious threat to its maritime security. In the waters of western Indonesia, especially the North Natuna Sea, Vietnamese-flagged fishing vessels engage in illegal fishing using pair trawl in the area of overlapping EEZ claimed by Indonesia and Vietnam and even far to the south of this area.

Since 2017, Vietnam has been subject to yellow card sanctions by the European Union due to Vietnam's perceived failure to uphold its flag state obligations of preventing



vessels flying its flag from engaging in illegal, unreported, and unregulated fishing (IUU Fishing). Vietnamese fishing vessels should not fish in the overlapping area or further south beyond it, which is geographically in the undisputed Indonesian EEZ, according to proactive measures taken by Vietnam Fisheries Resource Surveillance (VFRS) patrol boats, which consistently operate along the continental shelf maritime border line. Local Natuna fishermen, whose livelihoods depend on the fisheries resources of the North Natuna Sea (NNS), have experienced directly the negative impacts of Vietnamese fishing vessel operations in NNS. Therefore, a firm stance from the Indonesian Government to increase and intensify patrols and law enforcement is very necessary.

Lack of resources to support regular and continuous patrols and strong diplomatic efforts beyond negotiating the boundaries of the Exclusive Economic Zone (EEZ) with neighboring nations are two major obstacles facing the Indonesian government in its efforts to eradicate illegal fishing in the North Natuna Sea. The precise location of the EEZ boundary line between Indonesia and Vietnam is currently unknown because the EEZ boundary agreement between the two nations in December 2022 did not formally disclose the coordinate points or lines for the EEZ borders of either country. This undoubtedly has an impact on how strict law enforcement is in Indonesia's NNS jurisdictional waters.

Not only from foreign fishing vessels, illegal fishing threats in the NNS also come from Indonesian fishing vessels with jaring tarik berkantong gear originating from Java Island. These vessels, which are legally allowed to fish in areas >12 miles from the coast line and >30 miles specifically in WPP-711 (NNS), were observed fishing in areas <12 miles from the coastline. This potentially triggers social conflict with the local fishers. Jaring tarik berkantong is a fishing gear that is slightly different from cantrang fishing gear. Cantrang itself is a fishing gear that is categorized as fishing gear that damages

the environment as stated in the Minister of Maritime Affairs and Fisheries Regulation Number 18 of 2021. Based on MMAF data, the number of vessels with jaring tarik berkantong gear permits in Indonesia has now reached more than 1,600 vessels.

IOJI also observed potential illegal fishing activities in the waters of eastern Indonesia. Based on AIS data, IOJI observed the Chinese-flagged Fu Yuan Yu F77 vessel in the period September to December 2023 moving from Tual to the Arafura Sea. Referring to the MMAF fishing vessel registration database, no active license was found for the Fu Yuan Yu F77 vessel. Further investigation indicated that this ship was affiliated with PT SIS and PT IGP which are located in Tual. Furthermore, radio frequency detection also showed that there were vessels that disabled AIS among fishing vessels in the Arafura Sea. This raises suspicions that there are certain fishing activities that cannot be monitored or tracked by AIS in Arafura Sea.

Responding to the various maritime security threats above, the Indonesian Government needs to strengthen law enforcement with "*the 3A+1 abilities*":

- 1) *ability to detect* - the ability to timely and accurately detect activities at sea by using integrated multi-source data and information of surveillance technology from several ministries and institutions supported by adequate surveillance facilities and infrastructure in the field;
- 2) *ability to respond* - ability to respond and/or take firm action against violations that occur, including:
 - a) Arrest foreign fishing vessels that are illegally fishing in the Indonesian EEZ without permission and continue the legal process to the level of investigation and prosecution;
 - b) Verify whether foreign vessels have a license to conduct marine research in Indonesia's EEZ, and if not, Indonesia should ask the flag state of the



vessel for clarification regarding the research vessel's incursion into Indonesia's EEZ; And

- c) Demand accountability for vessels that should be responsible for oil spills in Indonesia's EEZ and coastal areas, and strengthen national capacity to handle domestic as well as transboundary oil spills incidents.
- 3) *ability to punish* - the ability to impose sanctions and/or penalties that provide a deterrent effect against perpetrators of maritime security threats in accordance with national as well as international applicable laws and regulations; And
- 4) *ability to cooperate with the international community* - the ability to prevent and handle maritime security threats through international cooperation, either directly with the other countries governments or with international institutions that specifically handle certain maritime threat issues.



Detection and Analysis of Maritime Security Threats in Indonesian Waters and Jurisdiction

A. Foreign Research Vessel Activities

IOJI detected two Chinese research vessels doing marine scientific research (MSR) in the North Natuna Sea in May 2023: Nan Feng and Jia Geng.

Marine scientific research is a basically peaceful activity, meaning that this activity does not aim to interfere with the rights of other countries¹ because marine scientific research activities actually bring benefits (knowledge) to all parties. In fact, in the dispute situations, for example maritime boundary disputes, international courts are of the opinion that exploration activities or marine scientific research in areas during the process of delimitation are activities that are not prohibited.

For example, in the case of *Greece versus Turkey*, the International Court of Justice (ICJ) rejected the request from *Greece* to stop seismic exploration activities being conducted

¹ *British Institute of International and Comparative Law (BIICL)* mention activities marine scientific research is an activity that less intrusive".
https://www.biicl.org/documents/29_1192_report_on_the_obligations_of_states_under_articles_743_and_833_of_unclos_in_respect_of_undelimited_maritime_areas.pdf



by *Turkey* in an area of continental shelf claimed by *Greece*. Regarding this case, the ICJ was of the opinion that the seismic exploration activities carried out by *Turkey* can continue.² In the case of *Guyana versus Suriname*, The Arbitral Tribunal Award of the Permanent Court of Arbitration (PCA) also believes that the hydrocarbon exploration activities carried out by *Suriname* do not cause physical changes to the condition of the marine ecosystem and therefore can be continued.³

However, marine scientific research activities by foreign vessels in this modern era require caution. For example, the *Centre for Strategic and International Studies* (CSIS) report shows that marine research activities carried out by the Chinese Government are not only aimed for scientific purposes, but also for strategic and military interests.⁴ Moreover, China's marine research activities are carried out without consent from coastal countries, for example MSR conducted by *Shiyan 1* vessel without permission in

² International Court of Justice (ICJ). *Greece v. Turkey*. Order of 11 September 1976 (Indication of Interim Measures). Paragraph 30. "Whereas, according to the information before the Court, the seismic exploration undertaken by Turkey, of which Greece complains, is carried out by a vessel traversing the surface of the high seas and causing small explosions occur at intervals under water; whereas the purpose of these explosions is to send sound waves through the seabed so as to obtain information regarding the geophysical structure of the earth beneath it; whereas no complaint has been made that this form of seismic exploration involves any risk of physical damage to the seabed or subsoil or to their natural resources; whereas the continued seismic exploration activities undertaken by Turkey are all of the transitory character just described, and do not involve the establishment of installations on or above the seabed of the continental shelf; and whereas no suggestion has been made that Turkey has embarked upon any operations involving the actual appropriation or other use of the natural resources of the areas of the continental shelf which are in dispute." <<https://www.icj-cij.org/sites/default/files/case-related/62/062-19760911-ORD-01-00-EN.pdf>>

³ Arbitral Tribunal Award of the Permanent Court of Arbitration (PCA). *Guyana v. Suriname*. Award of the Arbitral Tribunal 17 September 2017. Paragraph 466 & 467. "In the context of activities surrounding hydrocarbon exploration and exploitation, two classes of activities in disputed waters are therefore permissible. The first comprises activities undertaken by the parties pursuant to provisional arrangements of a practical nature. The second class is composed of acts which, although unilateral, would not have the effect of jeopardising or hampering the reaching of a final agreement on the delimitation of the maritime boundary. The Tribunal is of the view that unilateral acts which do not cause a physical change to the marine environment would generally fall into the second class. However, acts that do cause physical change would have to be undertaken pursuant to an agreement between the parties to be permissible, as they may hamper or jeopardise the reaching of a final agreement on delimitation. A distinction is therefore to be made between activities of the kind that lead to a permanent physical change, such as exploitation of oil and gas reserves, and those that do not, such as seismic exploration." <<https://pcacases.com/web/sendAttach/902>>

⁴ <https://features.csis.org/hiddenreach/china-indian-ocean-research-vessels/>

the Indian Ocean.⁵ and the research done by the Haiyang Dizhi Liuhao vessel which was unauthorized in Palau waters.⁶

A.1. The Nan Feng

Nan Feng (Figure 1) is a research vessel owned by South China Sea Fisheries Research Institute, a body under Chinese Academy of Fishery Sciences (CAFS).⁷ CAFS itself was established by the Chinese Ministry of Agriculture (*Chinese Ministry of Agriculture*).⁸



Figure 1. Nan Feng Research Vessel

The Nan Feng vessel conducted hydroacoustic surveys in the central zone of the South China Sea in 2014 and 2015. Hydroacoustic surveys are usually conducted by fisheries research vessels which aim to determine and assess the stocks of fisheries resources at sea.⁹ The survey activities were documented in the scientific journal "*Hydroacoustic*

⁵ <https://thediplomat.com/2024/02/india-has-good-reason-to-be-concerned-about-chinas-maritime-research-vessels/>

⁶ <https://islandtimes.org/another-chinese-research-vessel-disrespects-palau-laws/>

⁷ <https://www.southchinafish.ac.cn/info/1431/11600.htm>

⁸ <https://www.cafs.ac.cn/zzjg/yjj.htm>

⁹ Muhammad Zainuddin Lubis, et.al. 2017. *Oceana*, Volume XLII, Number 2 of 2017, Application of Hydroacoustic Technology in the Field of Marine Science and Technology. Pages 34-44.

*assessments of spatial-temporal distribution and biomass of fishery resources in the central South China Sea”.*¹⁰

Based on AIS data from April to May 2023, the Nan Feng ship was observed conducting a hydroacoustic survey along the South China Sea until it reached the North Natuna Sea. The Nan Feng ship departed from Guangzhou port on April 13 2023 towards several locations in the South China Sea, one of which is Fiery Cross Reef (Figure 2) before eventually entering the North Natuna Sea.



Figure 2. Photo of Fiery Cross Reef on June 17, 2022 (source:<https://amti.csis.org/fiery-cross-reef/>)

Figure 3 shows the trajectory of the Nan Feng which indicates survey activities in the South China Sea performed by this vessel.

¹⁰ LI Bin, CHEN Guobao, GUO Yu, CHEN Zuozhi, ZHANG Jun, WANG Dongxu, . Hydroacoustic assessments of spatial-temporal distribution and biomass of fishery resources in the central South China Sea[J]. South China Fisheries Science, 2016, 12(4): 28-37. doi: 10.3969/j.issn.2095-0780.2016.04.004

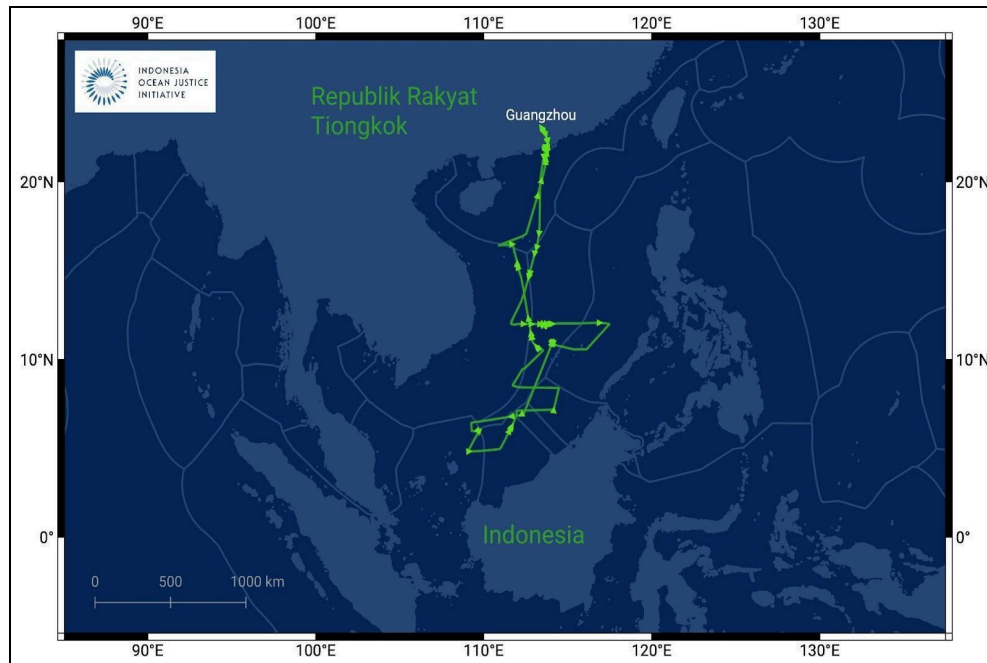


Figure 3. The passage of the Nan Feng Ship in the South China Sea from April 10 to May 15 2023.

Figure 4 below shows the trajectory taken by the Nan Feng vessel as it entered Indonesia's EEZ, the North Natuna Sea.

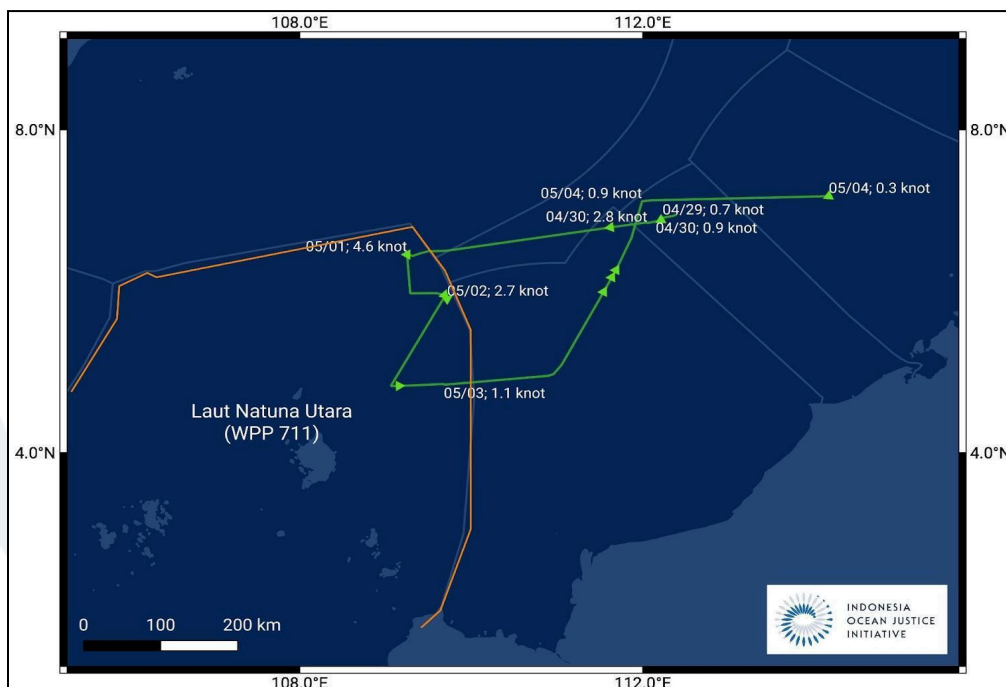


Figure 4. Nan Feng Ship Passage Enters the North Natuna Sea for 3 days from 1 to 3 May 2023 (Data Source: AIS)

A.2. The Jia Geng



Figure 5. Jia Geng's ship

The Jia Geng (IMO 9776640) is a Chinese-flagged research vessel owned by Xiamen University.¹¹ Xiamen University is one of China's top universities affiliated with China's defense industry. Xiamen University released its annual report in 2018, which stated that Xiamen University would begin conducting scientific research in the field of defense in cooperation with the Chinese Ministry of Education, the Fujian Provincial government and China's defense research and technology institute, SASTIND.¹²

The Jia Geng is a 3,611 GT state-of-the-art research vessel with the capacity to launch marine research equipment down to 10,000 meters in the water and cruise up to 12,000 nautical miles. Jia Geng carried out a survey mission from April to May 2023, covering the South China Sea region, including the North Natuna Sea, based on our observations. This kind of ship is called a Moving Vessel Profiler (MVP), and it can collect oceanographic data over a large area without stopping. It is equipped with hydrographic survey capabilities. Figure 6 shows the Jia Geng vessel's trajectory into and out of the North Natuna Sea between April 29 and May 1, 2023.

¹¹ https://ships.xmu.edu.cn/en/R_V_Tan_Kah_Kee.htm

¹² <https://archive.fo/9B8os>

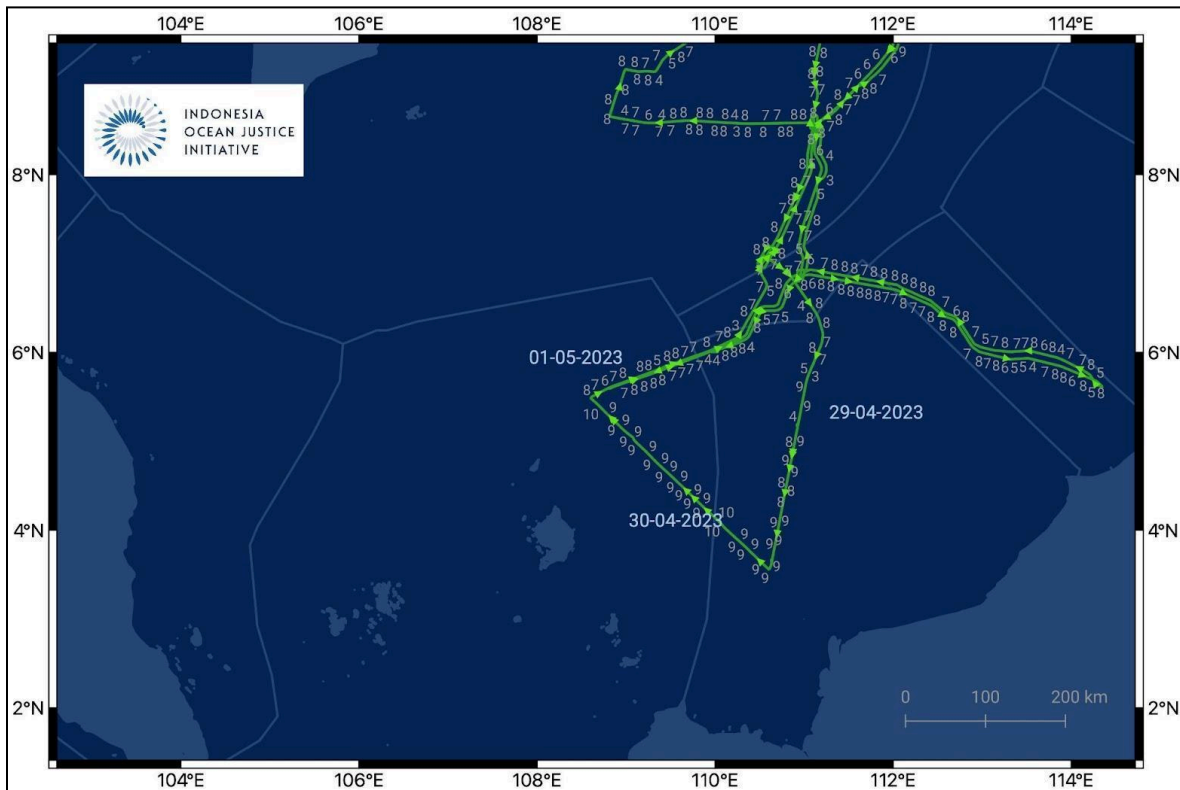


Figure 6. Jia Geng Ship Passage in the North Natuna Sea on April 29 - May 1 2023 (Data Source: AIS)

The trajectory of the Jia Geng ship from March 1 to August 14 2023 can be seen in Figure 7 below.

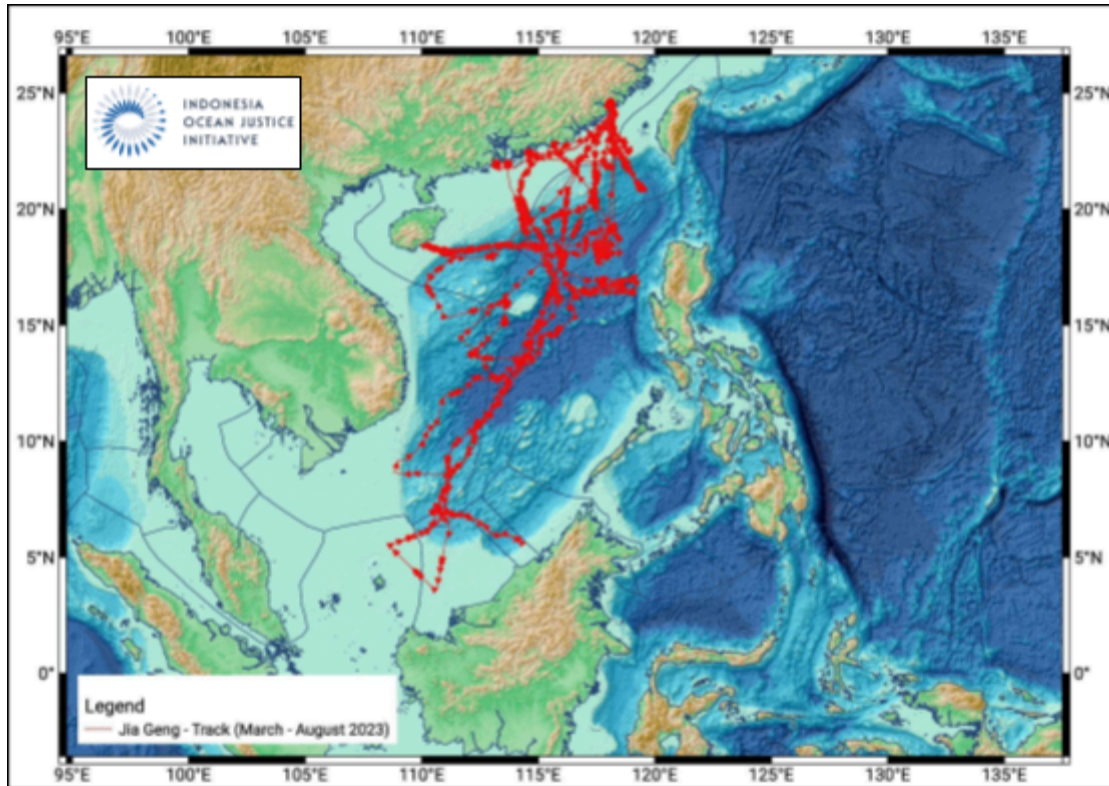


Figure 7. Jia Geng Ship Trajectory for the period 1 March to 14 August 2023 in the Deep Sea Section of the South China Sea (Data Source: AIS, Bathymetry: GEBCO)

During its journey, the Jia Geng crossed the EEZ of countries directly bordering the South China Sea, such as Vietnam, the Philippines, Brunei, Malaysia and Indonesia which have depth 100 m to 4000 m.¹³

In the last three years, this is the first time the Jia Geng has operated until the southern tip of the South China Sea, reaching the North Natuna Sea.. The following is a picture of the Jia Geng trajectory during the period August 2020 to January 2023 (during the last 3 years).

¹³ Based on observations of AIS data from the Jia Geng ship which is overlaid with sea bathymetry map.

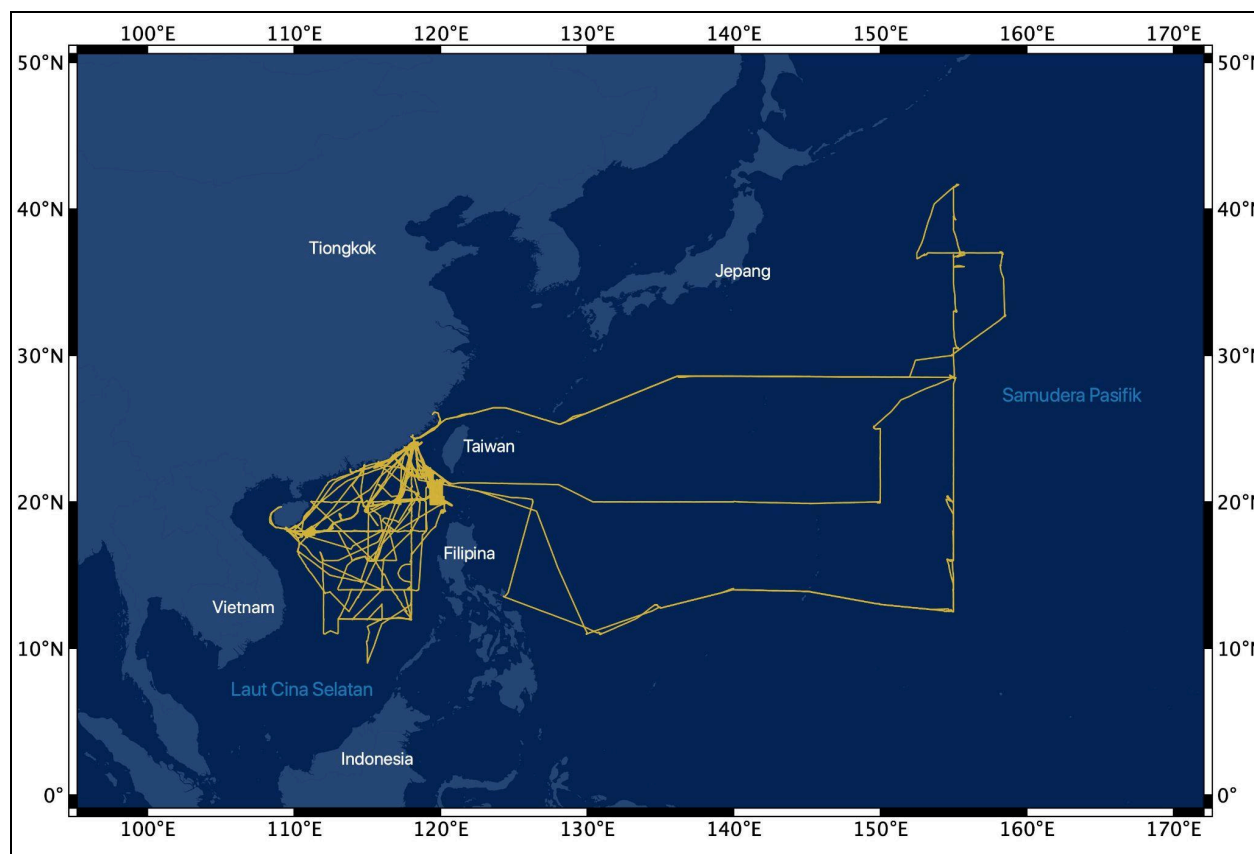


Figure 8. Jia Geng Trajectory in the South China Sea and Pacific Ocean from August 2020 to January 2023
(Data Source: AIS)

A.3. Marine Research Activities by Chinese Ships in The Neighboring Countries: Haiyang Dizhi Ba Hao Ship (Haiyang Dizhi 8)

A Chinese research vessel was also observed conducting marine scientific research activities not only in Indonesia's EEZ, but also in the EEZ of Indonesia's neighboring country: Malaysia.

The Haiyang Dizhi Ba Hao (IMO 9780756) is a geological research vessel owned by the Chinese government which has the ability to map rocks and natural resources contained under the seabed. The vessel has experience in the similar MSR activities in Vietnam's EEZ and Malaysia's EEZ in 2020.

On June 21 2023, this vessel was observed conducting an active operation in the Malaysian EEZ with the escort from China Coast Guard 5202 and several fishing vessels which were nothing but Chinese militia vessels. According to AIS, this research vessel moves back and forth creating a lawn mower pattern. This pattern is a common indication of marine scientific research activity done by many research vessels. In the midst of survey activities, the Haiyang Dizhi Ba Hao vessel also headed to the Chinese facility in Fiery Cross Reef. In this location, this vessel might replenish supplies and then return to continue its scientific research activities in Malaysia's EEZ.

The activities of the Haiyang Dizhi Ba Hao was responded to by the Malaysian Government by sending warships to monitor its activities in the Malaysian EEZ. Regarding the activities of the Chinese Government research vessel, the Malaysian Government commented stating that the Malaysian EEZ area contains rich oil and gas reserves that must be maintained.¹⁴ It is not known whether Haiyang Dizhi Ba Hao had permission from the Malaysian government to operate in the Malaysian EEZ.

The activities of the Haiyang Dizhi Ba Hao vessel in Malaysia's EEZ are nothing new. In 2021, intensive and intrusive marine scientific research activities like this were also conducted by the Haiyang Dizhi Shi Hao (Haiyang Dizhi 10) around the Tuna Block, North Natuna Sea for 7 (seven) weeks in the period of September to November 2021. IOJI produced a detection and analysis report of Haiyang Dizhi 10 activity in August 2021.¹⁵

¹⁴ <https://www.thestar.com.my/news/nation/2023/06/27/govt-to-continue-protecting-national-sovereignty-at-kasa-wari-beting-patinggi-ali-gas-fields>

¹⁵ IUUF Threats and Indonesian Maritime Security, IOJI, August 2021. <https://oceanjusticeinitiative.org/2021/09/02/ancaman-iuuf-dan-security-laut-indonesia-augustus-2021/>

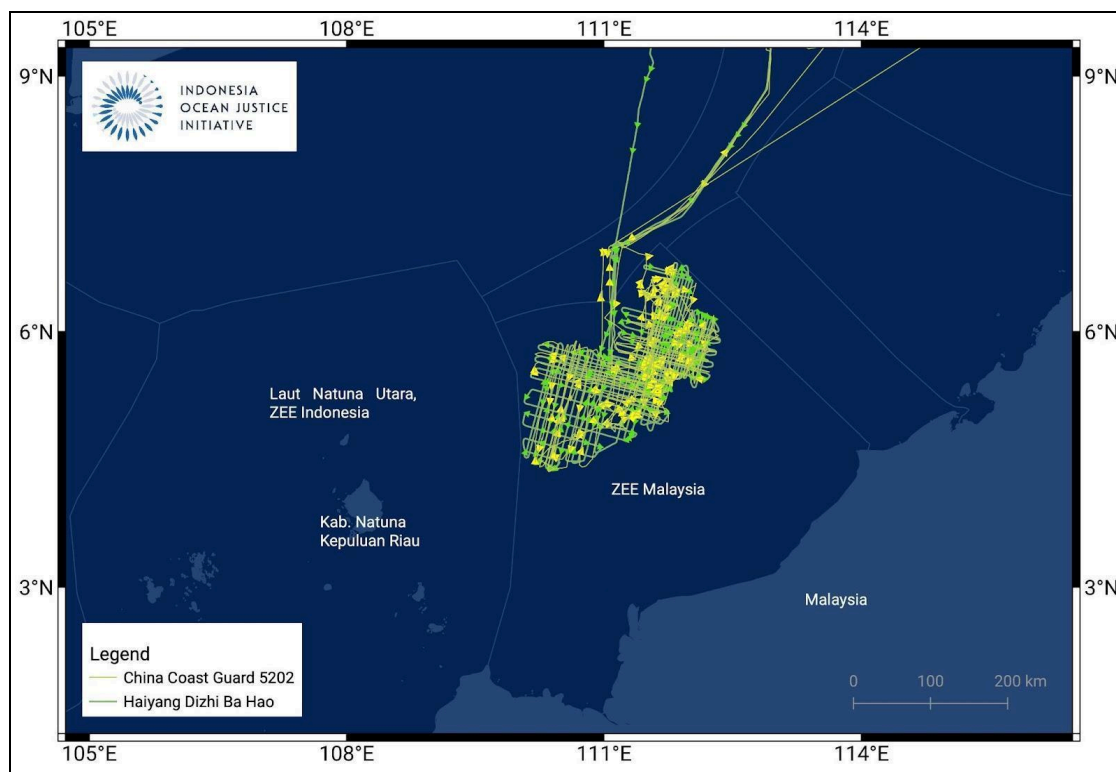


Figure 9. Passage of the Haiyang Dizhi 8 and China Coast Guard 5202 vessels from 21 June to 8 August 2023 in the Malaysian EEZ. (Source: AIS)

A.4. China's Achievements in Marine Research Activities in the South China Sea

On January 23, 2024 China released a report on its major achievements on marine geological survey in the whole South China Sea.¹⁶ Over the past 25 years China has collected the most valuable marine geological data from the South China Sea. Based on these data, China has been able to comprehensively map information on topography, geology, layers and sedimentation, types and distribution of geological structure evolution, mineral resources and dangerous marine environments from the whole South China Sea and its surroundings. The findings provide important theoretical support for the exploration and exploitation of natural resources such as minerals, petroleum, natural gas and heavy metal deposits at the bottom of the South China Sea.

¹⁶ <https://www.globaltimes.cn/page/202401/1305927.shtml>

A.5. Legal Analysis of Alleged Detection of Marine Research by Foreign Ships in Indonesia's EEZ

There are several laws and regulations in Indonesia that regulate marine research, namely:

1. Law Number 17 of 1985 concerning Ratification of the UN Convention on the Law of the Sea (UNCLOS);
2. Law Number 32 of 2014 concerning Maritime Affairs ("Marine Law") as amended by Law Number 6 of 2023 concerning Job Creation (Cipta Kerja - "CK Law")¹⁷;
3. Law Number 11 of 2019 concerning the National System of Science and Technology ("Sisnasiptek Law") as amended by the CK Law;
4. Law Number 16 of 2023 concerning the Continental Shelf ("LK Law");
5. Law Number 31 of 2004 concerning Fisheries as most recently amended by the CK Law ("Fisheries Law")¹⁸

First, UNCLOS stipulates that the coastal state, in its Exclusive Economic Zone (EEZ), has jurisdiction over *Marine Scientific Research* (MSR/Marine Scientific Research).¹⁹ This means that coastal states have the authority to regulate and permit or not permit marine scientific research activities in their EEZ.²⁰

Second, the Marine Law "only" regulates in general the government's responsibility to develop a marine research system, establish a marine facilities center, regulate the implementation of marine scientific research in the context of research collaboration

¹⁷ Law Number 6 of 2023 concerning the Stipulation of Government Regulations in Lieu of Law Number 2 of 2022 concerning Job Creation into Law

¹⁸ Fisheries Law Number 31 of 2004 has been amended by Law Number 45 of 2009 and was most recently amended by Law Number 6 of 2023 concerning Job Creation.

¹⁹ Article 56 paragraph (1) letter b of UNCLOS.

²⁰ Article 246 paragraph (1) and (2) of UNCLOS.

with foreign parties and manage and maintain marine information and data produced from the research activities.²¹

Third, the National Science and Technology Law and its implementing regulations require foreigners who wish to do research in Indonesia to obtain permission from the central government.²² Those who conduct research activities without permission may be subject to *blacklist* sanctions²³ and, in the event of repetition, a maximum fine of IDR 4,000,000,000.00 (four billion rupiah) will be imposed.²⁴ Additional sanctions not being able to obtain permission to conduct research in Indonesia for 5 (five) years²⁵ is also available.

There is no special article regarding marine scientific research in the National Science and Technology Law. However, with the provisions of Article 56 paragraph (1) letter b and Article 246 paragraphs (1) and (2) UNCLOS, it can be concluded that the Science and Technology Law also applies to research at sea in the EEZ and the continental shelf.

The Sisnasiptek Law revokes Law Number 18 of 2002 concerning the National System for Research, Development and Application of Science and Technology ("UU 18/2002"). There are several implementing regulations from Law 18/2002 which are stated to still be valid as long as they do not conflict with the Science and Technology Law²⁶, one of which is Government Regulation Number 41 of 2006 concerning Licensing to Conduct Research and Development Activities for Foreign Universities, Foreign Research and

²¹ Articles 37 to 40 of the Maritime Affairs Law.

²² Article 75 paragraph (2) Law on Science and Technology.

²³ Article 92 of the Sisnasiptek Law.

²⁴ Article 93 paragraph (1) of the Sisnasiptek Act.

²⁵ Article 93 paragraph (2) Law on Science and Technology.

²⁶ Article 98 of the Sisnasiptek Law.

Development Institutions, Foreign Business Entities and Foreign Persons ("PP 41/2006").

Fourth, the LK Law requires entities conducting research on the Continental Shelf to obtain permission from the minister/head of state institution that carries out government affairs in the fields of research, development, study and application as well as invention and innovation.²⁷ The LK Law mandates that further provisions regarding licensing be regulated by Government Regulation.²⁸ Thus, licensing provisions for research on the Continental Shelf may differ from those regulated by PP 41/2006.

Furthermore, the LK Law regulates that research on the Continental Shelf in the fisheries sector is carried out in accordance with statutory provisions.²⁹ This matter will be discussed in the following point.

In addition to licensing obligations, entities carrying out research activities under the LK Law are also required to protect the marine environment by preventing pollution, dealing with pollution (if it occurs) and restoring the polluted environment (if pollution occurs).³⁰

There are criminal provisions in the LK Law for marine research activities without a permit, namely a maximum fine of Rp. 4,000,000,000.00 (four billion rupiah)³¹. However, in the event that research without a permit causes pollution and/or destruction of the marine environment, or takes certain data or specimens, the criminal threat is imprisonment for a maximum of 6 (six) years or a fine of a maximum of Rp.

²⁷ Pasal 21 verses (1) UU LK.

²⁸ Pasal 21 verses (5) UU LK.

²⁹ Article 24 Law LK.

³⁰ Chapter V of the LK Law concerning Marine Environmental Protection (Articles 35 - 37).

³¹ Pasal 47 verses (1) UU LK.



20,000,000,000.00 (twenty billion). rupiah).³² Actions that result in pollution and/or destruction of the marine environment on the Continental Shelf can also be punished under Article 53 paragraph (1) of the LK Law with the threat of imprisonment for a maximum of 15 (fifteen) years or a fine of a maximum of IDR 150,000,000,000.00 (one hundred and fifty billion rupiah).

Fifth, Article 55 paragraph (1) of the Fisheries Law regulates that every foreigner is required to obtain permission from the government if he wants to conduct fisheries research. Permission is granted by the Minister who carries out government affairs in the field of research, development and application of science and technology.³³ Fishing research without a permit is a criminal offense that is punishable by a maximum imprisonment of 1 (one) year and a maximum fine of IDR 1,000,000,000.00 (one billion rupiah).³⁴

Based on the description above, it can be concluded that illegal marine scientific research is one of Indonesia's jurisdictions. Foreign parties are required to obtain permission and comply with provisions other than licensing if they wish to carry out marine scientific research in Indonesia's jurisdiction. Conducting marine research without a permit is a criminal offense that can be subject to imprisonment and/or fines as well blacklist sanction.

Regarding the Nan Feng and Jia Geng vessels activities observed in the North Natuna Sea, it is appropriate for the Indonesian government to ask the Chinese government for clarification regarding the allegation of marine research activities conducted by these

³² Pasal 47 verses (2) UU LK.

³³ Article 23 paragraph (1) Government Regulation Number 30 of 2008 concerning the Implementation of Fisheries Research and Development.

³⁴ Article 99 of the Fisheries Law.



two vessels at NNS and take steps strict laws in the event that something is found that is detrimental to Indonesia, for example conducting MSR without permission, sampling and/or damage to the marine environment.



B. Marine Pollution: Oil Spill in the Waters East of Johor, Malaysia

This section will start with several studies regarding oil spill in Indonesia, followed by a more detailed description supported by the results of IOJI's detection of an oil spill that occurred in the waters east of Johor, Malaysia which might be washed by currents and ultimately polluted the waters and coast of Batam, Riau Islands, Indonesia.

One of the Triple Planetary Crisis apart from biodiversity loss and climate change (both explained above) is pollution.³⁵ Marine pollution is a big problem in Indonesia. There are two main threats to marine pollution in Indonesia, they are plastic pollution and non-plastic pollution, such as oil spills. Non-plastic pollution of course consists of various forms other than oil spills, for example the dumping of hazardous and toxic waste (B3 waste).³⁶

Currently, data on the amount of marine pollution in the form of oil spills cannot be found nationally. For example, a study by Yanzhu Dong,*et al.*³⁷, Martin Gade, *et al.*³⁸ and Budhi Gunadharma Gautama can provide an overview of oil pollution in some areas of Indonesian waters.

³⁵ UNFCCC, "What is the triple planetary crisis?", <https://unfccc.int/news/what-is-the-triple-planetary-crisis#:~:text=The%20triple%20planetary%20crisis%20refers,change%2C%20pollution%20and%20biodiversity%20loss>, accessed January 18, 2024.

³⁶ Kompas, "Completely Investigate the Ship Carrying Thousands of B3 Waste Tolls in Batam", <https://www.kompas.id/baca/nusantara/2022/08/12/usut-tuntas-kapal-pengangkut-ribuan-ton-buang-b3-di-batam>, accessed January 20, 2024.

³⁷ Yanzhu Dong *et al.*, Chronic oiling in global oceans. *Science* **376**, 1300-1304 (2022). DOI:10.1126/science.abm5940

³⁸ Gade, Martin & Mayer, Bernhard & Meier, Carolin & Pohlmann, Thomas & Putri, Mutiara & Setiawan, Agus. (2017). An assessment of marine oil pollution in Indonesia based on SAR imagery. 10.1109/IGARSS.2017.8127261.

Yanzhu Dong,*et al.* states that the Java Sea is the highest polluted sea area caused by *oil slick* as wide as $1.69 \times 10^5 \text{ km}^2$ (equivalent to 255.5 times the land area of DKI Jakarta).³⁹

According to a study by Martin Gade,*et al.* which focuses on the Java Sea and Makassar Strait areas, many oil spill points in the Java Sea as shown in Figure 10.

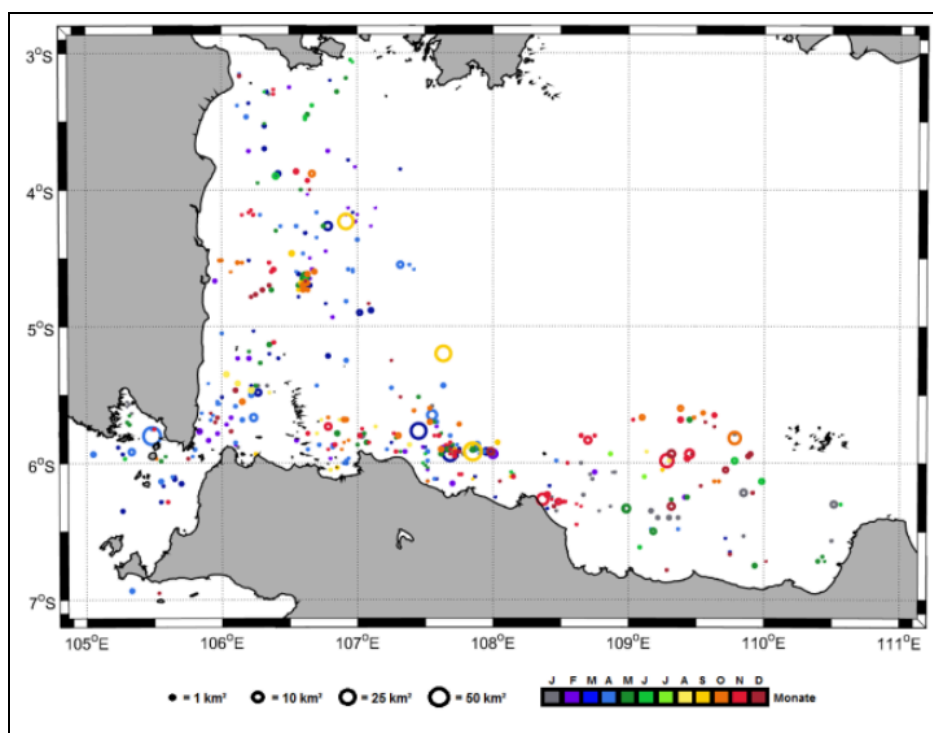


Figure 10. Oil spill locations (Source: Martin Gade, et. at the.)

This study also explained that the Java Sea experienced the highest oil pollution incidents in March-April and October-December whereas Makassar Strait highest oil pollution incidents occurred in December-February.⁴⁰

³⁹ According to BPS, the land area of DKI Jakarta is 661.23 km² <https://jakarta.bps.go.id/indicator/153/38/1/luas-daerah-menurut-kabupaten-kota.html>

⁴⁰The universe of satellite image data used by Martin Gade, et. al. are approximately 1,600 images from the ENVISAT ASAR satellite in the 2002-2012 period, approximately 2,800 satellite images from the ALOS-1 PALSAR satellite in the 2006 - 2011 period and approximately 800 images from the Sentinel-1A satellite in the 2014 period.

Budhi Gunadharma in 2017 published a study about "*Oil Spill Monitoring in Indonesia*".⁴¹ The universe of data used in Budhi's study is SAR images from the INDESOS system in the period July 2014 - January 2017 where there were 271 images and it was found that there were 734 polluted location points with a total area of polluted area of 2,567.47 km² as shown in Figure 11.

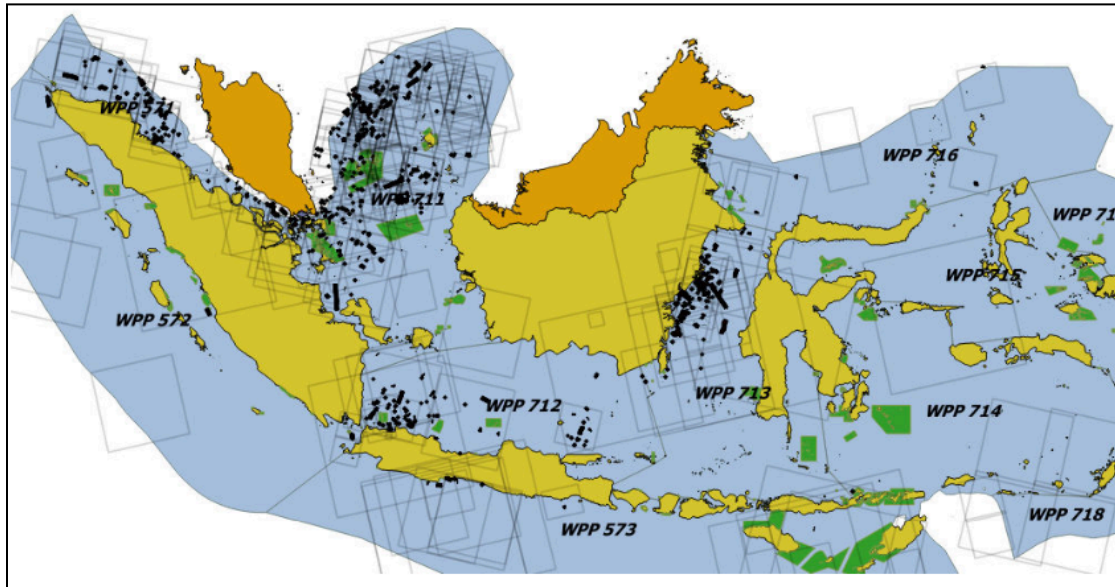


Figure 11. Oil spill detection (Source: Budhi Gunadharma, 2017)

From these satellite images, we have analyzed and concluded that The North Natuna Sea (WPP-711), the Java Sea (WPP-712) and the Flores Sea to the Makassar Strait (WPP-713) are 3 areas with a high risk of pollution.⁴²

Because there have been numerous oil leak occurrences in the waters surrounding the Riau Islands, IOJI has noticed that shipping operations from the Singapore Strait to the waters east of Johor, Malaysia, have a high potential of polluting Indonesian waters. Eventually, currents carried the leak into Indonesian waters, where it contaminated the shores of Bintan and Batam.

⁴¹ Budhi Gunadharma Gautama. Oil-spill monitoring in Indonesia. Signal and Image Processing. Ecole nationale supérieure Mines-Télécom Atlantique, 2017. English. NNT: 2017IMTA0036. tel- 01812211

⁴² *Ibid.*

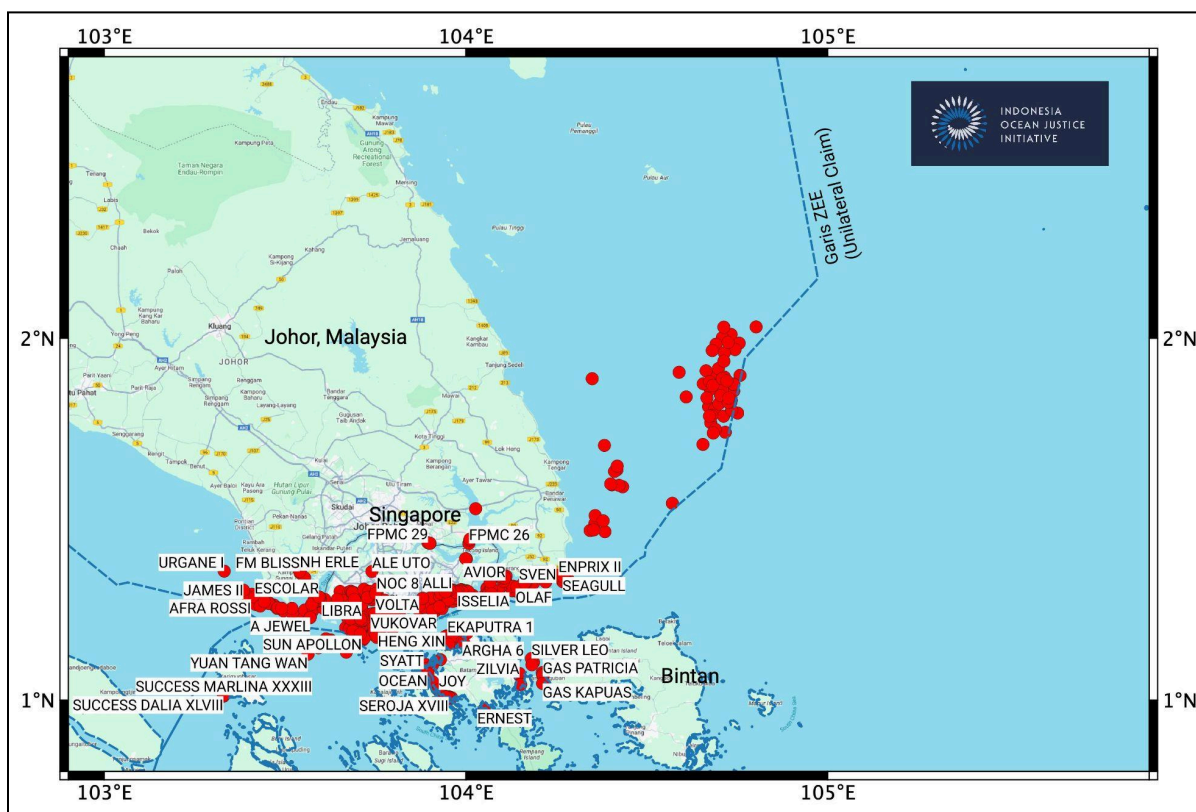


Figure 12. Activities By Tanker Vessels in the Singapore - Indonesia - Malaysia Border Area
(Source: AIS, 15 July 2023)

Singapore is the second busiest port in the world ⁴³ with an average service capacity of 140,000 vessels per year equivalent to 37.3 million *Twenty-foot Equivalent Unit* (NOT) in 2022.⁴⁴ This figure does not include vessels heading to Malaysia or just passing through. The shipping lanes in the Malacca Strait-Singapore Strait are very busy and in a high risk category.

Research by Nofandi shows that in the period July - October 2021 (approximately 4 months), there were 4,163 tankers, 310 container vessels, 5,690 cargo vessels, 15,326

⁴³ <https://www.cbre.com/insights/local-response/2022-global-seaport-review-singapore>

⁴⁴ <https://www.mpa.gov.sg/maritime-singapore/what-maritime-singapore-offers/global-hub-port#:~:text=As%20home%20to%20one%20of,calling%20at%20the%20port%20annually.>

passenger vessels and 221 support vessels which passes through the Strait of Malacca-Singapore Strait.⁴⁵

Table 1. Number of Ship Visits					
Length	Ship type				
	Tanker	Container	General Cargo	Passenger	Support Ship
0-25	0	0	0	0	59
26-50	7	0	19	15326	64
51-75	62	0	53	0	42
76-100	246	8	248	0	56
101-125	623	11	334	0	0
126-150	427	34	194	0	0
151-200	708	68	2038	0	0
201-250	907	50	1189	0	0
251-300	397	83	1088	0	0
301-400	786	56	527	0	0

Figure 13. Vessel Visits at Singapore Port Based on Ship Type

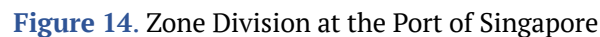
Tanker, Container and Cargo vessels in this area are very large vessels. The largest population of tankers have a length of 201 - 250 meters (There are 907 vessels). The largest population of containers have a length of 251 - 300 meters (83 ships). Vessel population of general cargo between a length of 151 - 200 meters (2,038 ships). For comparison, the length of an official FIFA football field is 105 meters.⁴⁶

To regulate shipping tariff, the Singapore Government determines zones in *Singapore port* as presented in the following image.⁴⁷

⁴⁵ F Nofandi et al 2022 IOP Conf. Ser.: Earth Environ. Know 1081 012009. <https://iopscience.iop.org/article/10.1088/1755-1315/1081/1/012009/pdf>

⁴⁶ <https://publications.fifa.com/en/football-stadiums-guidelines/technical-guideline/stadium-guidelines/pitch-dimensions-and-surrounding-areas/>

⁴⁷ [https://www.mpa.gov.sg/docs/mpalibraries/mpa-documents-files/hydrographic/port-of-singapore---anchorages-chartlet-\(1-feb-2021\).pdf](https://www.mpa.gov.sg/docs/mpalibraries/mpa-documents-files/hydrographic/port-of-singapore---anchorages-chartlet-(1-feb-2021).pdf)



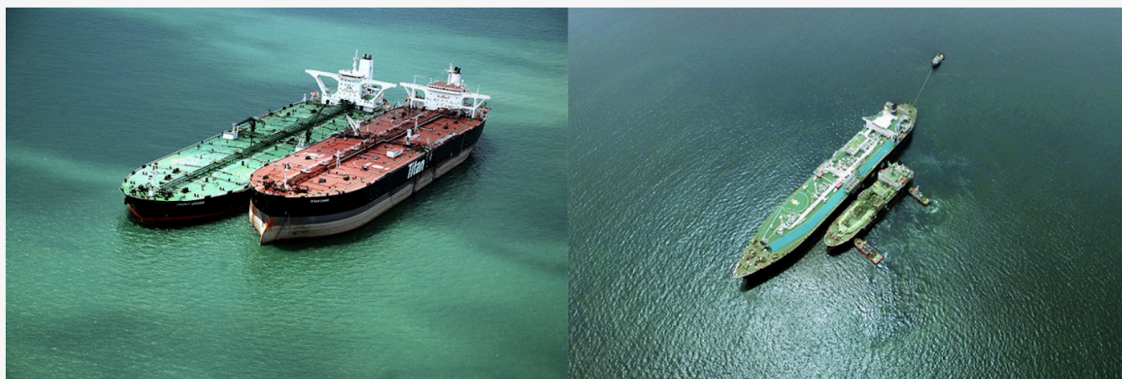
Let's take a look at the port of Pasir Gudang (Johor) Malaysia. Geographically, the distance between Pasir Gudang port is close to Singapore. So that the Pasir Gudang (Johor) port authority can provide services to ships in the area, certain zones have been established as is also done by Singapore. Examples of services provided by Pasir Gudang

Port are: *ship to ship transfer* (“StS”). The image below is a map depicting the situation of Pasir Gudang port in the Johor Strait and StS services.⁴⁸



Figure 15. Port of Pasir Gudang (Johor) Malaysia.

Transshipment & Ship to Ship Transfer



An ample of space at Pasir Gudang Anchorage off Teluk Ramunia provides facilities for Transshipment & Ship to Ship transfer to the customers. Johor Port Marine Services is the only provider approved by Johor Port Authority within Pasir Gudang Port Limits.

Figure 16. Ship to Ship Transfer

⁴⁸ <https://www.johorport.com.my/services/marine-services>

The tanker or cargo vessel's captain and crew could commit illegal acts by conducting StS in OPL or discarding rubbish, garbage or pollutants out to sea at OPL in order to avoid paying for port authority services or to avoid paying for waiting or queueing. Indonesia is frequently the victim of pollution because pollutants that spilled in the seas of the Malacca Strait, Singapore Strait, and waters east of Johor are washed by sea currents to Indonesia's coastal regions.

StS performed within the port is fundamentally an activity that is already dangerous. Due to the significant risk of ship collisions, this activity calls for extreme caution. Since OPL is farther from shore than the port limit, where sea waves are often stronger, StS operations there carry an even higher risk than those inside the port boundary.

B.1. The Revolving Fund Committee (RFC)

Trilateral mechanism for handling *oil pollution* has been established since February 11, 1981 through signing Memorandum of Understanding between the Governments of Indonesia, Malaysia and Singapore on the One Part and the Malacca Strait Council for and on Behalf of the Japanese Non Governmental Associations on the other Part for the Establishment and Operation of A Revolving Fund to Combat Oil Pollution From Ships in The Straits of Malacca and Singapore (RFC MoU).⁴⁹

Funds managed by the RFC can be used for the immediate anti-pollution operations and shall be utilized in the event of any incident of oil pollution caused by ships whether accidental or intentional.⁵⁰ Countries that receive the funds for oil pollution handling are required to return the funds in question after handling oil pollution.⁵¹ In

⁴⁹ https://maritim.go.id/konten/unggahah/2017/02/5488_TRI-1981-0008.pdf

⁵⁰ Section 2 *Annex Arrangement for Establishment of a Revolving Fund to Mitigate Oil Pollution of the Marine Environment in the Straits of Malacca and Singapore.*

⁵¹ Article 7 *Annex Arrangement for Establishment of a Revolving Fund to Mitigate Oil Pollution of the Marine Environment in the Straits of Malacca and Singapore.*



the Revolving Fund Standard Operating Procedure for Joint Oil Spill Combat in The Straits of Malacca and Singapore (SOP) it is mentioned that the use of these funds is "restricted" for "major oil spill occurring in or threatening the Straits of Malacca and Singapore"⁵².

The RFC covers a geographical scope (*area of coverage/AoC*). Article 1 of the RFC MoU states that RFC funds are used, "*to take immediate remedial action against oil pollution caused by ships in the Straits of Malacca and Singapore,*" . RFC is textually valid for oil pollution that occurs within the Straits of Malacca and Singapore. However, in the SOP, another stipulation mentions that, "*major oil spill occurring in or threatening the Straits of Malacca and Singapore,*". This can be interpreted as the RFC is also valid for oil pollution that occurs inside AoC or outside AoC that meet the criteria "*threatening the Straits of Malacca and Singapore*".

There is no further explanation or detailed criteria of "*major oil spill*" or "*threatening the Straits of Malacca and Singapore*". Referring to article 6.2 of the RFC MoU, it seems that the RFC fund disbursement decision and evaluation is submitted to the Committee.⁵³

⁵² Section 002 *Revolving Fund Standard Operating Procedure for Joint Oil Spill Combat in The Straits of Malacca and Singapore* (Updated 28 July 2020).
<https://rfcsoms.org/wp-content/uploads/2021/08/Annex-E-SOP-Updated-on-28-July-2020.pdf>

⁵³ Article 6.2. The RFC MoU reads "*Payment of the advance by the Authority administering the Fund shall only be effected with the written approval of the Committee.*"

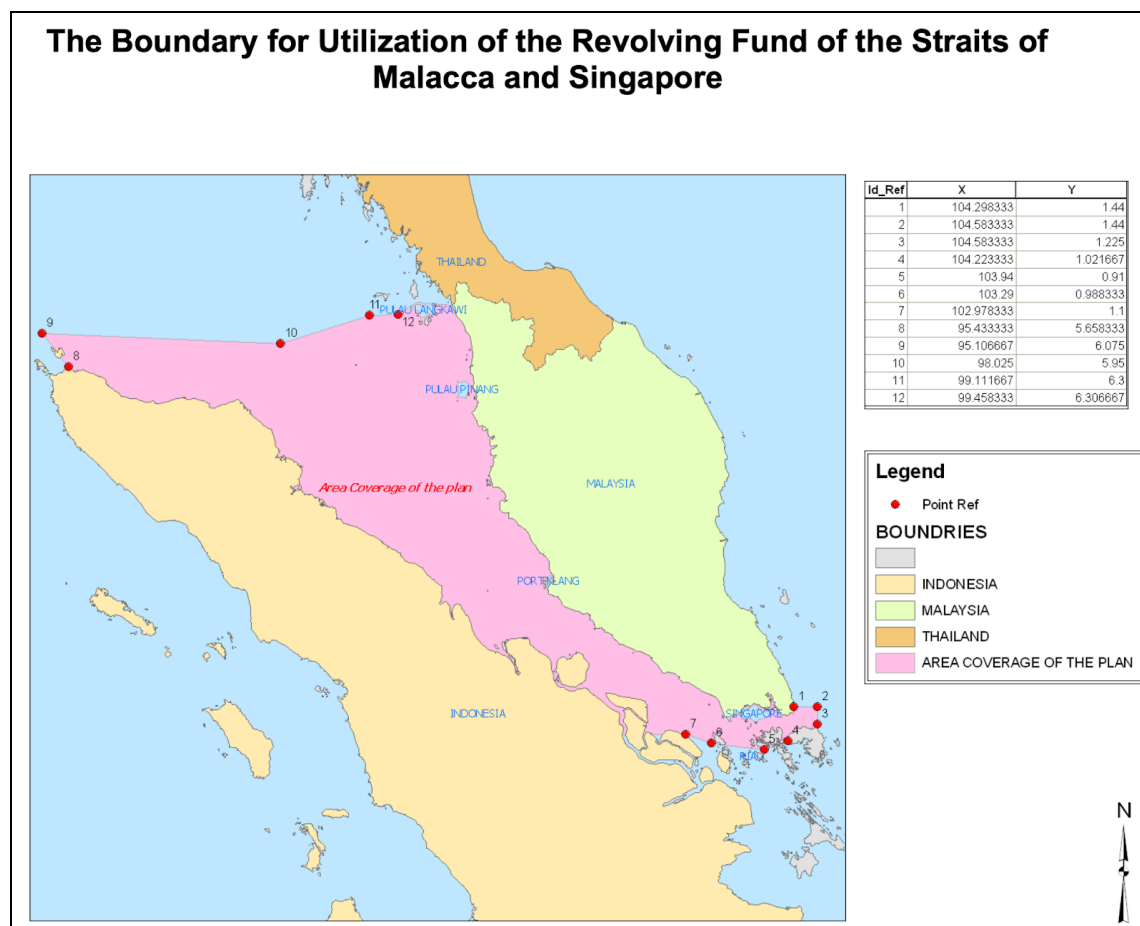


Figure 17. Area of Coverage Revolving Fund Committee

Since its establishment in February 1981, RFC funds have only been used for 2 (two) incidents⁵⁴. **First**, the *Nagasaki Spirit* incident in October 1992 where Indonesia used RFC funds amounting to USD 660,000 and Malaysia used funds amounting to USD 580,000; **Second**, the *Natuna Sea* incident in October 2000 near Tanjung Pinang where Indonesia used RFC funds amounting to USD 500,260.⁵⁵ Even though RFC is in place, in fact, oil pollution handling in this area is still not going so well.

The pictures below show our observation that some vessels are potentially polluting waters east of Johor based on satellite images.

⁵⁴ <https://rfcsoms.org/oil-spill-response/>

⁵⁵ <https://www.mpa.gov.sg/docs/mpalibraries/media-releases/older/060426c.pdf>

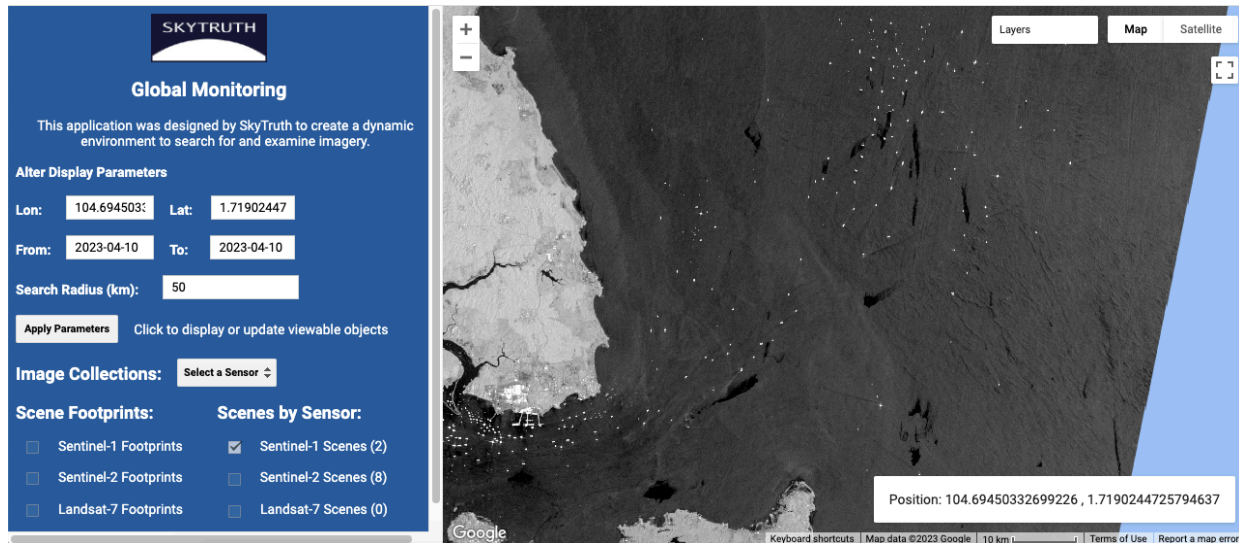


Figure 18. Oil Spill Detection in East Johor OPL Area on April 10 2023 - Coordinates 104.6945, 1.7190. (Source: Skytruth, Sentinel-1)

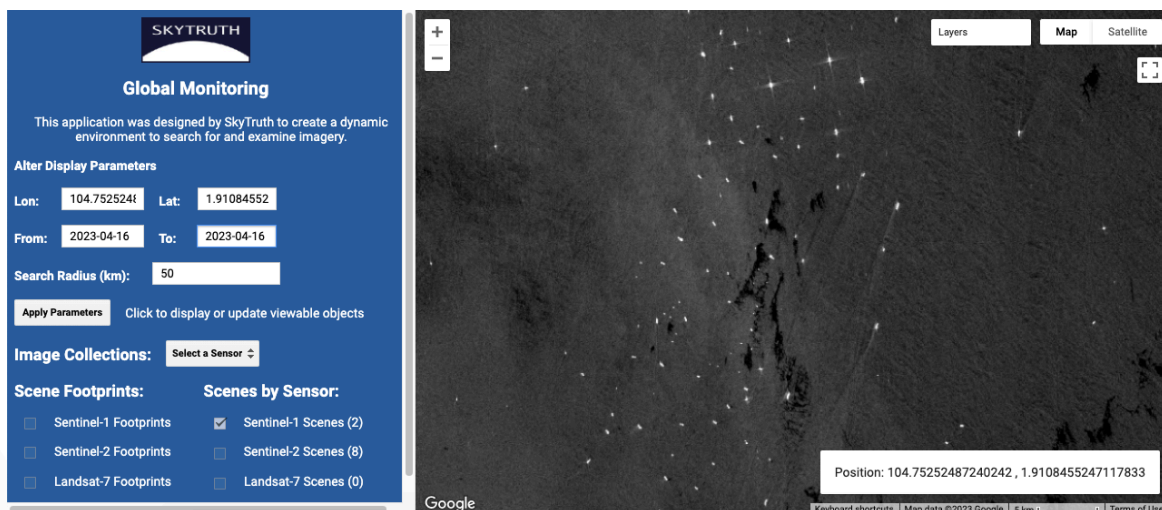


Figure 19. Oil Spill Detection in East Johor OPL Area on April 16 2023 - Coordinates 104.7525, 1.9108 (Source: Skytruth, Sentinel-1)

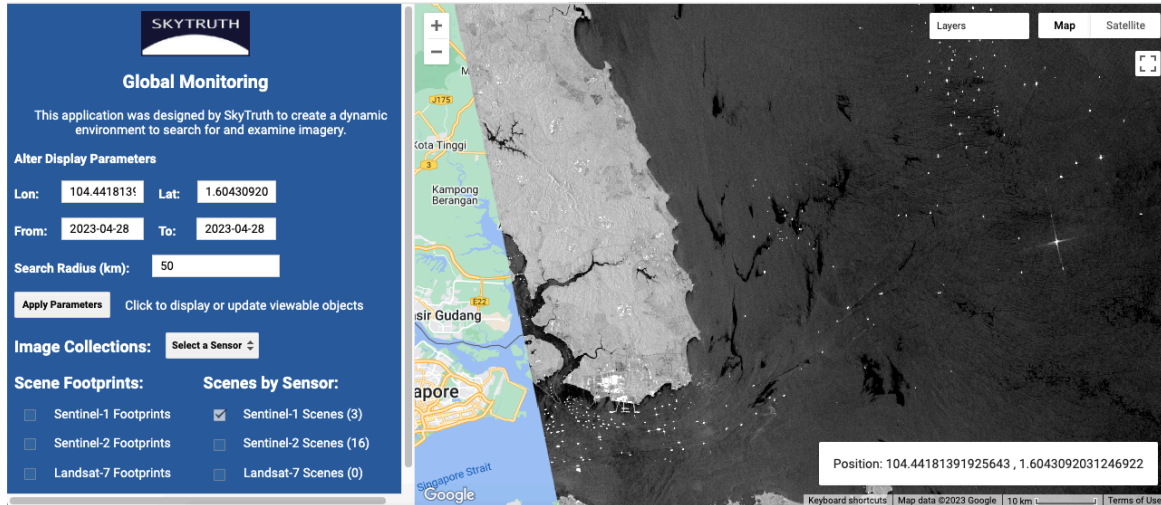


Figure 20. Oil Spill Detection in East Johor OPL Area on April 28 2023 - Coordinates 104.4418, 1.6043 (Source: Skytruth, Sentinel-1)

The location of oil spills in the figure 18-20 on the map is as follows:

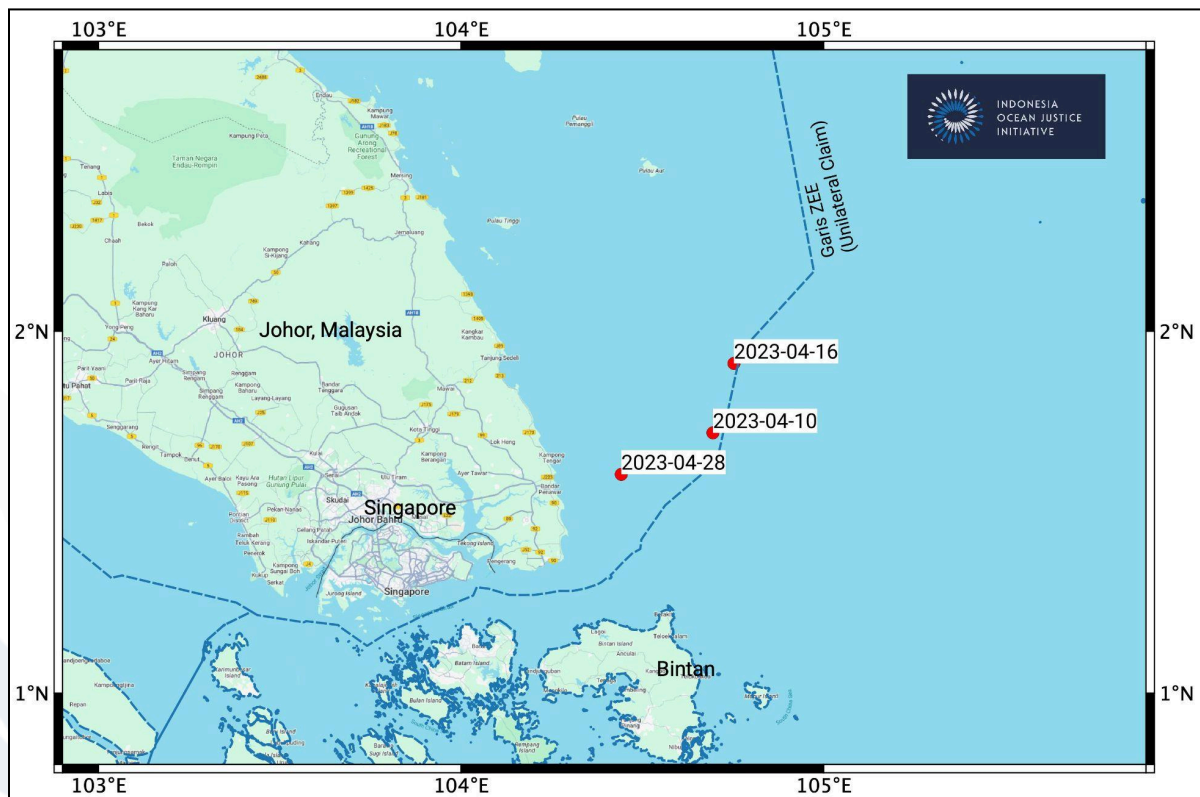


Figure 21. Oil Spill Location As illustrated in Figure 18, 19 and 20



AIS detection as of July 15 2023 also shows many tankers in the waters east of Johor Malaysia as shown in the following image.



Figure 22. Location Tankers at East of Johor OPL (Source: AIS)

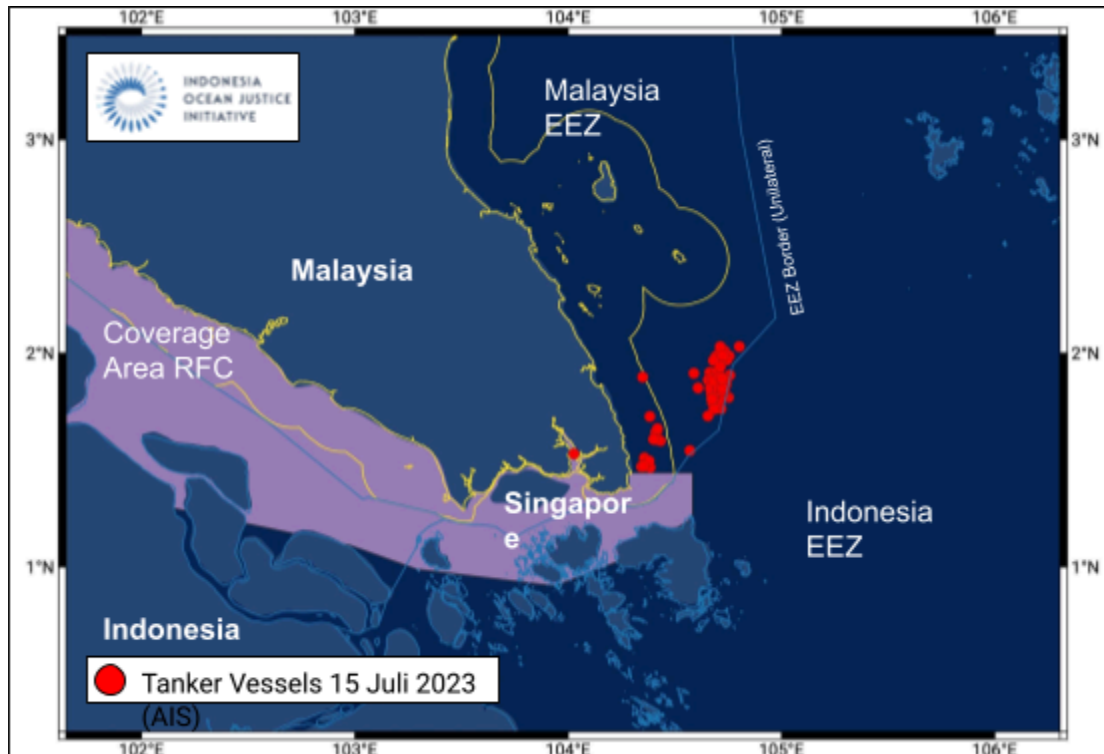


Figure 23. Tanker Vessels At East of Johor OPL (Enlarged, Source: AIS)

We see the direction of sea current in this location moving from north to south in the period from late April to early May (until May 6 2023) as shown in Figure 24. The current potentially washed the spill to the south and polluted the coast of Nongsa, Batam on May 5 2023, as reported by media (kompas.com).⁵⁶

⁵⁶ <https://www.kompas.id/baca/nusantara/2023/05/05/pencemaran-minyak-hitam-terus-berulang-di-batam>

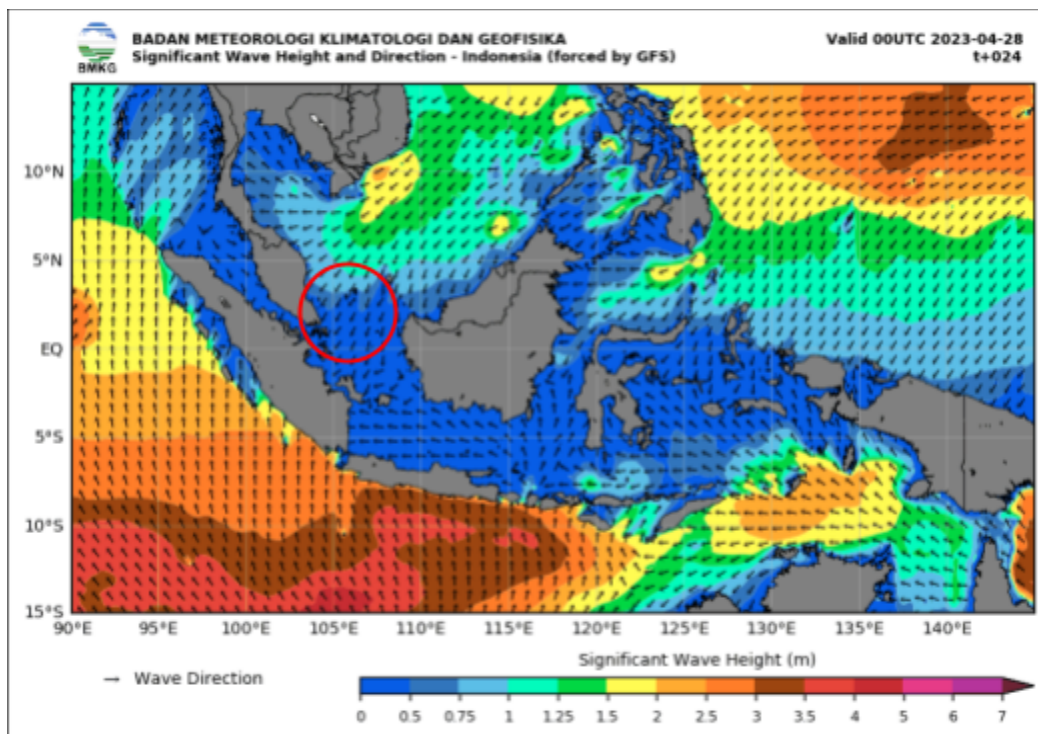


Figure 24. Sea currents direction in the North Natuna Sea and its surroundings are from North to South, including in Batam and Bintan waters on April 28 2023 (Source: BMKG)

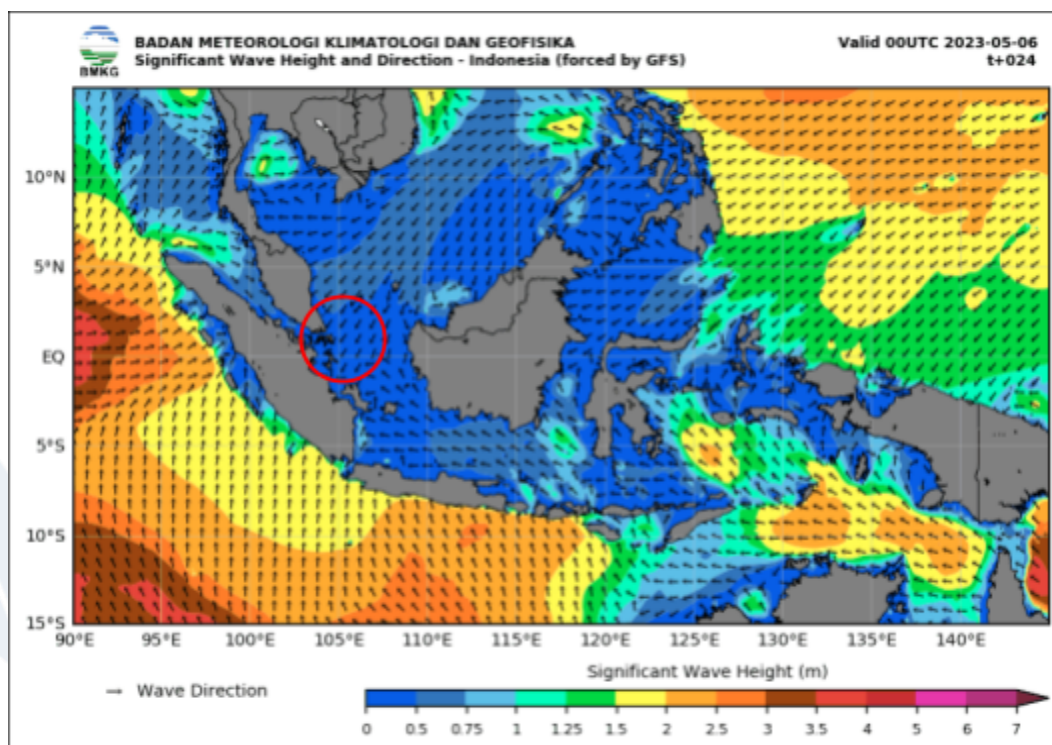


Figure 25. Sea currents direction in the North Natuna Sea and its surroundings, including Batam and Bintan waters, are from North to South on May 6 2023 (Source: BMKG)



Figure 26. Oil Spill That Washed to Batam's Nongsa Coast on May 5 2023 (Source: Kompas)

B.1.1 Challenges in Handling Transboundary Oil Spills in East Johor

The Government of Malaysia should be more intensive and consistent in conducting supervision and law enforcement against tankers' StS activity and marine pollution in its jurisdiction caused by this activity, including holding ship owners and flag states accountable. This is in accordance with a country's obligation to prevent pollution from spreading to the territory of other countries as regulated in UNCLOS (will be explained more fully in the next section).

Nazery Khalid (maritime industry expert from Malaysia) once said, "[a]lthough equipment to handle oil spills at sea are available in Malaysia, **they are stored onshore in containers. No vessel is on standby to be quickly mobilized to respond should an incident occur.** It would take time to load the equipment to combat oil spill onboard a vessel to be dispatched to the incident site at sea. This would take precious time that is



crucial in quickly preventing the spread of the oil spill.”⁵⁷ Khalid further emphasized, “It is crucial that maritime regulatory authorities closely monitor shipping companies involved in STS operations to ensure that they have the necessary equipment, personnel and capability to carry out emergency response to incidents ... The port state authority must quickly come down hard on companies carrying out unauthorized STS operations to avoid any untoward incidents resulting from sloppy operations, inadequate equipment, and poorly trained and supervised crew ... Last but not least, maritime security agencies must also continue to keep a close watch and step up surveillance on illegal STS transfer activities in our waters.”⁵⁸

In fact, holding the flag state accountable (*flag state responsibility/FSR*) and shipowner is not an easy job. Regarding FSR, some experts state:

- James Kraska: *“Seeking flag State consent for any particular enforcement action is often time consuming, and even fruitless, as ship registries and governments grapple with whether to permit foreign armed forces to conduct an opposed boarding of a ship that flies its flag.”* In fact, some countries use, *“...prerogative of exclusive flag State jurisdiction to shield its ships from international scrutiny, since flag State administrations are so slow or reluctant to act.”⁵⁹*
- Camille Goodman: *“...the practical challenges inherent in, and not addressed by, this system were obvious...they can be summarised as: ... (ii) lack of adequate implementation and enforcement by flag States...”⁶⁰*
- There Zwing: *“there seems to be no immediate consequences in international law if a flag State neglects to exercise effective jurisdiction and control over its vessels despite the fact that the Law of the Sea Convention of 1982 and other international*

⁵⁷ <https://www.businesstoday.com.my/2021/05/17/playing-by-the-rules/>

⁵⁸ *Ibid.*

⁵⁹ Kraska, James, Maritime Interdiction of North Korean Ships under UN Sanctions (October 7, 2019). Berkeley Journal of International Law (BJIL), Vol. 37, 369 (2019), Available at SSRN: <https://ssrn.com/abstract=3465825>

⁶⁰ Camille Goodman, The Regime for Flag State Responsibility in International Fisheries Law – Effective Fact, Creative Fiction, or Further Work Required?, 23 expl. & N.Z. Mar. L. J. 157 (2009).



standards requiring flag States to do so. ... what if such report is unsuccessful, that is the flag State does not take the appropriate measures to remedy the situation? ... what actions non-flag States could take if the flag State is unwilling or unable to enforce its international obligations? Anderson and Nijhoff suggest that the complainant's State could raise the matter at an international level, for example ... to induce dispute resolution procedures under Part XV of the LOSC. However, many States ... were unsatisfied with these remedies. Hence the inadequate implementation and enforcement of the existing flag State duties initialized various actions to counter poor flag State performance.”⁶¹

It is difficult to stop the transboundary oil spill pollution that happened in the waters east of Johor, Malaysia, and subsequently polluted Indonesian waters because of these difficulties.

B.2. Legal Analysis of Transboundary Pollution

Indonesia and Malaysia do not yet have an EEZ boundary agreement in the North Natuna Sea area and waters east of Johor. The blue lines in the map images Figures 21, 22 and 23 are lines that refer to the WPP-NRI map as stated in the Regulation of the Minister of Maritime Affairs and Fisheries of the Republic of Indonesia Number 18 of 2014 and PP 32 of 2019 regarding Marine Spatial Planning as shown in the following image:

⁶¹ Tamo Zwinge, Duties of Flag States to Implement and Enforce International Standards and Regulations – And Measures to Counter Their Failure to Do So, *Journal of International Business and Law*, Vol. 10, Issue 2, Article 5 (2011).

4. WPP-RI 711, meliputi perairan Selat Karimata, Laut Natuna dan Laut Cina Selatan

A. Peta

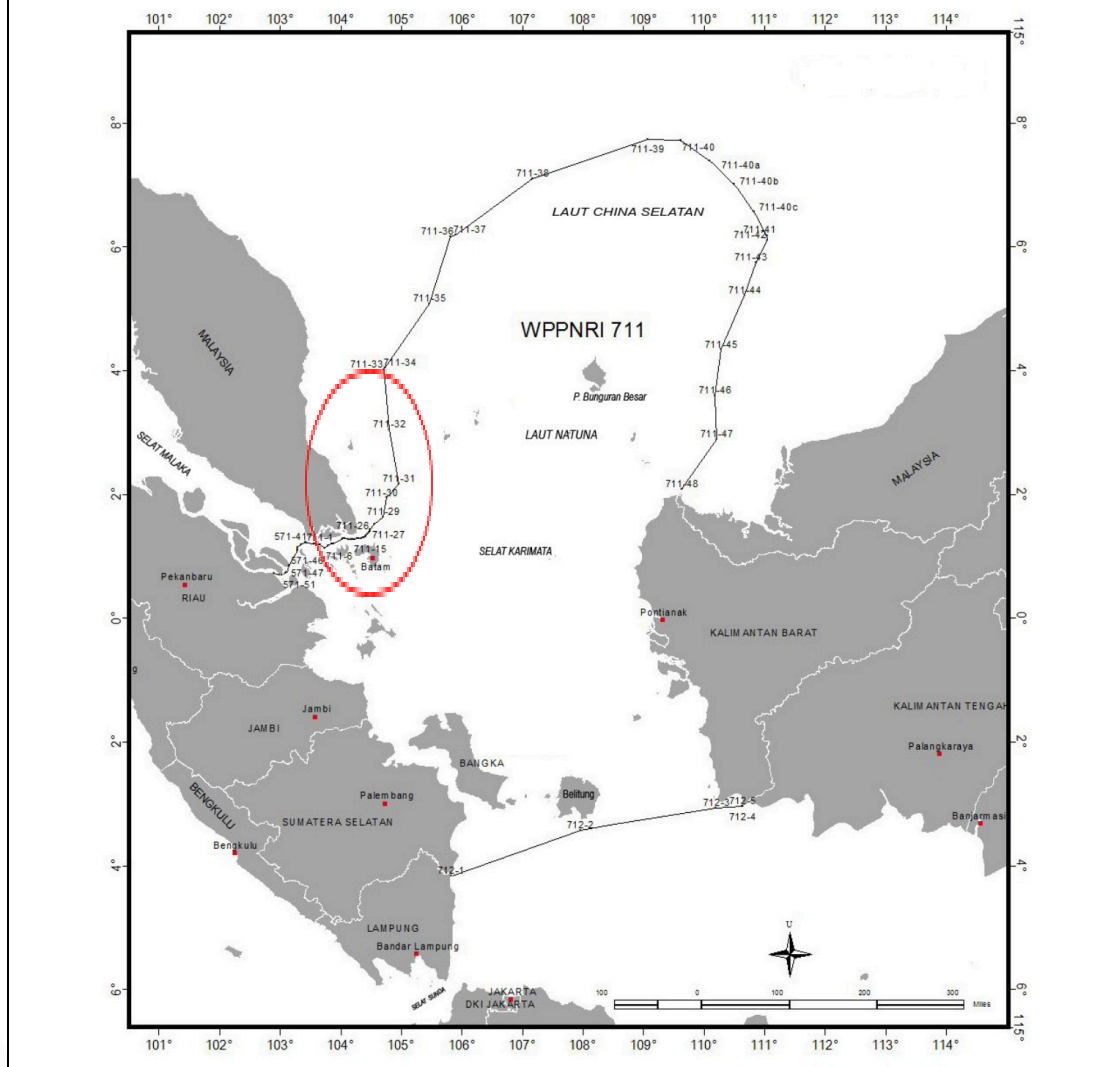


Figure 27. WPP-NRI map, Minister of Maritime Affairs and Fisheries Regulation Number 18 of 2014.

2019, No.89

-100-

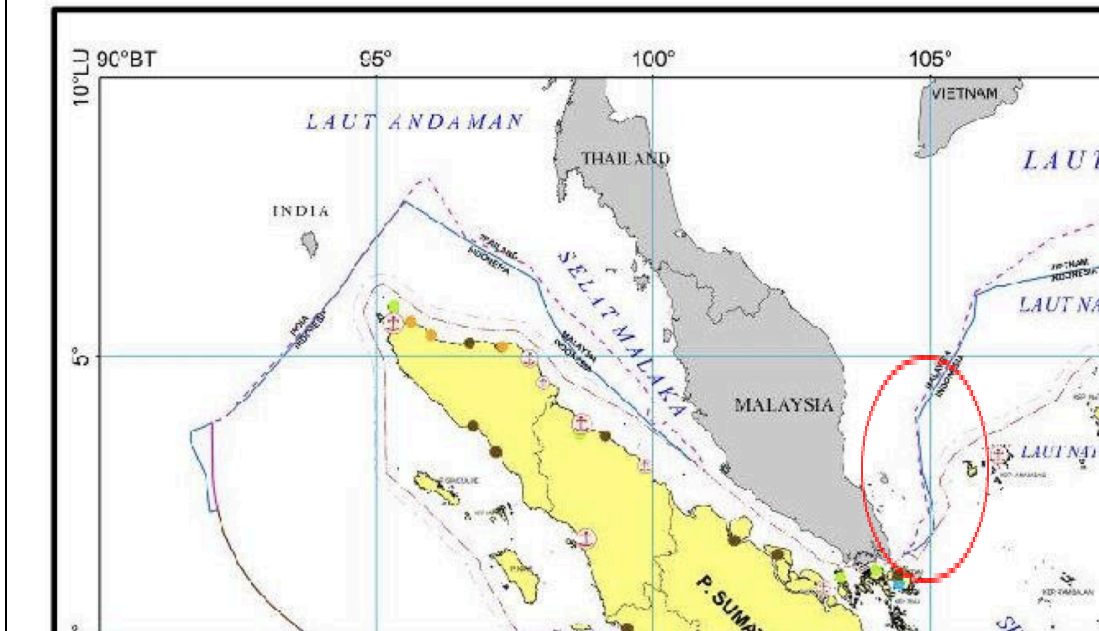


Figure 28. The EEZ line has not been agreed upon between Indonesia and Malaysia in accordance with PP 32 of 2019

For the purposes of this report, the WPP-NRI line and the unilateral EEZ line in PP 32/2019 are used as references as EEZ boundaries even though they are not legally binding.

UNCLOS requires each member country to, independently and collectively, take the necessary steps to prevent, reduce and control marine pollution from all sources using best efforts (*best practicable means*) according to its capacity.⁶² Apart from that, UNCLOS also requires its member countries to take all necessary steps to ensure that all activities occurring in their jurisdiction do not cause marine pollution in other

⁶² Article 194 paragraph (1) of UNCLOS



countries and ensure that the pollution that occurs does not spread to the seas of other countries (*so use yours so as not to harm others harm principle*).⁶³

Several forms of pollution that must be prevented as much as possible by UNCLOS member countries include: (i) **dumping**: the release of toxic and dangerous substances, especially persistent substances, from land, air or from activities; (ii) pollution from the vessel, whether due to accident or emergency, due to intentional or unintentional discharge of certain substances, due to the design and construction of the vessel and manning; (iii) pollution from installations and equipment used in exploration or exploitation activities of natural resources on the seabed; (iv) pollution from installations or other equipment operated at sea.⁶⁴ London Protocol 1996 define dumping as:

- i. *any deliberate disposal into the sea of wastes or other matter from vessels, aircraft, platforms or other man-made structures at sea;*
- ii. *any deliberate disposal into the sea of vessels, aircraft, platforms or other man-made structures at sea;*
- iii. *any storage of wastes or other matter in the seabed and the subsoil thereof from vessels, aircraft, platforms or other man-made structures at sea; and*
- iv. *any abandonment or toppling at site of platforms or other man-made structures at sea, for the sole purpose of deliberate disposal.*

The 1996 London Protocol and the 1972 London Convention were not ratified by Malaysia, Singapore, or Indonesia. Oil pollution in the waters east of Johor, Malaysia relates to 4 (four) Laws that prohibit dumping in the sovereign territory and jurisdiction of Malaysia, is named *Merchant Shipping Ordinance 1952, Merchant Shipping (Liability*

⁶³ Article 194 paragraph (2) of UNCLOS

⁶⁴ Article 194 paragraph (3) of UNCLOS



and Compensation for Oil and Bunker Oil Pollution) Act 1994, Environmental Quality Act 1974 dan Exclusive Economic Zone Act 1984.

Several times, Malaysia has carried out law enforcement against StS activities without permission, for example the arrest of 3 (three) Comoros, Malaysian and Indonesian flagged ships which carried out *oil transfer* without permission in October 2020⁶⁵ and the capture of Panamanian-flagged tankers and Honduras on October 2023.⁶⁶ Supervision and enforcement of this law needs to be increased by the Malaysian government.

The next question is, what can Indonesia do? **First**, Indonesia may take Malaysia to the dispute resolution mechanism by arguing that, as stipulated in UNCLOS Article 194 paragraph (2), Malaysia does not "*take all necessary measures to ensure that activities under their jurisdiction or control are so conducted as not to cause damage by pollution to other States and their environment, and that pollution arising from incidents or activities under their jurisdiction or control does not spread beyond the areas where they exercise sovereign rights in accordance with this Convention.*" This process begins with a discussion of points of view, moves on to effort conciliation, and, in the event that a resolution cannot be reached, ends in arbitration or another forum.

Second, At the operational level, the Indonesian government should be more active in utilizing the RFC mechanism. Numbers 1 and 2 of Section 002 SOP state that, "[i]n the event of a major oil spill threatening the region, ***the State in whose zone of responsibility the oil spill occur should assume the lead role and be initially responsible for all the***

⁶⁵ <https://www.manifoldtimes.com/news/malaysia-mmea-detains-three-vessels-for-conducting-illegal-ship-to-ship-oil-transfer/>

⁶⁶ <https://www.manifoldtimes.com/news/malaysia-mmea-conducts-forced-boarding-on-vlccs-caught-in-midst-of-sts-oil-transfer/>

actions taken related to both tracking the spills and any necessary responses”.

Nonetheless, in the context of *oil pollution* from waters east of Johor that spread to Indonesia, the Indonesian Government should be more prepared to convey notifications to the RFC *Committee* and Malaysia, supported by sufficient preliminary evidence (such as satellite images, current trajectory information, drone photos, etc.), information regarding the spread of *oil pollution* from Malaysian waters to Indonesia. Oil pollution handling equipment is also needed and prepared on Bintan Island to contain *oil pollution* from the eastern waters of Johor going far south to the coast of Bintan Island or other islands.

Third, in order to implement the second point above, transboundary *oil pollution* handling instructions or operation procedures are needed. This can be realized by improving the Decree of the Minister of Transportation Number 263 of 2020 concerning Procedures for Handling Emergency Situations for Oil Spills in Tier 3 Seas so that it also covers pollution from other countries, or drafting new technical regulations.



C. Alleged Illegal Fishing Activities

C.1. Detection and Analysis of IUU Fishing Activities in Fisheries Management Area (WPP) 711 and Surrounding Areas

As stated in several publication of maritime security detection and analysis reports by IOJI ⁶⁷, allegation of illegal fishing activities in the North Natuna Sea (NNS) shows an increase during the period April 2021, May 2022 and September 2023. The vessels that engage in illegal fishing in NNS were mostly coming from Vietnam with the highest number 100 vessels in April 2021 and the lowest number 6 vessels in December 2022.

Several studies say that fish stocks in Vietnam's Exclusive Economic Zone (EEZ) are decrease in *inshore*⁶⁸ waters as well as *offshore*⁶⁹ waters. This decline started to occur in 2000 when the number of fishing vessels in Vietnam's EEZ increased rapidly, while catches continued to decline.⁷⁰ Several Vietnamese fishing boat crews who had been arrested by the Indonesian government admitted that the decline of fish stock in Vietnamese waters was a driving factor for them to fish in the Indonesian EEZ.⁷¹ On October 25 2023, 2 (two) Vietnamese fishing vessels were arrested by the POLRI Polairud in the Anambas Conservation Area flying the Indonesian flag while operating.⁷²

There are many Vietnamese fishing vessels engaged in illegal fishing. As the impact, *European Union* (EU) imposed sanctions “*yellow card*” against Vietnamese fisheries

⁶⁷ Collection of Detection and Analysis Reports on Maritime Security Threats and IUU Fishing by the Indonesia Ocean Justice Initiative (IOJI).<https://oceanjusticeinitiative.org/analysis/>

⁶⁸ *Inshore* meaning close to the coastline

⁶⁹ *Offshore* meaning close to the EEZ maritime boundary line

⁷⁰ Wife, Jan. *Vietnam development report 2011 : natural resources management (English)*. Washington, D.C.: World Bank Group.<http://documents.worldbank.org/curated/en/509191468320109685/Vietnam-development-report-2011-natural-resources-management>.

⁷¹ <https://earthjournalism.net/stories/vietnams-fishermen-battle-a-lack-of-fish-and-china>

⁷² <https://www.kompas.id/baca/nusantara/2023/10/25/modus-pakai-bendera-indonesia-kapal-vietnam-catch-ikan-panjang-zona-konservasi-di-anambas>

products entering Europe since September 2017. The "yellow card" sanctions mean, based on *assessment* by EU, Vietnam "[fail to discharge] its duties under international law as flag, port, coastal or market State and to take action to prevent, deter and eliminate IUU fishing ..."⁷³.

The two images below show detection of fisheries activity in NNS and surrounding areas in 2022 and 2023.

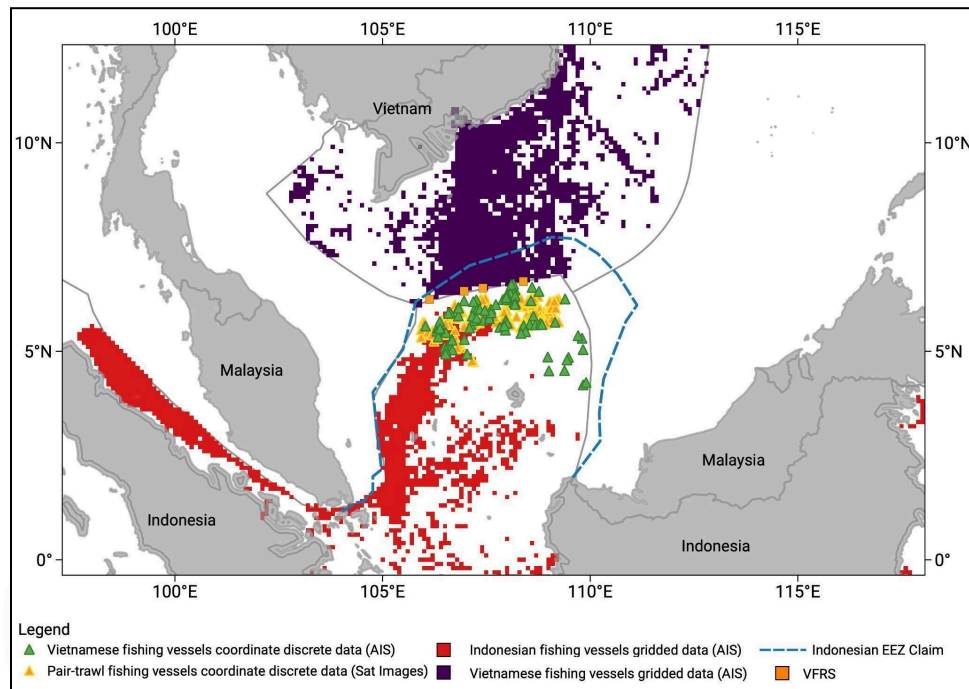


Figure 29. Fisheries Activities in the North Natuna Sea Throughout 2022⁷⁴

⁷³ [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017D1027\(01\)](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017D1027(01))

⁷⁴ *Gridded data* shows fishing activities that occur in a rectangular spatial area or what is called *grid*. This data shows that fishing activity has occurred in this area. Within a grid, fishing activities that occur can be carried out by one or more fishing vessels; *Discrete data* This means that at each location coordinate (longitude, latitude) the presence of 1 Vietnamese fishing vessel has been detected based on AIS or satellite imagery.

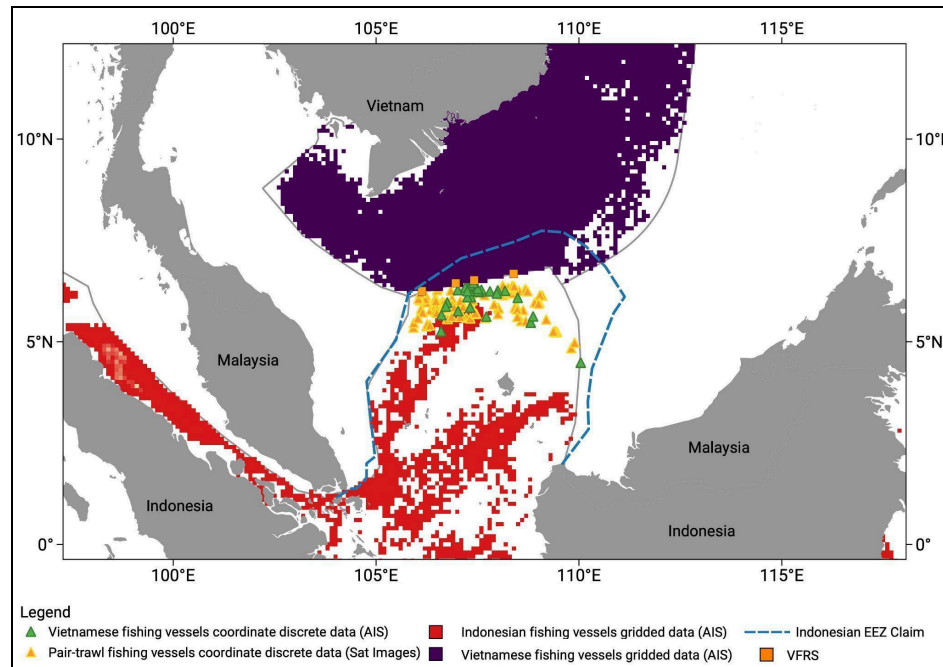


Figure 30. Fisheries Activities in the North Natuna Sea Throughout 2023

Figure 29 shows the fisheries activities in 2022 while Figure 30 shows these activities in 2023. Those pictures show a similar situation: (a) Indonesian fishing vessels (in red) are seen conducting activities in the NNS but do not reach the EEZ boundary with Vietnam on the north and east sides even though that area is Indonesia's EEZ; (b) Up to the Indonesia-Vietnam Continental Shelf border, there appears to be a high concentration of Vietnamese fishing vessels (purple); (c) Vietnamese fishing vessels are doing the illegal fishing in undisputed Indonesia's EEZ (yellow and green triangles); and (d) Vietnamese government patrol vessels (*Vietnam Fisheries Resources Surveillance/VFRS*) actively patrolling along the Indonesia-Vietnam Continental Shelf line (orange square).

Looking at those images, it is important to discuss again the EEZ line agreement between Indonesia and Vietnam which was agreed on 22 December 2022.⁷⁵ Until now there has been no official publication of the coordinate points or line for the newly agreed EEZ between Indonesia and Vietnam. Clarity of the coordinate points of the EEZ

⁷⁵<https://setkab.go.id/pernyataan-presiden-ri-pada-pernyataan-bersama-dengan-presiden-republik-socialis-vietnam-di-istana-kepresidenan-bogor-provinsi-jawa-barat-22-desember-2022/>



boundaries of Indonesia and Vietnam will provide legal certainty for both countries and, based on the good faith of both countries, the EEZ boundary lines should be able to contribute to reducing *illegal fishing* at NNS. Intensive patrolling by VFRS along the Indonesia-Vietnam Continental Shelf line during 2023, after the agreement on the Indonesia-Vietnam EEZ boundary line in December 2022, is a strong indication of Vietnam's bad faith towards Indonesia.

On January 16 2024, the Indonesia Minister of Maritime Affairs and Fisheries, Sakti Wahyu Trenggono stated that “If they (Vietnamese fishing boats) pass (Indonesia’s EEZ) by a little, we just chase them away, we don't have to arrest them, (but) we strictly [watch them].”⁷⁶ This was stated after the Minister of Maritime Affairs and Fisheries made a state visit by the President of the Republic of Indonesia to Vietnam where several cooperation agreements were signed, one of which was in the field of capture fisheries. There has been no official and detailed explanation of how the MKP statement will be implemented.

The coordinates of the EEZ boundaries of Indonesia and Vietnam have not yet been published. Apart from that, Vietnamese government patrol boats are still patrolling along the line of the Indonesian and Vietnamese Continental Shelf. The Minister needs to explain in more detail to the public how to implement “repelling Vietnamese fishing vessels” in the North Natuna Sea so that Indonesia's sovereign rights, fish resources and the North Natuna Sea ecosystem are protected from illegal fishing.

Relaxing patrols and operations is clearly not an option that the government can take. In line with the minister's statement that ecology is the commander, illegal activities

⁷⁶<https://finance.detik.com/berita-economic-bisnis/d-7144767/ri-tak-lagi-tangkap-nelayan-vietnam-yang-entering-ke-natuna-puas-dihalu>

that continue to damage fish resources and ecosystems are something that must be eradicated, especially in the current climate crisis period. The Government has committed to improving maritime security in the North Natuna Sea and mentions strengthening maritime security in the North Natuna Sea as one of the *major project* (priority projects) in the 2020 - 2024 RPJMN⁷⁷ and Government Work Plan.⁷⁸ The government needs to seriously take its role in strengthening Natuna maritime security and overseeing its implementation.

C.1.1. Alleged IUU Fishing Activities by Vietnamese Vessels in Non-Disputed Areas

Figure 31 shows the number of Vietnamese fishing vessels' operation in Indonesia's non-disputed EEZ area in the North Natuna Sea is still taking place for the last 3 years (2021-2023).

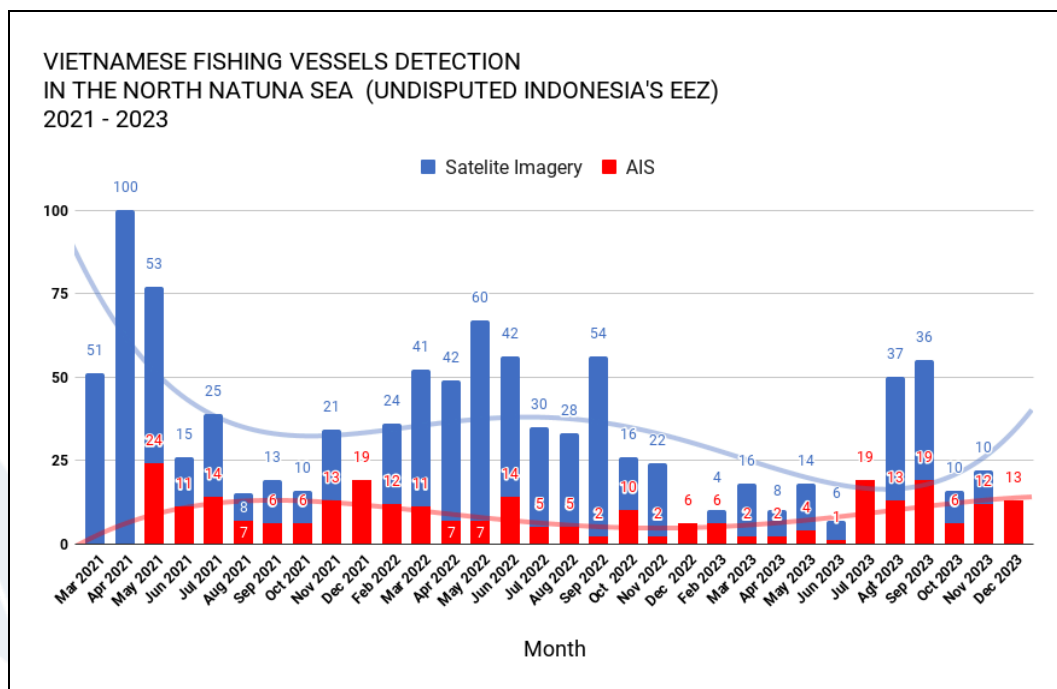


Figure 31. The number of Vietnamese fishing vessels engaged of illegal fishing in undisputed Indonesia's EEZ in 2021 - 2023 (Source: AIS, Satellite Images)

⁷⁷ Presidential Regulation Number 18 of 2020 concerning RPJMN 2020 - 2024.

⁷⁸ Presidential Regulation Number 52 of 2023 concerning Government Work Plans for 2024.

In comparison to 2022 and 2021, fewer Vietnamese fishing vessels were apprehended by Indonesian law enforcement in 2023 in the North Natuna Sea.

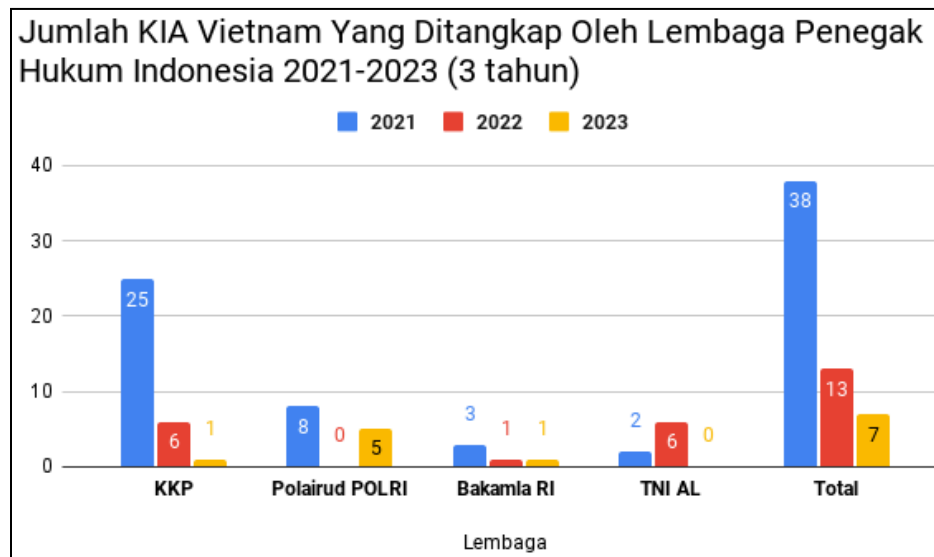


Figure 32. Trend of Vietnamese Fishing Boats Arrested by Law Enforcement 2021-2023⁷⁹

Based on the data shown in the chart above, the number of Vietnamese fishing vessels arrested by Indonesia law enforcement agencies has continued to decline from year to year since 2021. In 2023, the MMAF arrested 1 (one) Vietnamese fishing vessels in March⁸⁰, Bakamla arrested 1 (one) in August⁸¹, Polairud POLRI arrested 5 (five) in 3 (three) operations each in August⁸², October and December⁸³. Detailed information regarding sources of seizure information is presented in the document attachment.

The rampant of Vietnamese fishing vessels which are engaged in illegal fishing in NNS is validated by information obtained from Indonesian fishermen. On November 20 2023, a group of local fishermen from Natuna documented a Vietnamese fishing vessel

⁷⁹ Details of incidents involving the capture of Vietnamese fishing vessels by Indonesian law enforcement agencies are available in the attachment

⁸⁰ <https://kkp.go.id/artikel/50173-kkp-tangkap-kapal-ilegal-asal-vietnam-di-laut-natuna>

⁸¹ https://bakamla.go.id/publication/detail_news/bakamla-ri-tangkap-kia-vietnam-curi-ikan-di-laut-natuna-north

⁸² <https://humas.polri.go.id/2023/08/31/ditpolair-korpolairud-baharkam-polri-tangkap-2-kapal-ikan-berben-dera-vietnam-di-perairan-natuna-utara/>

⁸³ <https://korpolairud-news.com/2023/12/05/kp-bisma-kembali-tangkap-kapal-asing-berbendera-vietnam/>

in the eastern NNS at sea. This occurred at coordinates (lon/lat) 109.33166667, 4.32777778.⁸⁴ According to fishermen, the location of the Vietnamese fishing boat is 49 miles from Senua Island.

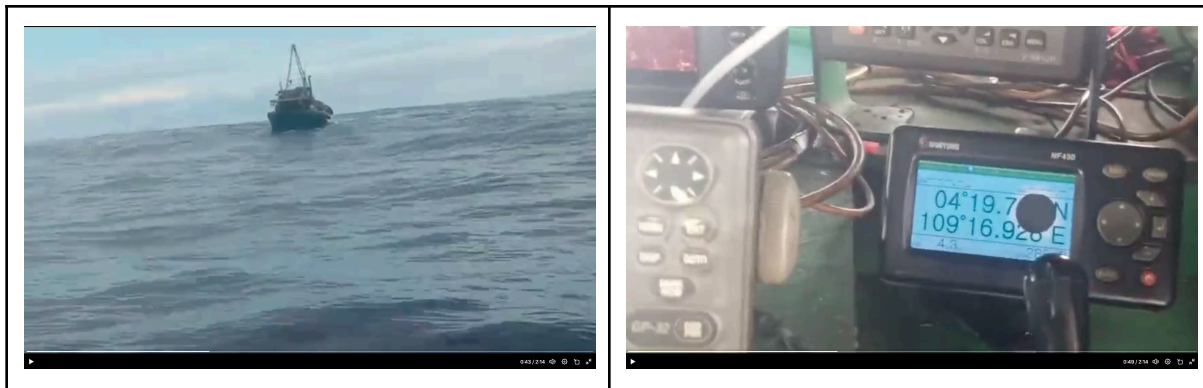


Figure 33. Documentation of Natuna Fishermen on a Vietnamese fishing vessel which is engaged in illegal fishing in NNS on November 20, 2023.

Following up on the information from fishermen on the waters, IOJI checked AIS and satellite imagery. AIS did not pick up data at the location and date stated by the fisherman, so it can be concluded that this vessel might be not broadcasting AIS. Satellite imagery on November 20 2023 at the location of the Vietnamese fishing boat activity mentioned above cannot provide a clear picture due to cloud cover.

However, By still looking at the area of interest where local fishermen meet with the Vietnamese vessel and by expanding the search time range to 7 January 2023 to 26 November 2023 (10 months), IOJI succeeded in finding a Vietnamese fishing vessel with the identity MMSI 574151209; ship name "18 A 27"⁸⁵; fishing vessel type; and the home port of Vung Tau Port, Ba Ria province, Vietnam. Historical investigations into the vessel track, this vessel allegedly engaged in *illegal fishing* in the same area as the

⁸⁴ <https://www.mongabay.co.id/2023/11/29/nelayan-natuna-kembali-laporkan-maraknya-kia-vietnam/>

⁸⁵ The name of the Vietnamese fishing vessel listed on the AIS may not be the name stated on the ship's hull and/or documents.

location where the Natuna fishermen met the Vietnamese fishing vessel, eastern zone of NNS, on November 13 2023, as shown in the figure below.

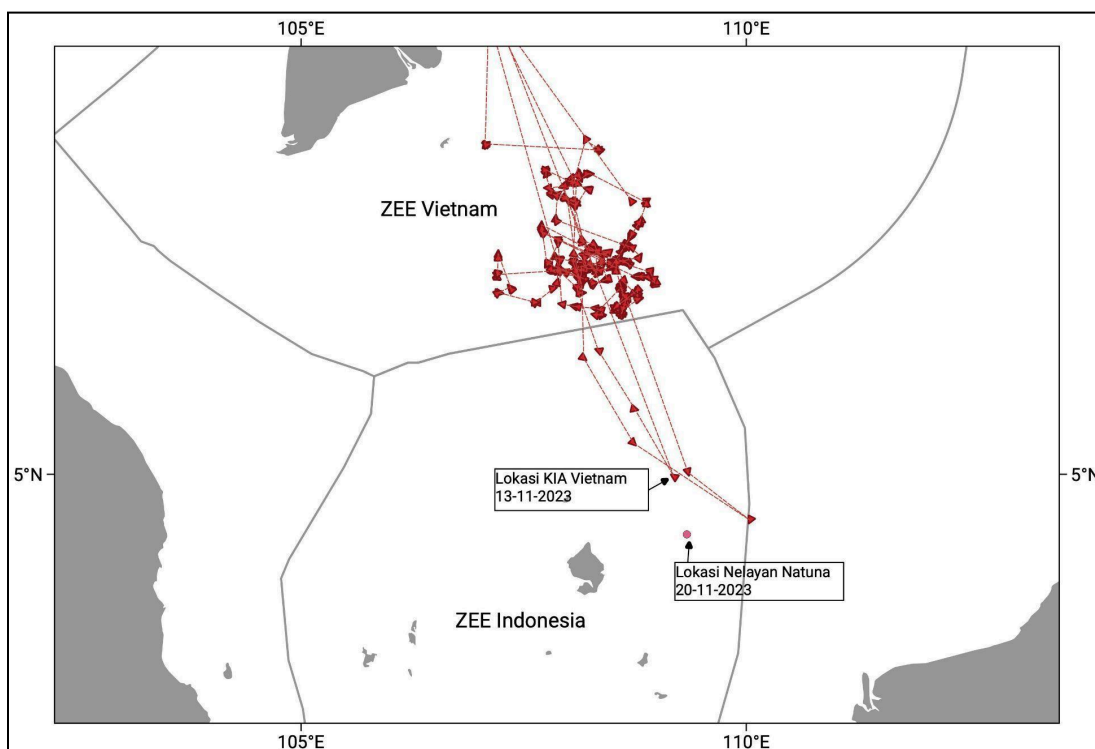


Figure 34. Trajectory of Vietnamese fishing vessel 18 A 27 (MMSI 574151209) in NNS

Vessel 18 A 27 with MMSI number 574151209, was reported to have been engaged in illegal fishing at NNS since 2021 in the prior IOJI report.⁸⁶

C.1.2. Natuna Maritime Security Major Project

Strengthening maritime security in the North Natuna Sea is something that the government is already aware of. Furthermore, the Government has even established one major project RPJMN 2020-2024 is "Strengthening Maritime Security in Natuna" where the adequacy of defense equipment, TNI facilities and infrastructure is integrated⁸⁷ and the adequacy of alpalkamla, BAKAMLA facilities and infrastructure

⁸⁶ <https://oceanjusticeinitiative.org/2021/06/14/iuu-fishing-di-laut-natuna-utara-mei-2021/>

⁸⁷ The Integrated TNI Unit was inaugurated by the TNI Commander on 18 December 2018: <https://www.cnnindonesia.com/nasional/20181218180004-20-354636/panglima-resmikan-satuan-tni-terintegrasi-di-natuna>



will continue to be increased to reach 100% in 2024. Funding has also been stated at IDR 12.2 trillion from the APBN (IDR 2.44 trillion/year).

Daftar Proyek Prioritas Strategis (Major Project)				
No	Nama Proyek Prioritas Strategis	Manfaat	Indikasi Pendanaan (Rp Triliun)	Pelaksana
41	Penguatan Keamanan Laut di Natuna	<ul style="list-style-type: none"> Peningkatan <i>deterrent effect</i> dan penegakan kedaulatan di perairan Natuna; Penurunan aktivitas perompakan, kekerasan dan tindak kejahatan di laut, IUUF, <i>trans-national crimes</i> dan penguatan sistem pengelolaan pengamanan navigasi. 	12,2 (APBN)	a.l. Kemenhan/TNI, Bakamla

41. Penguatan Keamanan Laut di Natuna (1/2)						
Latar Belakang	1. Adanya eskalasi ancaman di wilayah Natuna; 2. Masih adanya risiko perompakan, kekerasan dan tindak kejahatan di laut, <i>Illegal Unreported and Unregulated Fishing</i> (IUUF), <i>trans-national crimes</i> serta lemahnya sistem pengelolaan pengamanan navigasi.					
Manfaat	1. Peningkatan <i>deterrent effect</i> dan penegakan kedaulatan di perairan Natuna; 2. Penurunan aktivitas perompakan, kekerasan dan tindak kejahatan di laut, IUUF, <i>trans-national crimes</i> dan penguatan sistem pengelolaan pengamanan navigasi.					
Durasi	2020-2024 (5 tahun)					
Indikasi Target dan Pendanaan	INDIKASI TARGET					INDIKASI PENDANAAN
	2020	2021	2022	2023	2024	
	Persentase Kecukupan Alutsista dan Sarpras Satuan TNI Terintegrasi di Natuna 40%	Persentase Kecukupan Alutsista dan Sarpras Satuan TNI Terintegrasi di Natuna 55%	Persentase Kecukupan Alutsista dan Sarpras Satuan TNI Terintegrasi di Natuna 70%	Persentase Kecukupan Alutsista dan Sarpras Satuan TNI Terintegrasi di Natuna 85%	Persentase Kecukupan Alutsista dan Sarpras Satuan TNI Terintegrasi di Natuna 100%	
	Persentase Kecukupan Alpalkamla dan Sarpras Bakamla di Natuna 40%	Persentase Kecukupan Alpalkamla dan Sarpras Bakamla di Natuna 47%	Persentase Kecukupan Alpalkamla dan Sarpras Bakamla di Natuna 60%	Persentase Kecukupan Alpalkamla dan Sarpras Bakamla di Natuna 80%	Persentase Kecukupan Alpalkamla dan Sarpras Bakamla di Natuna 100%	Rp 12,2 Triliun (APBN)

Figure 35.Major project Deep Natuna Sea SecurityNational Medium Term Plan 2020-2024 (Presidential Regulation Number 18 of 2020)

In 2020, Indonesia faced the COVID-19 pandemic which required the government to reallocate the APBN for the purposes of handling COVID-19. In the Government Work Plan for 2021 (RKP 2021) before the amendment (Presidential Decree 86 of 2020) it was stated that the budget allocation for the National Priority of Strengthening Political, Legal and Security Stability and Transforming Public Services (strengthening Natuna maritime security is included) was IDR 881,898,900,000.00 (eight hundred eighty one billion eight hundred ninety eight million nine hundred thousand rupiah). Institutions responsible in the major project Natuna Sea Security are TNI and BAKAMLA in accordance with Presidential Decree 86 of 2020.

PRIORITAS NASIONAL/ MAJOR PROJECT	ALOKASI (Rp. JUTA)
Akses Air Minum Perpipaan (10 Juta Sambungan Rumah)	
Akses Sanitasi (Air Limbah Domestik) Layak dan Aman (90% Rumah Tangga)	
Rumah Susun Perkotaan (1 Juta)	
MEMBANGUN LINGKUNGAN HIDUP, MENINGKATKAN KETAHANAN BENCANA, DAN PERUBAHAN IKLIM	2.021.610,7
Penguatan Sistem Peringatan Dini Bencana	
Pembangunan Fasilitas Pengolahan Limbah B3	
MEMPERKUAT STABILITAS POLHUKHANKAM DAN TRANSFORMASI PELAYANAN PUBLIK	881.898,9
Penguatan NSOC - SOC dan Pembentukan 121 CSIRT	
Penguatan Keamanan Laut di Natuna	

Figure 36. Major project Deep Natuna Sea Security Government Work Plan for 2021 before changes (Presidential Regulation Number 86 of 2020)

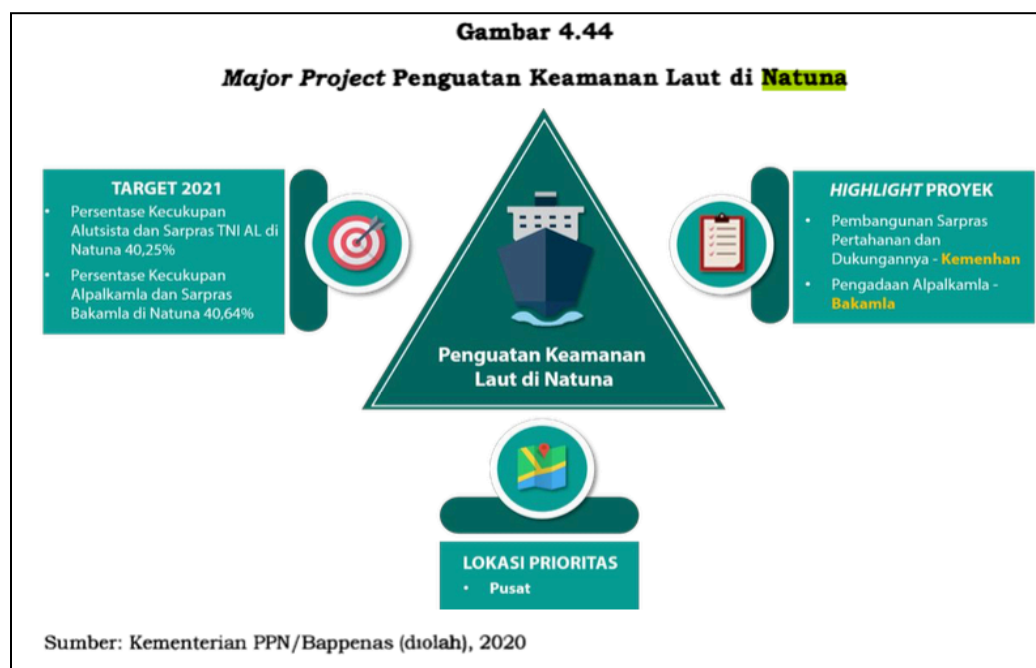


Figure 37. Major project Deep Natuna Sea Security Government Work Plan for 2021 before changes (Presidential Regulation Number 86 of 2020).

The Government Work Plan for 2021 has been updated (amended by Presidential Regulation Number 122 of 2020). There is a fairly high increase in budget allocation through this update for the National Priority of Strengthening the Stability of Political, Legal and Security Affairs and Transforming Public Services (strengthening Natuna



maritime security is included) from IDR 881.9 billion to IDR 3.6 trillion. Designated for *major project* strengthening Natuna maritime security is IDR 2.76 trillion, of which BAKAMLA is given a budget of IDR 30 billion for the procurement of UAVs (*unmanned aerial vehicle*) and the remaining IDR 2.73 trillion is for the Ministry of Defense.

Prioritas Nasional/ Major Project/ Proyek	Alokasi (Rp Juta)	Instansi Pelaksana
• Prasarana pengelolaan database dan teknologi informasi kebencanaan	10 500,0	Badan Nasional Penanggulangan Bencana (BNPB)
• Satuan Pendidikan Aman dari Bencana (SPAB)	3 200,0	Badan Nasional Penanggulangan Bencana (BNPB)
• Layanan Sistem Peringatan Dini	4 600,0	Badan Nasional Penanggulangan Bencana (BNPB)
• Lingkungan Hidup	1 300,0	Pemda (DAK)
PN 7. MEMPERKUAT STABILITAS POLHUKHANKAM DAN TRANSFORMASI PELAYANAN PUBLIK	3.600.592,7	
42) Penguatan NSOC - SOC dan Pembentukan 121 CSIRT, dengan proyek antara lain:	839.699,4	
• Pembangunan Ruang Pemantauan Siber dan Pusat Data SOC Kejaksaan RI	82.089,0	Kejaksaan Republik Indonesia
• Integrasi Cyber Intelligent Analytics (CIA)	50.000,0	Badan Intelijen Negara
• Perluasan Cakupan Area National Cybersecurity Operation Center (RKP 2021)	325 000,0	Badan Siber dan Sandi Negara
• Pembangunan Kapasitas Nasional Computer Security Incident Response Team (Nat-CSIRT) (Carry over) (RKP 2021)	150.000,0	Badan Siber dan Sandi Negara
• Penguatan National Data Center Berstandar Internasional (Carry Over) (RKP 2021)	175 000,0	Badan Siber dan Sandi Negara
43) Penguatan Keamanan Laut di Natuna, dengan proyek antara lain:	2.760.893,3	
• Operasi Militer Selain Perang Matra Laut (Prioritas)	276 709,7	Kementerian Pertahanan
• Sarpras militer pulau strategis (Prioritas)	73 006,0	Kementerian Pertahanan
• Senjata dan amunisi yang diadakan (Prioritas)	636 493,3	Kementerian Pertahanan
• KRI, KAL, Alpung dan Ranpur/Rantis Matra Laut (Prioritas)	1 744.684,3	Kementerian Pertahanan
• Unmanned Aerial Vehicle (UAV)	30.000,0	Badan Keamanan Laut

Figure 38. Major project Deep Natuna Sea Security Updated Government Work Plan for 2021 (Presidential Regulation Number 122 of 2020).

Furthermore, in the 2022 Government Work Plan document (RKP 2022)⁸⁸ it appears that the targets set in the 2020 - 2024 RPJMN have not been achieved (see Figure 39). Referring to the 2020 - 2024 RPMN target, in 2022 the adequacy of TNI and BAKAMLA facilities and infrastructure should be 70% and 60% respectively. However, in the 2022 RKP, it is stated that the 2022 achievement targets for the adequacy of TNI and BAKAMLA infrastructure are 40.59% and 44.17%, respectively. Another distinction is

⁸⁸ Presidential Regulation Number 85 of 2021 concerning Government Work Plans for 2022.

that the type of activities that will be undertaken is made more apparent in the 2022 RKP, such as the acquisition of unmanned aerial vehicles (UAVs) and Strategic Island Military Infrastructure. The amount of funds allocated for the National Priority of Strengthening the Stability of Political, Legal and Security Affairs and Transforming Public Services (strengthening Natuna maritime security is included) in 2022 is IDR 286,833,900,000.00. This amount is smaller compared to 2021.

The budget for strengthening Natuna maritime security received IDR 78,263,700,000.00.

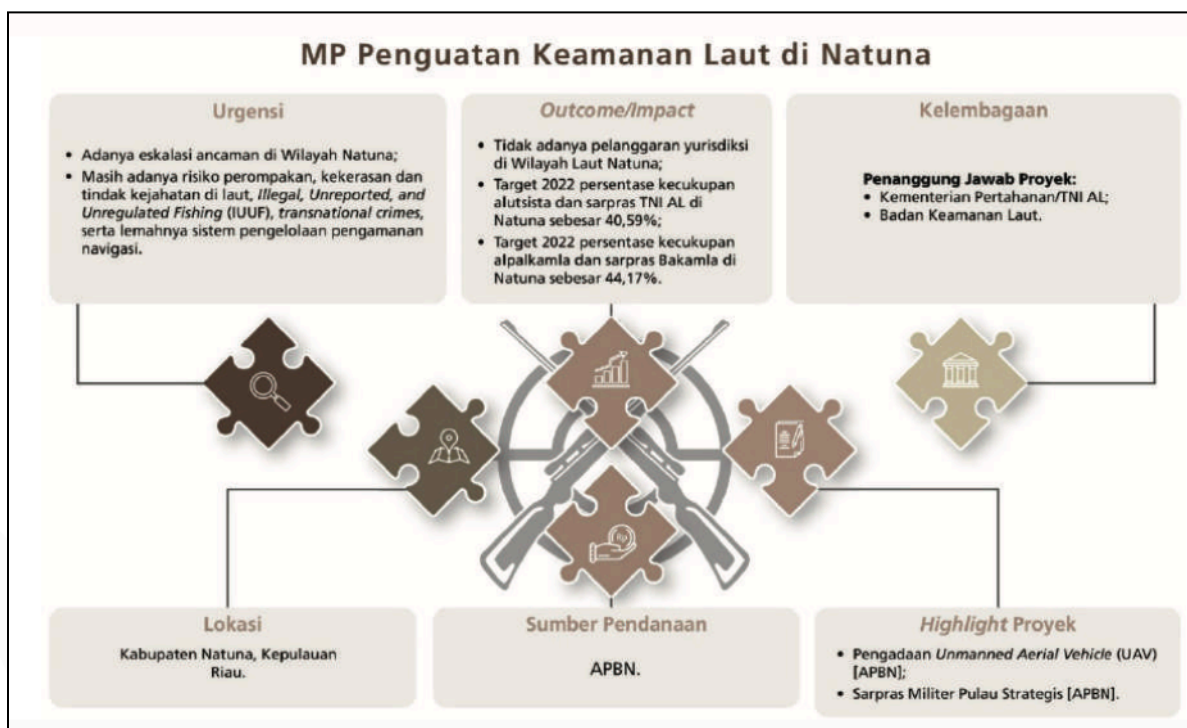


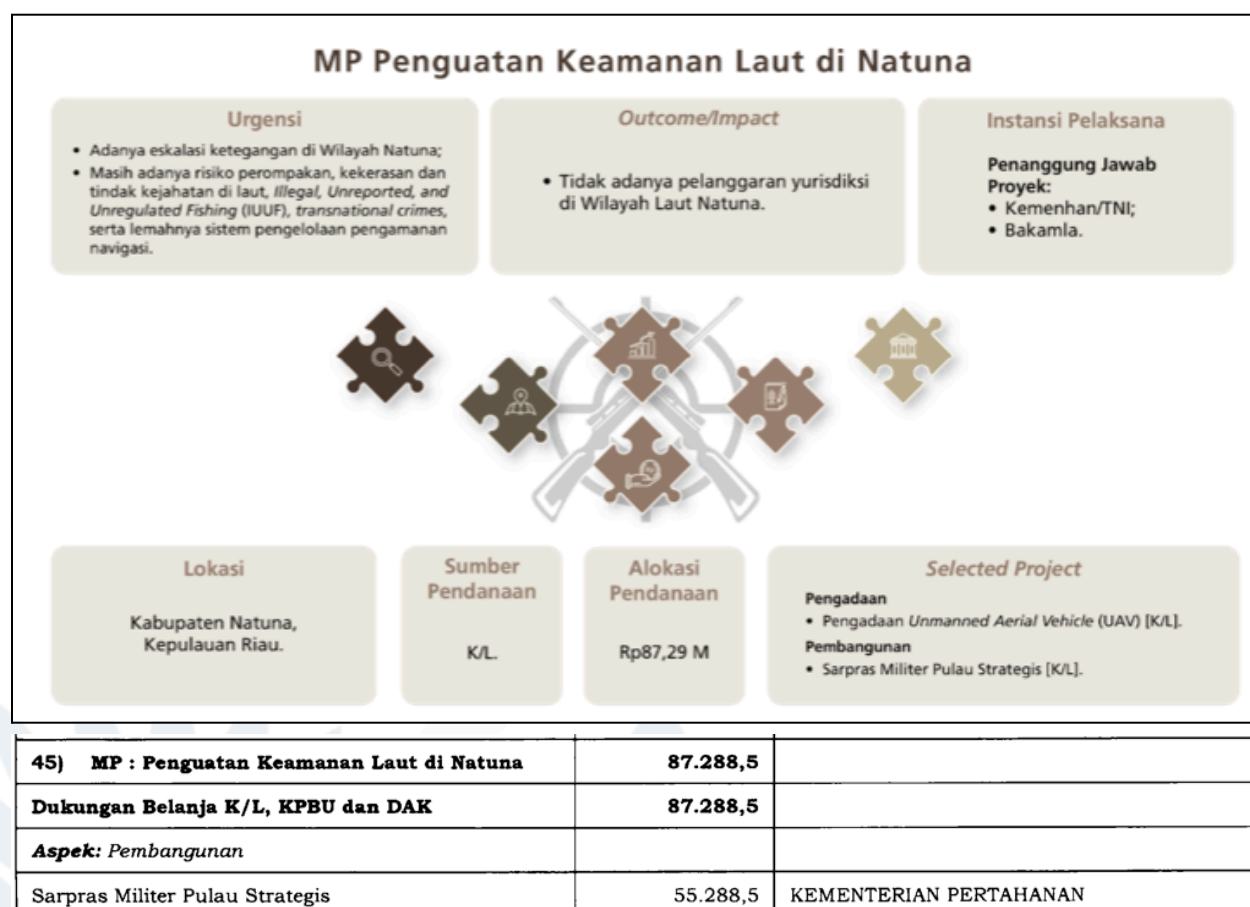
Figure 39. Natuna Maritime Security Major Project Government Work Plan for 2022 (Presidential Regulation Number 85 of 2021).



Prioritas Nasional / Major Project	Alokasi (Rp Juta)
Memperkuat Stabilitas Polhukhankam dan Transformasi Pelayanan Publik	286.833,9
Penguatan NSOC-SOC dan Pembentukan 121 CSIRT	208.570,2
Penguatan Keamanan Laut di Natuna	78.263,7

Figure 40. Natuna Maritime Security Major Project Government Work Plan for 2022 (Presidential Regulation Number 85 of 2021).

Along the way, the 2022 RKP has undergone changes. In the Presidential Regulation Number 115 of 2021, the budget allocation for strengthening Natuna maritime security in 2022 has increased by approximately 9 billion to IDR 87.3 billion.





Prioritas Nasional / Major Project	Alokasi (Rp Juta)	Instansi Pelaksana
Aspek: Pengadaan		
Pengadaan <i>Unmanned Aerial Vehicle</i> (UAV)	32.000,0	BADAN KEAMANAN LAUT

Figure 41. Natuna Maritime Security Major Project Government Work Plan for 2022 Changes (Presidential Regulation Number 115 of 2021).

In the 2023 Government Work Plan (RKP 2023)⁸⁹, there is a new activity of Maritime Security Base construction in Setokok Island. As stated in the 2022 BAKAMLA Performance Report, the acquisition of UAVs has been completed.⁹⁰ The budget allocation provided for Natuna maritime security major project in the 2023 RKP is IDR 166.9 billion.

⁸⁹ Presidential Regulation Number 108 of 2022 concerning Government Work Plans for 2023.

⁹⁰ https://bakamla.go.id/uploads/ppid/LKJ_BAKAMLA_RI_TAHUN_2022.pdf

Major Project Penguatan Keamanan Laut di Natuna

Dilatarbelakangi oleh adanya eskalasi ancaman di Wilayah Natuna dan meningkatnya risiko perompakan; kekerasan dan tindak kejahatan di laut; *Illegal, Unreported, and Unregulated (IUU) Fishing*; serta *transnational crimes*. Oleh karena itu, MP tersebut diarahkan untuk pembangunan sarana prasarana pertahanan dan dukungannya, serta pengadaan alat peralatan keamanan laut (alpalkamla).

MP Penguatan Keamanan Laut di Natuna diharapkan dapat meningkatkan *deterrent effect* dan penegakan kedaulatan di Perairan Natuna, menurunkan aktivitas perompakan, kekerasan dan tindak kejahatan di laut, *IUU Fishing*, serta *transnational crimes*. Dari sisi pendanaan, pelaksanaan MP tersebut dibiayai dari APBN dengan indikasi pendanaan selama lima tahun sebesar Rp12,2 triliun.

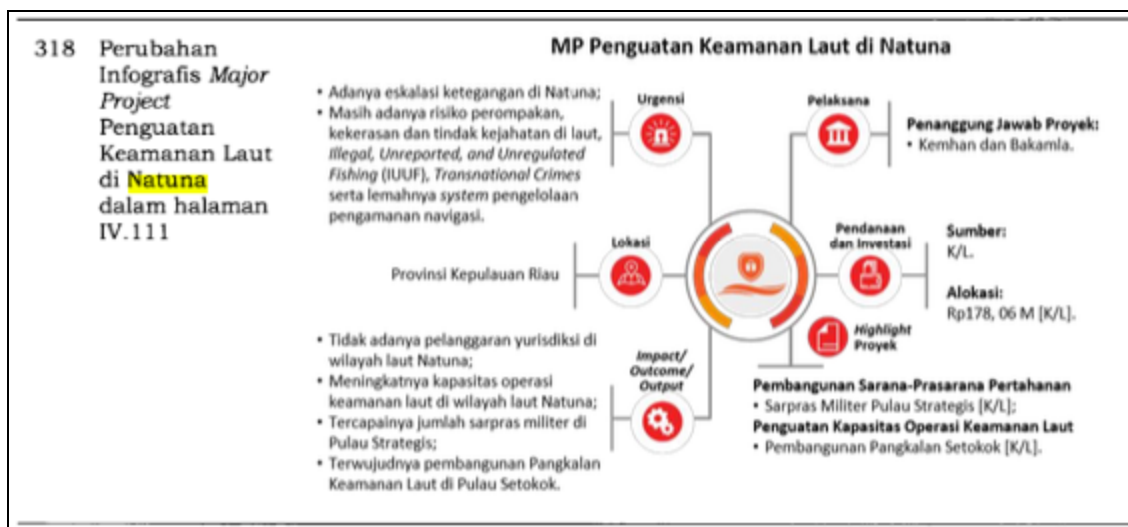
MP Penguatan Keamanan Laut di Natuna



Prioritas Nasional / Major Project		Rp. Juta
07 - Memperkuat Stabilitas Polhukhankam dan Transformasi Pelayanan Publik		
44	Penguatan NSOC-SOC dan Pembentukan 121 CSIRT	330.658,8
45	Penguatan Keamanan Laut di Natuna	166.897,9

Figure 42. Natuna Maritime Security Major Project Government Work Plan for 2023 (Presidential Regulation Number 108 of 2022).

Along the way, the 2023 RKP was updated with Presidential Regulation Number 134 of 2022. The targeted activities are still the same. It is called Strategic Island Military Infrastructure and Setokok Base Development. The total budget allocation for this activity increased from IDR 166.9 billion to IDR 178 billion where the construction of the Setokok Marine Security Base is allocated IDR 155 .75 billion and Strategic Island Military Infrastructure amounting to IDR 22.3 billion.



45) MP: Penguatan Keamanan Laut di Natuna		
Dukungan Belanja K/L	178.058,7	
Aspek: Penguatan Kapasitas Operasi Keamanan Laut		
Pembangunan Pangkalan Setokok	155.737,1	BADAN KEAMANAN LAUT
Aspek: Pembangunan Sarana-Prasarana Pertahanan		
Sarpras Militer Pulau Strategis	22.321,6	KEMENTERIAN PERTAHANAN

Figure 43. Natuna Maritime Security Major Project Government Work Plan for 2023 Changes (Presidential Regulation Number 134 of 2022).

In the Government Work Plan (RKP 2024)⁹¹, the activity mentioned is only the construction of the Setokok Maritime Security Base without any Strategic Island Military Infrastructure. The total budget allocation for the construction of the Setokok Maritime Security Base is IDR 188 billion.

⁹¹ Presidential Regulation Number 52 of 2023 concerning Government Work Plans for 2024.



Prioritas Nasional / Major Project		Rp. Juta
07 - Memperkuat Stabilitas Polhukhankam dan Transformasi Pelayanan Publik		
43	Penguatan NSOC-SOC dan Pembentukan 121 CSIRT	259.480,6
44	Penguatan Keamanan Laut di Natuna	188.089,2

Figure 44. Natuna Maritime Security Major Project Government Work Plan 2024

The location of the Setokok Island BAKAMLA Base is shown in the following picture:

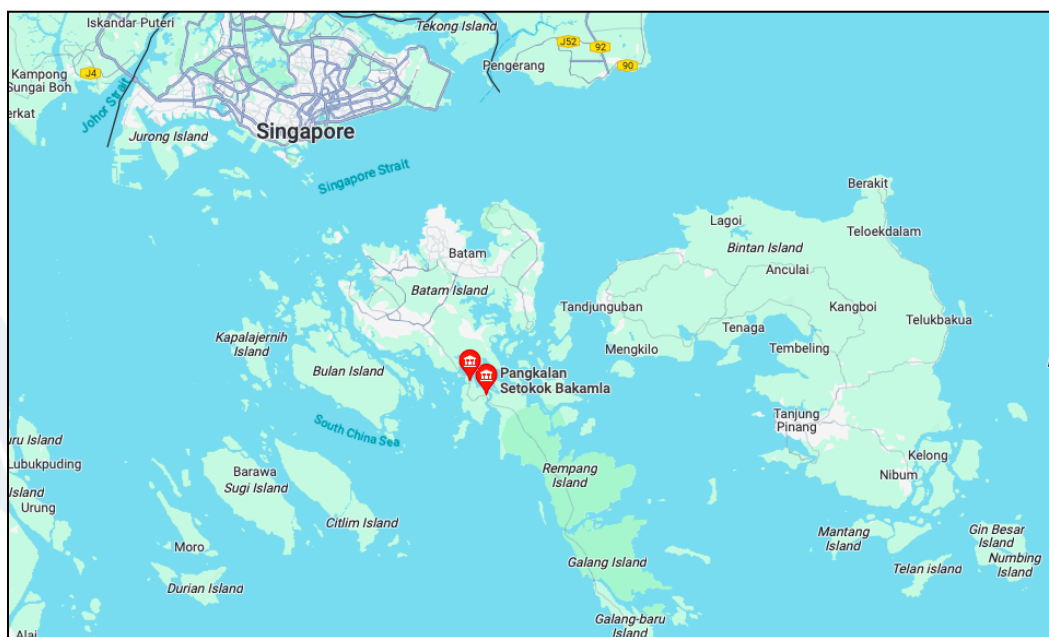


Figure 45. Location of Setokok Marine Security Base, Batam

And the location of the Natuna Integrated TNI Unit is shown in the following picture:



Figure 46. Location of Natuna Integrated TNI Unit, Lampa Strait

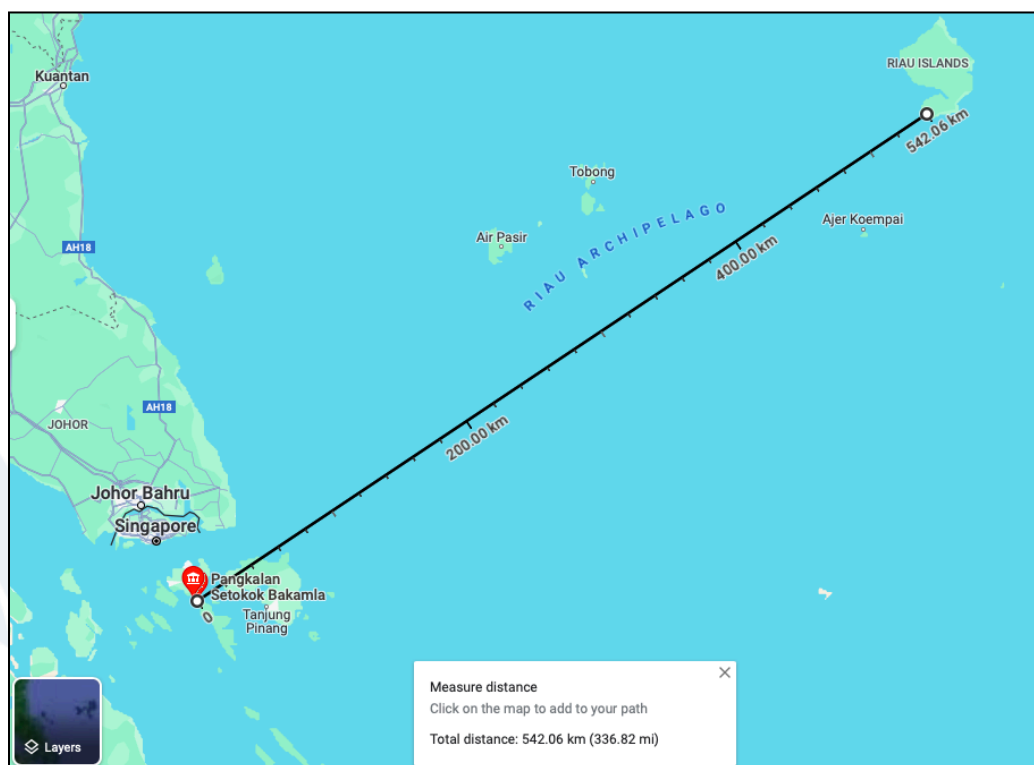


Figure 47. Distance between Setokok BAKAMLA Base and Lampa Strait Integrated TNI Unit



The breakdown of budget allocations for Natuna Sea maritime security major projects from 2020 to 2024 is presented in the following table:

Planning Document	Activity	sub-activities	2020	2021	2022	2023	2024
RPJMN	MP Kamla Natuna		2,44 T	2,44 T	2,44 T	2,44 T	2,44 T
RKP 2021	PN 7			881.898,9 M			
		MP Kamla Natuna		?			
RKP 2021 update	PN 7			3.600.592,7 jt			
		MP Kamla Natuna		2.760.893,3 jt			
RKP 2022	PN 7				286.833,9 jt		
		MP Kamla Natuna			78.263,7 jt		
RKP 2022 update		MP Kamla Natuna			87.288,5 jt		
RKP 2023		MP Kamla Natuna				166.897,9 jt	
RKP 2023 update		MP Kamla Natuna				178.058,7 jt	
RKP 2024		MP Kamla Natuna					188.089,2 jt

We summarize :

1. The analysis in this section does not include the 2020 RKP and its updates because the 2020 - 2024 RPJMN was published on 17 January 2020 while the 2020 RKP and its updates were published respectively on 25 September 2019⁹² and December 31,

⁹² Presidential Regulation Number 61 of 2019 concerning Government Work Plans for 2020.



2019.⁹³ Natuna maritime security major project was firstly introduced in the RPJMN so that it doesn't exist in the 2020 RKP and its updates.

2. The RPJMN notes that IDR 12.2 trillion for five years (2020–2024) or IDR 9.76 trillion for four years (2020 omitted) is the funding allotted for the Natuna maritime security major project. The entire budget allotted to the Natuna maritime security major project for the years 2021–2024 is IDR 3,214,329.7 million, or IDR 3.21 trillion (see table above, yellow-colored cell). This amounts to 32.88% of the funds indicated in the RPJMN for 2020–2024. Assuming that the Natuna maritime security major project budget request for 2020–2024 RPJMN is a perfect need. Thus, we may conclude that 2021–2024 funding allocation is still too small and that the next government must continue its commitment to bolstering Natuna's maritime security.
3. Despite the minimum total funds allocated for Natuna maritime security major project, it should be appreciated that in 2021 the funds allocated is IDR 2.76 trillion, exceeding the average annual funding indication, IDR 2.44 trillion. 2021 is a year where Indonesia is still in a pandemic situation, but the funding allocation of IDR 2.76 trillion shows that the government is working hard to realize the Natuna maritime security major project.
4. However, the allocation of funds in the following year, 2022, is less than 2021 (Rp. 87.3 billion compared to Rp. 2.76 trillion) and even much less than the average of RPJMN funding per year (Rp. 87.3 billion compared to Rp. 2, 44 trillion).
5. The funding allocation for the Natuna maritime security major project is always improving for the 3 year period: 2022, 2023, and 2024

⁹³ Minister of National Development Planning Regulation Number 11 of 2019 concerning Updates to the Government Work Plan for 2020.



C.1.3. IUU Fishing Activities by Indonesian Fishing Vessels (KII) at WPP-711

C.1.3.1. Fishing Ground Violations by Indonesian Fishing Vessels Using Jaring Tarik Berkantong

Besides *illegal fishing* by Vietnamese fishing vessels in Indonesian waters, IOJI also observed potential illegal fishing in Indonesian territorial waters engaged by domestic fishing vessels using jaring tarik berkantong fishing gear. In 2021, the Ministry of Maritime Affairs and Fisheries introduced the “jaring tarik berkantong” (“SV-JTK”) fishing gear⁹⁴ through Minister of Maritime Affairs and Fisheries Regulation Number 18 of 2021 (“PermenKP 18/2021”).⁹⁵ Jaring tarik berkantong is a fishing gear that is basically cantrang (trawl) with some modification. The Director General of Capture Fisheries stated that the SV-JTK is a different fishing gear from cantrang and can be used in NRI WPP.⁹⁶

IOJI detection found two examples of fishing vessel activity with SV-JTK fishing gear in WPP-NRI. These vessels are the “Netral Abadi 3” and “Wiro Wibowo-I”.

The detailed identities of the two vessels are as follows:

⁹⁴ The abbreviation code for Pocketed Drag Nets is based on PermenKP 18/2021

⁹⁵ Regulation of the Minister of Maritime Affairs and Fisheries Number 18 of 2021 concerning the Placement of Fishing Equipment and Fishing Aids in the Fisheries Management Areas of the Republic of Indonesia and the High Seas and the Arrangement of Fishing Andons

⁹⁶<https://www.antaranews.com/berita/2755917/dirjen-kkp-tegaskan-jaring-tarik-berkantong-beda-dengan-cantrang>



NAMA KAPAL	NOMOR SIPI/SIKPI	TANGGAL TERBIT	TANGGAL BERLAKU	ALAT TANGKAP	GT KAPAL	TANDA SELAR	DAERAH PENANGKAPAN	PELABUHAN PANGKALAN
NETRAL ABADI - 3	33.24.0001.134.57911	02 Januari 2024	31 Desember 2024	Jaring Tarik Berkantong (Es Batu)	99.00	JUWANA/GT.99 No.1890/Gc	WPP NRI 712 (L. Jawa), WPP NRI 713 (Sl. Makassar; Tl. Bone; L. Flores; dan L. Bali)	PPP. Bajomulyo , PPP. Tasik Agung
WIRO WIBOWO I	33.23.0001.135.51411	19 Desember 2023	31 Desember 2024	Jaring Tarik Berkantong (Freezer)	98.00	JUWANA/GT.98 No.1974/Gc	WPP NRI 711 (Sl. Karimata; L. Natuna dan Laut Natuna Utara) 30 mil keatas (WPP-711), ZEEI WPP NRI 711 (ZEEI L. Natuna Utara) 30 mil keatas (WPP-711)	PP. Selakau, PPP. Bajomulyo

Figure 48. The Details of the Wiro Wibowo-I and Netral Abadi-3 vessels
(Source:<https://perizinan.kkp.go.id/grid.php?target=aktif&doc=6&q=>).

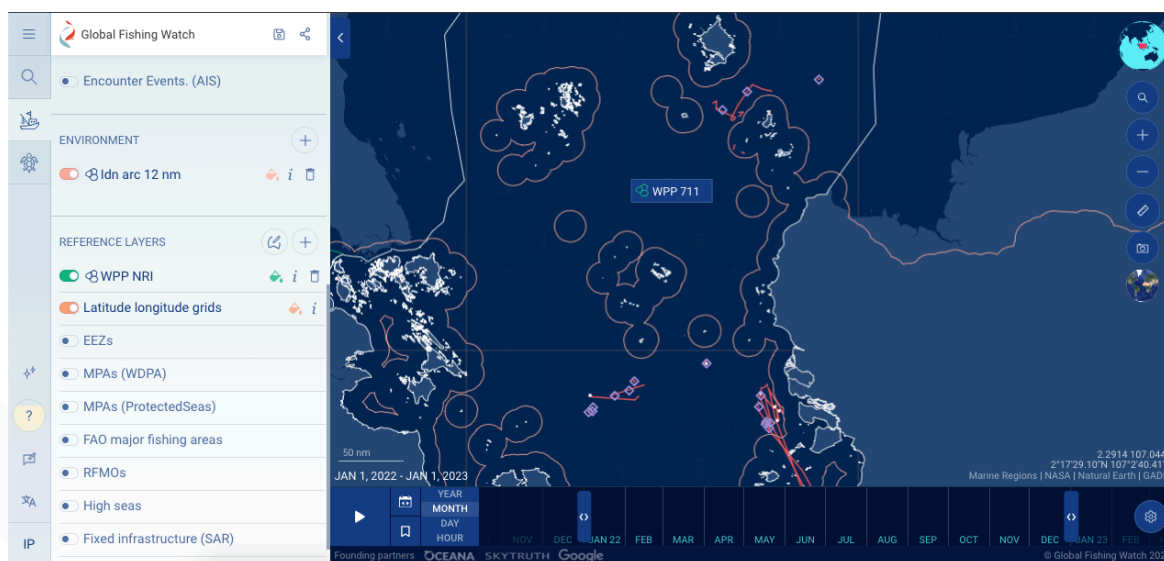


Figure 49. KM Netral Abadi 3 Fishing Activities in WPP 711 in 2022

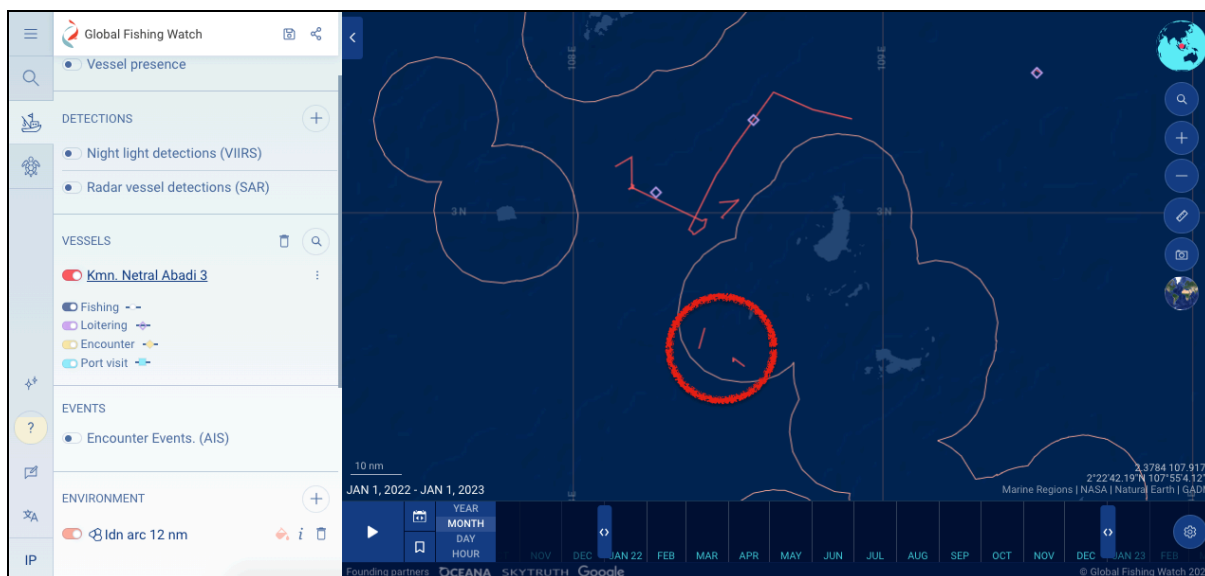


Figure 50. Enlargement of Figure 49: Fishing Activities of KM Netral Abadi 3 in WPP 711 in 2022 in an area of less than 12 miles.



Figure 51. KM Netral Abadi 3 fishing activities in WPP 713 in 2023 until it enters an area of less than 12 miles.

Figure 51 shows the fishing activities of the 99 GT KM Netral Abadi 3 vessel in 2023. In the period January - December 2024 the vessel obtained a registered fishing area at WPP 712 and WPP 713. Based on the Minister of Maritime Affairs and Fisheries Regulation 18/2021, SV-JTK vessels with sizes above 30 GT can catch fish above 12

nautical miles, except in WPP-711 which requires above 30 nautical miles. AIS data (Figure 52 and 53) shows that KM Netral Abadi 3 is allegedly operating under 12 nautical miles at WPP 713 on January 2024.

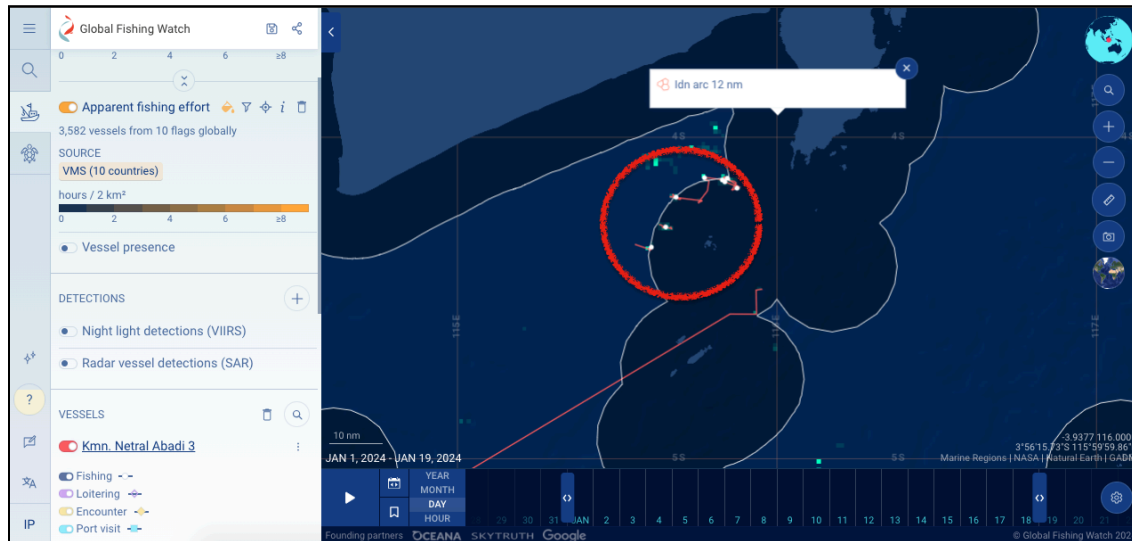


Figure 52. KM Netral Abadi 3's fishing activities in WPP 713 will enter an area of less than 12 miles in January 2024 (Source:Global Fishing Watch)

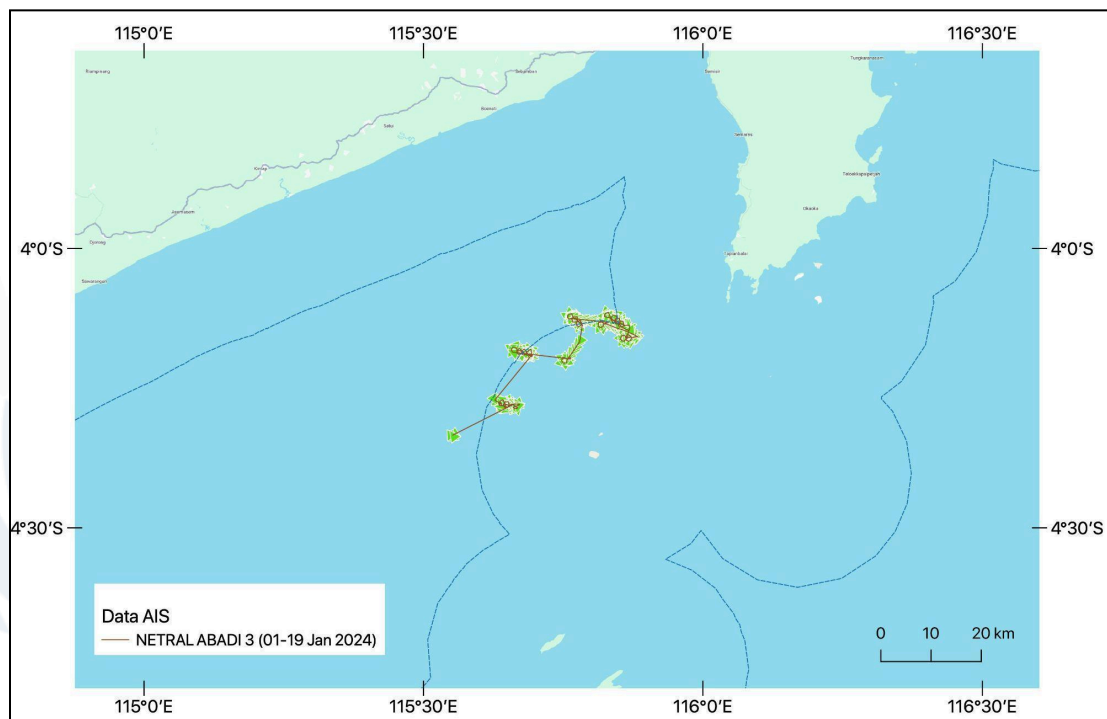


Figure 53. KM Netral Abadi 3's fishing activities in WPP 713 will enter an area of less than 12 miles in January 2024 (Source: AIS)

The image below shows the vessel track of the Wiro Wibowo I:

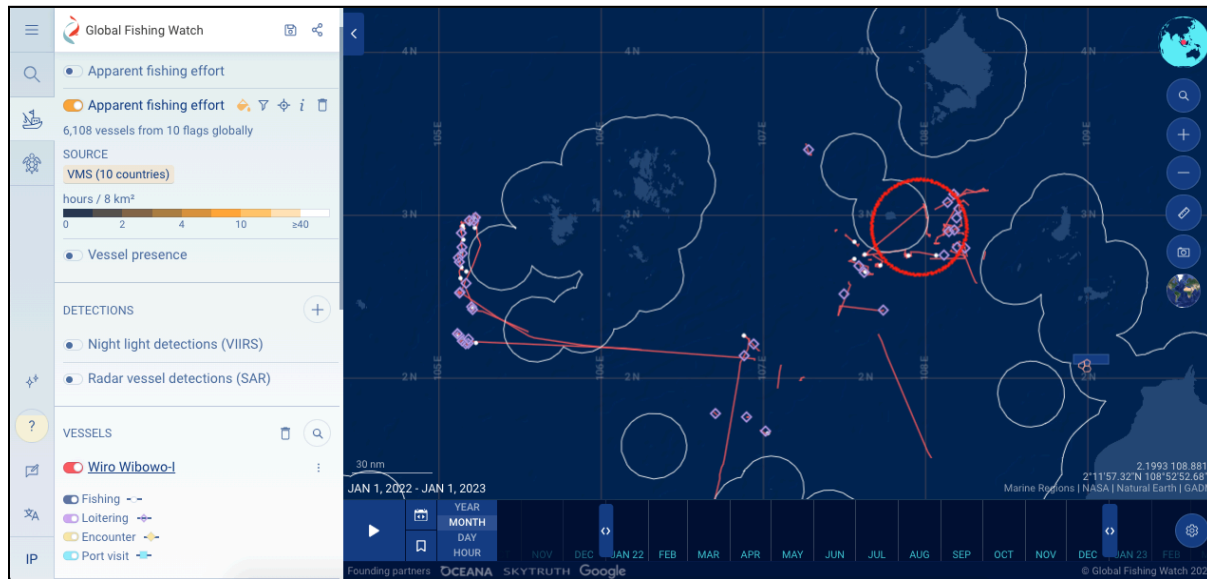


Figure 54. Trajectory of the Wiro Wibowo-I Vessel with in WPP 711 in 2022

The Wiro Wibowo-I is a fishing vessel with 98 GT size and equipped with jaring tarik berkantong gear. This vessel has obtained a fishing license in WPP-711 (North Natuna Sea) for the period December 2023 - December 2024. As previously explained, based on PermenKP 18/2021, jaring tarik berkantong fishing vessels with a size of over 30 GT with a WPP-711 fishing area can fish in areas above 30 miles from the shoreline. Figure 54 shows strong indications that the Wiro Wibowo-I vessel violated the fishing area permit because it operated in an area less than 12 miles from the coastline.

The rule details for using SV-JTK according to Minister of Maritime Affairs and Fisheries Regulation (PermenKP) 18/2021 are as follows:



NO	ALAT PENANGKAPAN IKAN					KAPAL				JALUR				WPPNRI di PERAIRAN LAUT											KETERANGAN		
	Pengelompokan	Kode-Singkatan	Sifat	Ukuran Selektifitas dan kapasitas	ABPI	TM	≤ 5 GT	>5-10 GT	>10-30 GT	>30 GT	IA	IB	II	III	Laut Lepas	571	572	573	711	712	713	714	715	716		717	718
3	Jaring Tarik Berkantong	02.2.6 SV-JTK	Aktif	ukuran mata jaring kantong ≥2 inci menggunakan mata jaring berbentuk persegi (square mesh), panjang Tali Risa Atas ≤40 m, dan panjang tali selambar ≤300 m	-	DL	DL	√	DL	DL	DL	√	DL	DL	DL	DL	DL	DL	DL	√	DL	DL	DL	DL	DL	DL	-
				ukuran mata jaring kantong ≥2 inci menggunakan mata jaring berbentuk persegi (square mesh), panjang Tali Risa Atas ≤60 m, dan panjang tali selambar ≤900 m untuk setiap sisi	-	DL	DL	DL	√	DL	DL	DL	√	√	DL	DL	DL	DL	DL	√	DL	DL	DL	DL	DL	DL	-
				ukuran mata jaring kantong ≥2 inci menggunakan mata jaring berbentuk persegi (square mesh), panjang Tali Risa Atas ≤40 m, dan panjang tali selambar ≤300 m	-	DL	DL	DL	DL	√	DL	DL	DL	√	DL	DL	DL	DL	√	√	DL	DL	DL	DL	DL	DL	* daerah Penangkapan Ikan di WPPNRI 711 di atas 30 mil

Figure 55. Provisions of Jaring Tarik Berkantong in the Attachment to PermenKP 18/2021

Fishing activities below 12 nautical miles by the KM Netral Abadi 3 and the Wiro Wibowo-I potentially cause social conflicts. In August 2023, West Kalimantan fishermen detained two fishing vessels using cantrang fishing gear.⁹⁷ which was then handed over to the Polairud POLRI. These vessels are KM Eka Setia 04 (82 GT) and KM Sumber Makmur (104 GT). On the Indonesia fishing vessel license database these two vessels are registered with jaring tarik berkantong fishing gear.

NAMA KAPAL	NOMOR SIPI/SIKPI	TANGGAL TERBIT	TANGGAL BERLAKU	ALAT TANGKAP	GT KAPAL	TANDA SELAR	DAERAH PENANGKAPAN	PELABUHAN PANGKALAN
SUMBER MAKMUR	33.23.0001.135.00667	30 Januari 2023	13 Februari 2024	Jaring Tarik Berkantong (Freezer)	104.00	TEGAL/GT.104 No.2080/Ft	ZEEI WPP NRI 711 (ZEEI Laut Natuna Utara) 30 mil keatas (WPP-711)	PPN. Pemangkat, PPP. Tegalsari
EKA SETIA 04	33.23.0001.135.01099	07 Februari 2023	08 Februari 2024	Jaring Tarik Berkantong (Freezer)	82.00	TEGAL/GT.82 No.2149/Ft	WPP NRI 711 (Sl. Karimata; L. Natuna dan Laut Natuna Utara) 30 mil keatas (WPP-711)	PPN. Pemangkat, PPP. Tegalsari

Figure 56. Details of Vessels Sumber Makmur and Eka Setia 04 (source: perizinan.kkp.go.id)

⁹⁷<https://kalbar.antaranews.com/berita/547530/dua-orang-jadi-tersangka-kas-penangkapan-kapal-cantrang-di-kku-kalbar>



As of January 2024, the number of fishing vessels with jaring tarik berkantong fishing gear and size over 30 GT in Indonesia had reached **1,652 vessels** and spread over 3 WPPs: 711, 712 and 713. These vessels are given license to fish in the waters of the Natuna Sea, Karimata Strait (west of Kalimantan Island, east of Lampung), Java Sea (south of Kalimantan) or Makassar Strait.

LAYANAN PERIZINAN BERUSAHA SUBSEKTOR PENANGKAPAN DAN PENGANGKUTAN IKAN													
Data Sebaran Perizinan Berusaha Izin Pusat (Kapal) Per Alat Tangkap & WPPNRI													
ALAT TANGKAP	LL S. Hindia	LL S. Pasifik	WPP-RI 571	WPP-RI 572	WPP-RI 573	WPP-RI 711	WPP-RI 712	WPP-RI 713	WPP-RI 714	WPP-RI 715	WPP-RI 716	WPP-RI 717	WPP-RI 718
Bouke Ami						23	78	35					3
Bubu (Pots)						1							
Huhate					4			2	10	81	2		
Jala Jatuh Berkawal						900	2,108	1,161		5			91
Jala Jatuh Berkawal (Cast Nets)						3							
Jaring Hela Ikan Berkantong			96			5							
Jaring Hela Udang Berkantong													16
Jaring Insang Hanyut				3	4	58	174	70		5			412
Jaring Insang Tetap					3	1	11	10		3			38
Jaring Tarik Berkantong								1					
Jaring Tarik Berkantong (Es Batu)						51	478	150					
Jaring Tarik Berkantong (Freezer)						306	658	9					
Pancing Cumi			1			13	20	16		10			564
Pancing Ulur	1		8	38	146		1	6	1	18	56	53	10
Pancing Ulur Tuna	47			250	368		7	15	4	126	60	77	34
Pukat Cincin Pelagis Besar dengan Satu Kapal	386	5		431	427				140		29	32	
Pukat Cincin Pelagis Kecil dengan Satu Kapal			51	238	220	155	598	506		226	257	177	340
Pukat Labuh													5
Purse Seine (Pukat Cincin) Pelagis Besar Dengan ..	1			1	1								
Rawai Dasar				5	54	12	40	16		8			200
Rawai Dasar (Set Long Line)													1
Rawai Tuna	358			353	357				8	3	34	34	9
Grand Total	793	5	156	1,319	1,584	1,528	4,174	1,996	163	485	438	373	1,723

Figure 57. Number of Pocket Towing Net Vessels in Indonesia

The following chart shows the increase of jaring tarik berkantong vessel licenses in the period January 2022 - December 2023 (2 years).



Figure 58. Chart Shows Numbers of Jaring Tarik Berkantong Vessels in Indonesia In The Period January 2022 to December 2023 (Source: Indonesia Fishing Vessel Registration Data)

C.1.3.2. About Jaring Tarik Berkantong

By the regulation, In the Ministerial Regulation KP 18/2021, SV-JTK can be operated on a limited basis depending on the length of the top rope and the length of the bottom rope.⁹⁸ Furthermore, Ministerial Regulation KP 18/2021 regulates in detail the prohibition of fishing gears that can threaten the extinction of biota; resulting in habitat destruction; and/or endanger user safety.⁹⁹ The fishing gears such as, dogol, pair seine, cantrang and basic lampara (all four fall into the towing net category), are referred to as prohibited APIs. Only SV-JTK is not mentioned as a prohibited API even though this fishing gear is operated like a cantrang.

⁹⁸ SV-JTK with mesh bag sizes $\text{square mesh} \geq 2$ inches, top rope length ≤ 40 m, and bottom rope length ≤ 300 m can be operated by ships with a size of $>5-10$ GT on route II ($>4 - 12$ nautical miles) in WPP 712. SV-JTK with dimensions mesh bag eyes $\text{square mesh} \geq 2$ inches, top rope length ≤ 60 m, and bottom rope length ≤ 900 m can be operated by ships with a size of $>10-30$ GT on routes II ($>4 - 12$ nautical miles) and III (>12 miles - outer limit ZEE) in WPP 712. SV-JTK with mesh bag sizes $\text{square mesh} \geq 2$ inches, top rope length ≤ 90 m, and bottom line length ≤ 900 m can be operated by ships with a size of >30 GT on route III (>12 miles - the outer limit of the EEZ) in WPP 711 (with a note above 30 miles sea) and 712.

⁹⁹ Article 7 PermenKP 18/2021.

Referring to the technical information on the use of fishing gear in Appendix I of Ministerial Regulation KP 18/2021, it is explained that:

Cantrang	SV-JTK
Cantrang is a kind of drag net with a long rope at the bottom of the water by circling demersal fish, then pulled and lifted onto the ship while stopping/anchoring. Cantrang API uses <i>diamond mesh</i> on all parts of the bag.	Jaring tarik berkantong (SV-JTK) is a kind of drag net which uses <i>square mesh</i> on all parts of the bag and its operation using a diving rope at the bottom of the water by circling demersal fish then pulled and lifted to the ship while stopping/anchoring .

The two technical descriptions of Cantrang and SV-JTK above show only 1 (one) difference between Cantrang and SV-JTK in the specification of the net: *diamond mesh* and *square mesh*.

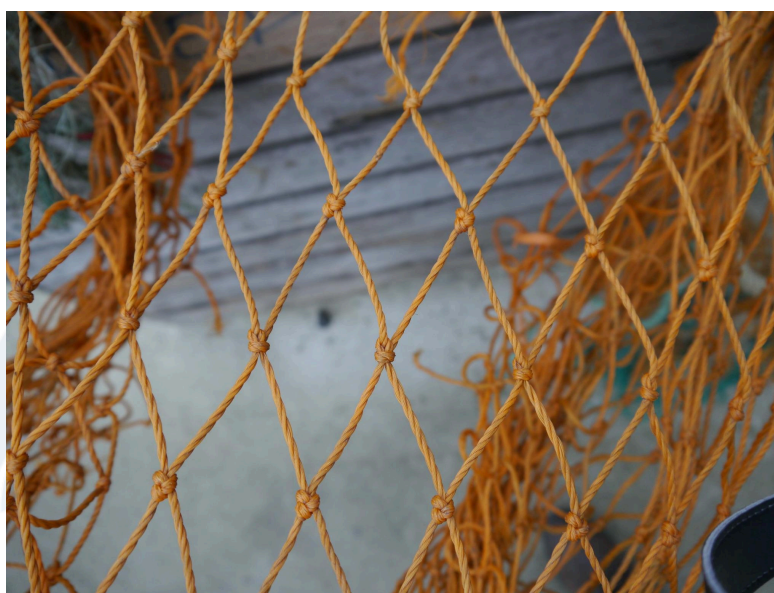


Figure 59. Illustration of *Diamond Mesh*

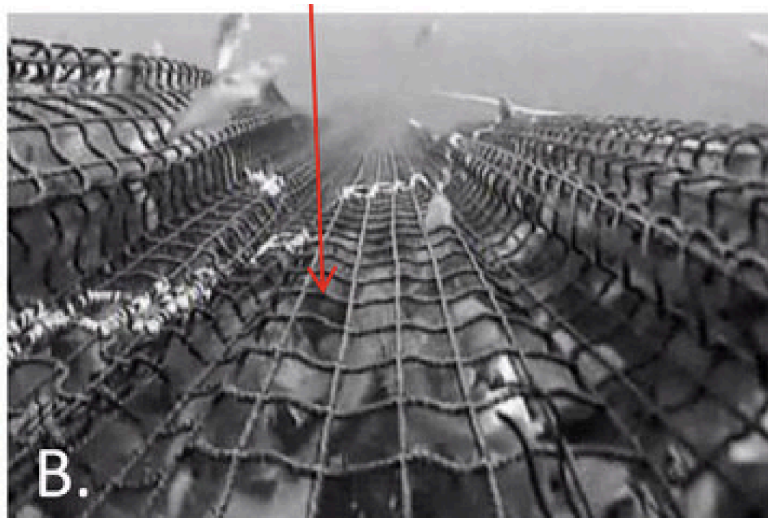


Figure 60. Illustration of *Square Mesh*

Some research says *square mesh* net is more *sustainable* compared with *diamond mesh* net. Research by Sevil and Ihsan in 2017¹⁰⁰ mentioned that *square mesh* net is more selective compared to *diamond mesh* net for *roundfish* but the opposite applies to *flatfish*. However, This research observed trawl nets with a total length of 47 meters (*codend* length: 8 meters), *square mesh* size is 40 mm that was operated by a 26 m length fishing vessel with a 450 HP engine running at a speed of 2.4 knots where the net is towed at a depth of 100 meters and an operating time of 40 to 60 minutes in the Mediterranean Sea. This research compared the catches that were made from *square mesh* trawl 40 mm to catches made by *diamond mesh* trawl 50 mm and 44 mm.

11 years previously similar research was also conducted by Francesc, Enric and Beatriz (2006).¹⁰¹ This research compares 40 mm *diamond mesh* trawl and 40 mm *square mesh* trawl which was towed on the seabed south of Mallorca (Mediterranean Sea) near the Balearic Islands in September - October 2002 at a depth of 50 - 78 sea meters and May -

¹⁰⁰ Demirci, Sevil & Akyurt, İhsan. (2017). Size selectivity of square and diamond mesh trawl codend for fish with different body shapes. *Indian Journal of Geo-Marine Sciences*. 46. 774-779.

¹⁰¹ Ordines, Francesc & Massutí, Enric & Guijarro, Beatriz & Mas, Ramon. (2006). Diamond vs. square mesh codend in a multi-species trawl fishery of the western Mediterranean: Effects on catch composition, yield, size selectivity and discards. *Aquatic Living Resources*. 19. 329 - 338. 10.1051/alr:2007003.

June 2003 at a depth of 147 - 189 meters, using a vessel with the size of 22 m (59 GT) and engine power of 365 HP. The duration of the net towing operation is 1 - 2 hours vessel speed between 2.6 - 3.6 knots. The final conclusion from this research is the *square mesh net trawl* “would reduce the fishing pressure on small specimens, leading to a subsequent improvement in the state of these resources.” Furthermore, this research also states that *square mesh trawl* also reduces the number of *discards* or by catch significantly.

*Seafish*¹⁰² mention, one of the reasons that *square mesh* is more sustainable compared to *diamond mesh* is, that it can "maintain" its open shape position so that the probability of a small fish getting out of the net is greater compared to *diamond mesh* which when it is pulled it will only open approximately 30-40% and continue to shrink to 20% on the sides *codend* net.¹⁰³

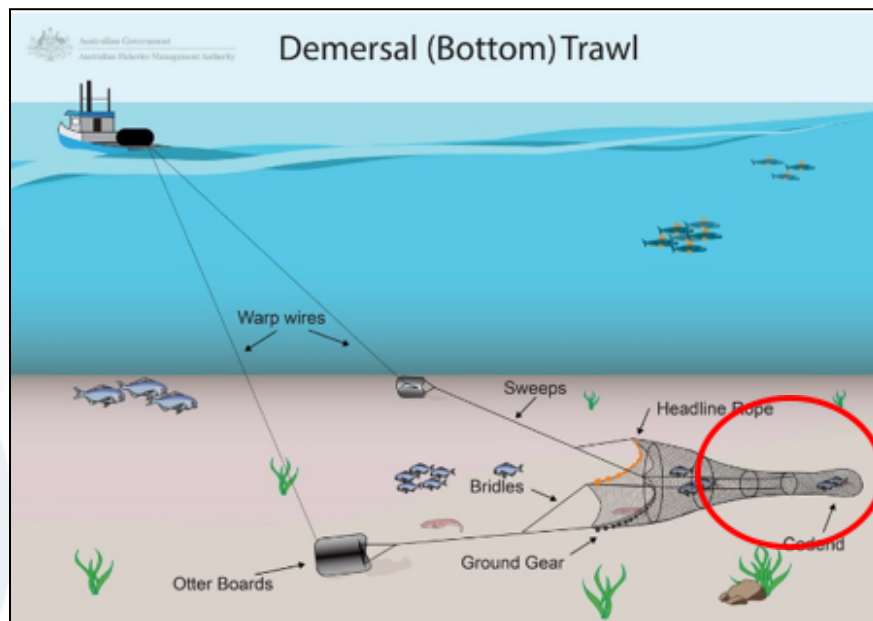


Figure 61. Codend illustration <https://legasea.co.nz/2019/10/31/all-about-trawling/>

¹⁰² <https://www.seafish.org/about-us/who-we-are-and-what-we-do/#who-we-are>

¹⁰³ <https://www.seafish.org/responsible-sourcing/fishing-gear-database/selective-device/square-mesh-panels/>



WWF conducted research in square mesh nets in 2008 and provided important notes. WWF said, although the results of the study showed that *square mesh* more selective compared to *diamond mesh* in certain scenarios, “*These analyses, performed on the bases of experimental studies, however, it may have been overoptimistic, as they only focused on the impacts of the square mesh on commercial species, and they only considered immediate mortality caused by the mesh. In reality, these impacts are likely to be more complex, firstly because species interact within an ecosystem, and therefore fishing may have indirect impacts on other species in the ecosystem, even non-commercial ones, for example through affecting predation mortality or competition between species. Predation mortality is high in marine ecosystems, particularly in the cases of small-sized species and juveniles. Secondly, organisms that escape from selectivity devices may not always survive for long periods. They can be damaged by the mesh and may thus die hours or days after escapement, or may be more vulnerable to predation.”¹⁰⁴ It was further stated that, “*Although results from ecological modeling applications regarding increasing trawl selectivity are positive, they also show that increasing selectivity of bottom-trawling alone is not enough to recover highly exploited or overexploited demersal species. More drastic reductions in fishing effort, in parallel with a greater increase in gear selectivity, would be necessary for the recovery of these species.*”¹⁰⁵*

As WWF stated above, one of the important aspects to study of fishing gear is the impact of the fishing gear on the marine ecosystem, not limited to fish resources alone. Recent research by Trisha B. Atwood, *et al.* indicates that bottom trawling activity releases CO₂ that has been stored for a long time in seabed. “*Trawling the seabed can disturb carbon that took millennia to accumulate, but the fate of that carbon and its impact*

¹⁰⁴ https://wwfeu.awsassets.panda.org/downloads/square_mesh_brochure_final_1.pdf

¹⁰⁵ *Ibid.*



on climate and ecosystems remains unknown. Using satellite-inferred fishing events and carbon cycle models, we find that 55-60% of trawling-induced aqueous CO₂ is released to the atmosphere over 7-9 years. Using recent estimates of bottom trawling's impact on sedimentary carbon, we found that between 1996-2020 trawling could have released, at the global scale, up to 0.34-0.37 Pg CO₂ yr⁻¹ to the atmosphere, and locally altered water pH in some semi-enclosed and heavy trawled seas.”¹⁰⁶

Furthermore, a search for the SV-JTK fishing gear review document led us to a letter from the Director General of Capture Fisheries to the National Standardization Agency (BSN) regarding the proposed PNPS (National Program for the Formulation of Standards) for pocket drag nets.¹⁰⁷ PNPS is an activity carried out by BSN to formulate SNI within a certain period, which is published so that it can be known by all interested parties.¹⁰⁸

The letter dated 28 October 2021 was accompanied by an attachment and "Attachment to Detailed Information on Research Results or Studies on SNI".

¹⁰⁶ Atwood TB, Romanou A, DeVries T, Lerner PE, Mayorga JS, Bradley D, Cabral RB, Schmidt GA and Sala E (2024) Atmospheric CO₂ emissions and ocean acidification from bottom-trawling. *Front. Mar. Sci.* 10:1125137. doi: 10.3389/fmars.2023.1125137

¹⁰⁷ <http://sispk.bsn.go.id/PNPS/DetilPNPS/24376>

¹⁰⁸ <https://www.bsn.go.id/uploads/pedoman/PSN%2001-2007.pdf>



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BSN BADAN STANDARDISASI NASIONAL

Beranda Komtek **PNPS** RSNI SNI Jajak Pendapat Regulasi LPK Dok & Panduan

PNPS > Detil Usulan PNPS

> Publikasi Usulan PNPS
> Informasi PNPS

Detail Data Pengajuan Usulan

Nomor	9080:2022
Judul	Kapal penangkap ikan – Kapal jaring tarik berkantong > 30 GT
Komite Teknis / Subkomite Teknis	65-14. Perikanan Tangkap
Konseptor	Raden Sapto Pamungkas Kortorahardjo, S.T, M.Si Muhammad Najib, S.T, M.Si Agung Raharjo, S.T Oktavian Rahardjo, S.T, M.T
Institusi Konseptor	Balai Besar Penangkapan Ikan
ICS	1. 47.020 Bangunan dan konstruksi kapal secara umum
Judul PNPS	Kapal penangkap ikan – Kapal jaring tarik berkantong > 30 GT
Ruang Lingkup	Standar ini menetapkan batasan dan kesesuaian ukuran utama, rasio ukuran utama, angka kubikasi, dan daya mesin utama dari kapal jaring tarik berkantong > 30 GT
Jenis Perumusan SNI	Baru
Jalur Perumusan SNI	Perumusan sendiri berdasarkan penelitian
Kebutuhan Mendesak	Ya
Terdapat isi dari standar yang terkait dengan hak paten ?	Tidak
File Hak Paten	-

Figure 62. BSN site regarding Submission of Baggage Drag Net Proposals
(<http://sispk.bsn.go.id/PNPS/DetilPNPS/24376>)




 BADAN STANDARISASI NASIONAL		Beranda Komtek PNPS RSNI SNI Jajak Pendapat Regulasi LPK Dok & Panduan
	Informasi detail hasil penelitian atau kajian terhadap SNI	-
	Lampiran Informasi detail hasil penelitian atau kajian terhadap SNI	(20211117-0004) Lampiran Pendukung Usulan
	Tujuan dan alasan spesifik mengenai perumusan yang akan dilakukan	1. SNI ini disusun sebagai pedoman petugas teknis lapangan yang melakukan pemeriksaan kapal jaring tarik berkantung 2. Menyiapkan bahan acuan pembangunan kapal jaring tarik berkantung baru 3. Menyiapkan bahan acuan perbaikan kapal jaring tarik berkantung Kapal jaring tarik berkantung adalah kapal penangkap ikan yang mengoperasikan jaring tarik berkantung. Jaring tarik berkantung merupakan jaring tarik yang menggunakan square mesh pada seluruh bagian kantungnya dan pengoperasiannya menggunakan tali selambar di dasar perairan dengan melingkari ikan demersal, kemudian ditarik dan diangkat ke kapal yang sedang berhenti/berlabuh. Pada dasarnya kapal jaring tarik berkantung merupakan kapal cantrang (kapal penangkap ikan yang mengoperasikan cantrang), tetapi karena adanya aturan yang melarang nelayan mengoperasikan cantrang maka nelayan harus beralih ke jaring tarik berkantung. Oleh karena kapal jaring tarik berkantung merupakan penamaan baru dari salah satu jenis kapal penangkap ikan yang diizinkan oleh pemerintah, maka diperlukan adanya kesamaan pemahaman di antara pemangku kepentingan (stakeholder) melalui suatu standar. Selain itu, pemberian ijin oleh pemerintah pusat diberikan untuk kapal penangkap ikan yang berukuran di atas 30 GT, sehingga perlu adanya acuan pemeriksaan fisik kapal (dalam bentuk standar) untuk petugas teknis di lapangan dalam rangka mengidentifikasi kapal jaring tarik berkantung yang berukuran di atas 30 GT.
	Kesesuaian dengan program pemerintah (sebutkan secara terperinci)	Peraturan Menteri Kelautan Dan Perikanan Republik Indonesia Nomor 18 Tahun 2021 yang mengatur Penampakan Alat Penangkapan Ikan dan Alat Bantu Penangkapan Ikan di Wilayah Pengelolaan Perikanan Negara Republik Indonesia dan Laut Lepas, salah satunya menetapkan bahwa alat penangkapan ikan yang mengganggu dan merusak keberlanjutan sumber daya ikan. Alat penangkapan ikan yang mengganggu dan merusak keberlanjutan sumber daya ikan tersebut dilarang dioperasikan di semua WPPNRI dan di Laut Lepas karena dapat mengancam kepunahan biota, mengakibatkan kehancuran habitat, dan/atau membahayakan keselamatan pengguna. Salah satu alat penangkapan ikan yang mengganggu dan merusak keberlanjutan sumber daya ikan adalah jaring tarik "cantrang". Namun pemerintah tidak semena-mena melakukan pelarangan melalui Permen KP tersebut, pemerintah juga tetap memberikan kesempatan berusaha bagi nelayan "cantrang" untuk beralih ke "jaring tarik berkantung". Jika menggunakan kapal penangkap ikan berukuran lebih dari 30 GT dapat mengoperasikan jaring tarik berkantung pada Jalur Penangkapan III di WPPNRI 711 (di atas 30 mil laut) dan WPPNRI 712.
	Pihak-pihak utama yang Berkepentingan	1. <input type="checkbox"/> Pemerintah Pusat 2. <input type="checkbox"/> Pemerintah Daerah 3. <input type="checkbox"/> Petugas Cek Fisik Kapal 4. <input type="checkbox"/> Pemilik atau Operator Kapal
	Manfaat yang akan didapatkan dengan menerapkan SNI yang diusulkan	<input type="checkbox"/> Pemerintah Pusat dan Pemerintah Daerah dapat menjadikan standar ini sebagai bahan rumusan kebijakan tata kelola perikanan tangkap di WPPNRI dan Laut Lepas, sesuai ruang lingkup tanggungjawabnya. <input type="checkbox"/> Petugas Cek Fisik Kapal sebagai bahan acuan dalam mengidentifikasi kapal di lapangan. <input type="checkbox"/> Pemilik atau Operator Kapal dapat menjadikan standar ini sebagai referensi melakukan usaha penangkapan ikan. <input type="checkbox"/> fungsi keamanan, keselamatan, kesehatan, fungsi lingkungan hidup, ekonomi dan penguatan daya saing

Figure 63.BSN site regarding Submission of Bagged Drag Net Proposals


 BADAN STANDARISASI NASIONAL		Beranda Komtek PNPS RSNI SNI Jajak Pendapat Regulasi LPK Dok & Panduan
		mengakibatkan kehancuran habitat, dan/atau membahayakan keselamatan pengguna. Salah satu alat penangkapan ikan yang mengganggu dan merusak keberlanjutan sumber daya ikan adalah jaring tarik "cantrang". Namun pemerintah tidak semena-mena melakukan pelarangan melalui Permen KP tersebut, pemerintah juga tetap memberikan kesempatan berusaha bagi nelayan "cantrang" untuk beralih ke "jaring tarik berkantung". Jika menggunakan kapal penangkap ikan berukuran lebih dari 30 GT dapat mengoperasikan jaring tarik berkantung pada Jalur Penangkapan III di WPPNRI 711 (di atas 30 mil laut) dan WPPNRI 712.
	Pihak-pihak utama yang Berkepentingan	1. <input type="checkbox"/> Pemerintah Pusat 2. <input type="checkbox"/> Pemerintah Daerah 3. <input type="checkbox"/> Petugas Cek Fisik Kapal 4. <input type="checkbox"/> Pemilik atau Operator Kapal
	Manfaat yang akan didapatkan dengan menerapkan SNI yang diusulkan	<input type="checkbox"/> Pemerintah Pusat dan Pemerintah Daerah dapat menjadikan standar ini sebagai bahan rumusan kebijakan tata kelola perikanan tangkap di WPPNRI dan Laut Lepas, sesuai ruang lingkup tanggungjawabnya. <input type="checkbox"/> Petugas Cek Fisik Kapal sebagai bahan acuan dalam mengidentifikasi kapal di lapangan. <input type="checkbox"/> Pemilik atau Operator Kapal dapat menjadikan standar ini sebagai referensi melakukan usaha penangkapan ikan. <input type="checkbox"/> fungsi keamanan, keselamatan, kesehatan, fungsi lingkungan hidup, ekonomi dan penguatan daya saing
	Apakah terdapat organisasi yang mendukung usulan perumusan standar ini?	Tidak
	SNI Acuan Normatif	-
	Acuan Non SNI	-
	Bibliografi	-
	Surat Pengajuan PNPS	(20211117-0004) Lampiran Surat Pengajuan PNPS
	Outline RSNI	-
KEMBALI		

Figure 64.BSN site regarding Submission of Bagged Drag Net Proposals



The title of this document is like it has nothing to do with the substance. The title and the content is cantrang whereas in the proposal letter it was clearly stated what was proposed by DG Capture Fisheries was jaring tarik berkantong. Until now, no technical test documents for the SV-JTK fishing gear have been found.

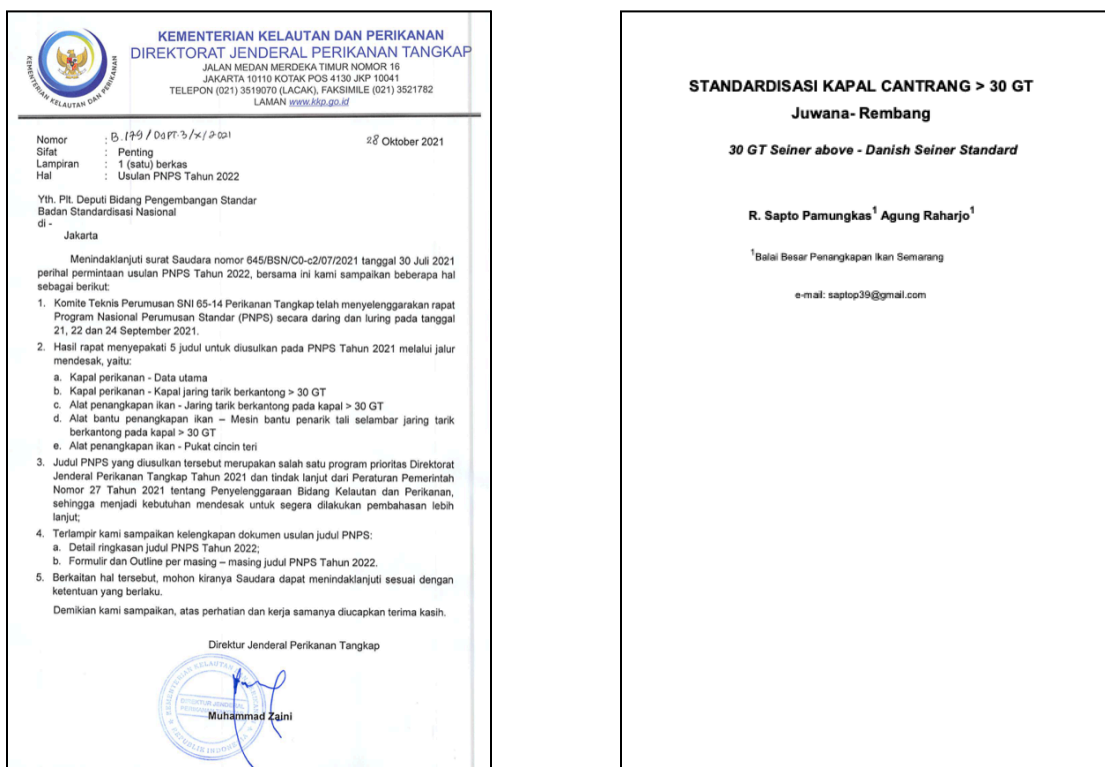


Figure 65. DJPT MMAF Letter to BSN and Research Results downloaded from the BSN website

Scientific studies to determine the environmental friendliness of fishing gear before it is used commercially is a necessity in fisheries management. This principle is strictly required by Article 61 paragraph (2) of UNCLOS which reads "*the Coastal State, **taking into account the best scientific evidence available to it, shall ensure through proper conservation and management measures that the maintenance of the living resources in the EEZ is not endangered by overexploitation.***" Maritime Law¹⁰⁹ and Fisheries

¹⁰⁹ Law Number 32 of 2014 concerning Maritime Affairs.

Law¹¹⁰ also prepared based on the principle of sustainability¹¹¹ which means policy making must be based on the best scientific evidence (*best scientific evidence available*).¹¹²

Based on this, the introduction of SV-JTK fishing gear should be based on scientific studies so that it is proven environmentally friendly to be used at sea within the WPP-NRI. Furthermore, research by the Institute for Marine and Antarctic Studies, University of Tasmania together with the CSIRO Oceans & Atmosphere Flagship¹¹³ shows that there are social, economic, industrial, governance and corruption situations aside from biological and environmental aspects that need to be taken into consideration in determining a fisheries policy, including the introduction of fishing gear.

So, in the context of SV-JTK in Indonesia, an in-depth technical study is needed to ensure:

- a. This fishing gear is environmentally friendly **especially for marine ecosystems and fish resources in WPP 712 which is based on estimates of fish stock potential in 2022, demersal fish in WPP 712 has over-exploited; and**
- b. **It doesn't produce a huge impact of damage to the marine environment due to the use of SV-JTK fishing gear on marine ecosystems (for example the release of CO2 from the seabed as explained above).**

¹¹⁰ Law Number 31 of 2004 jo. Law Number 45 of 2009 jo. Law Number 6 of 2023 concerning Job Creation

¹¹¹ Article 2 of the Marine Law and Article 2 of the Fisheries Law.

¹¹² Su, Shu, "Moving Towards the Science-based Fisheries Management (SBFM) in China" (2021). Electronic Theses and Dissertations. 3429. <https://digitalcommons.library.umaine.edu/etd/3429>

¹¹³ Jessica A Nilsson, Craig R Johnson, Elizabeth A Fulton, Marcus Haward, Fisheries sustainability relies on biological understanding, evidence-based management, and conducive industry conditions, *ICES Journal of Marine Science*, Volume 76, Issue 6, November-December 2019, Pages 1436–1452, <https://doi.org/10.1093/icesjms/fsz065>

C.2. IUU Fishing Activities in Fisheries Management Area (WPP) 718 and Surrounding Areas

C.2.1. Foreign Vessel Activities

Based on AIS, in September 2023 IOJI observed a ship operating in Tual waters with the following identity:

Vessel Name: Fu Yuan Yu F77

MMSI: 412693520

It is found that this vessel is a Chinese-flagged vessel. Its MMSI number starting with the number 412 also represents the country code for China. This vessel doesn't have an active fishing or fish-transport license if we check from the MMAF vessel registration database.¹¹⁴ *Global Fishing Watch* map shows that this vessel has ever operated in Indonesian waters in 2014.

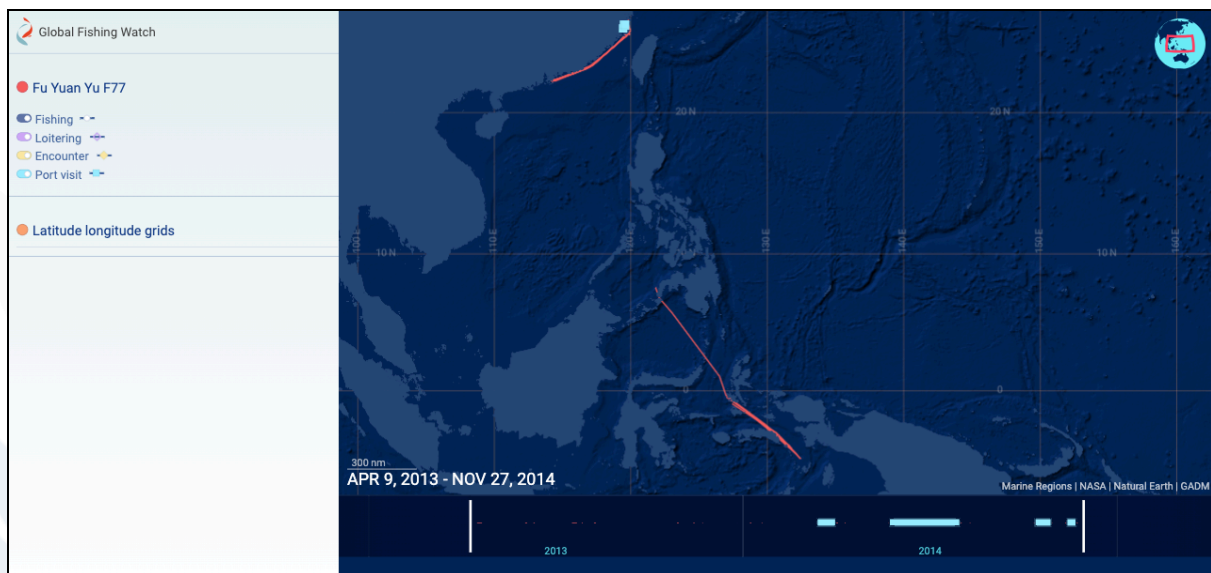


Figure 66. The trajectory of the Chinese vessel Fu Yuan Yu F77 based on AIS in 2014 in the EEZ of Indonesia and China (Source: Global Fishing Watch)

¹¹⁴ Based on checking the fishing vessel registration database (<https://perizinan.kkp.go.id/grid.php?target=active&doc=6&q=>) on January 1 2024.

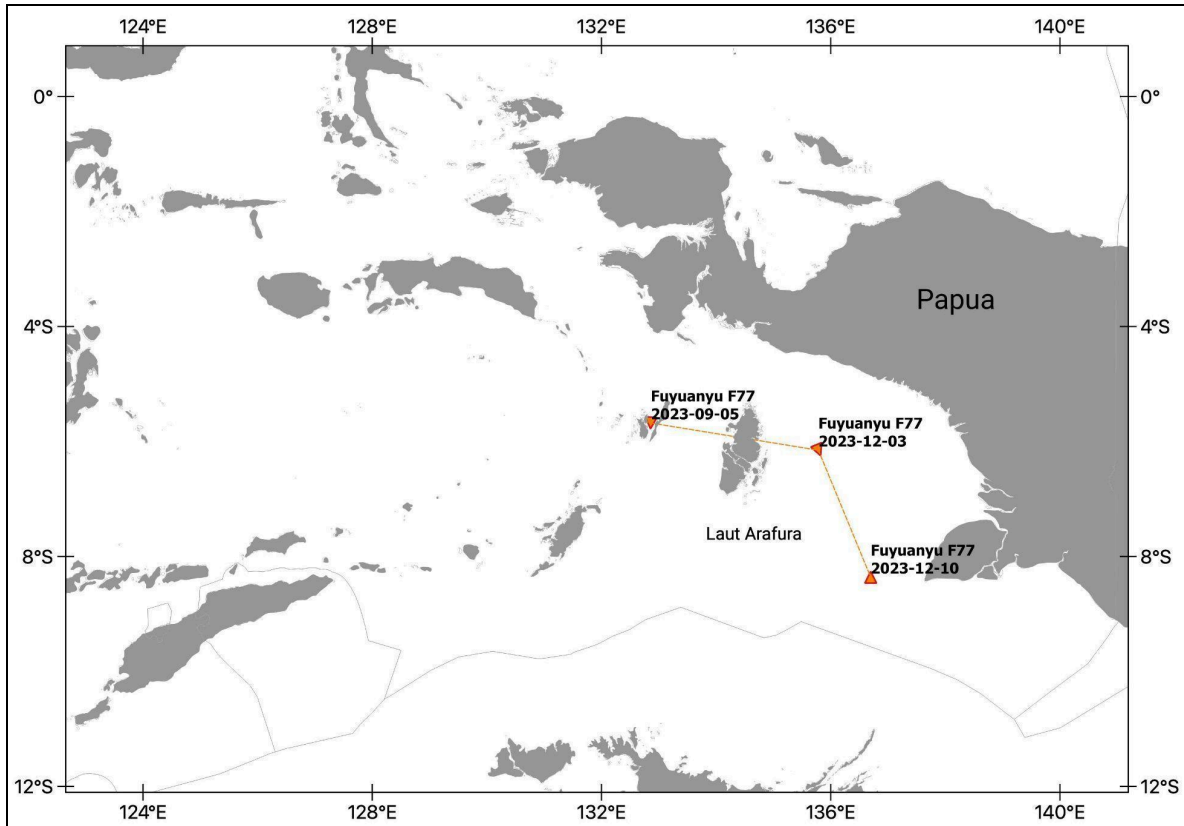


Figure 67. Detection of Chinese Ship Fu Yuan Yu F77 based on AIS In 2023.

This vessel departed from a port in Tual on the 4th September 2023 towards WPP 718. On September 5 2023 this vessel started not broadcasting AIS . New AIS pings from this vessel were available again on December 3 2023 and December 10 2023 in the Arafura Sea, WPP 718. After that, this vessel went dark until now.

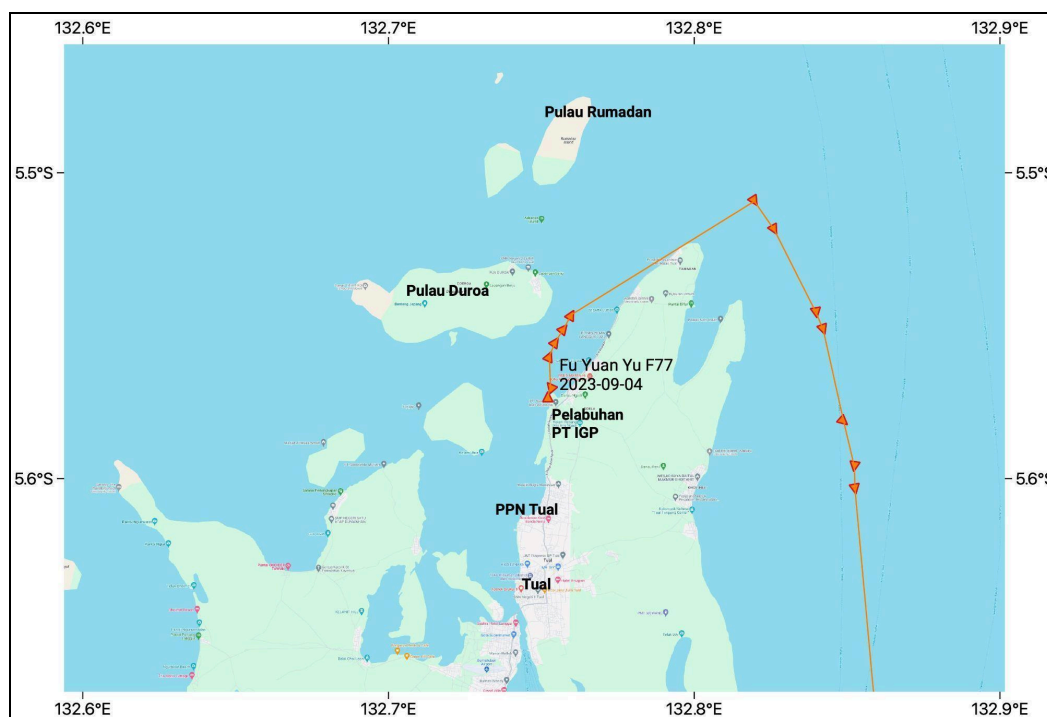


Figure 68. Fu Yuan Yu F77 on September 4,

Google Maps shows that the departure port of the Fu Yuan Yu F77 vessel is from the pier located on Jalan Maritim Timur Jaya which is connected to Jalan Dullah Raya-Ngadi, Tual. It can also be seen in the image below that the address is the location of the PT Samudera Indo Sejahtera (PT SIS), a fishing company.

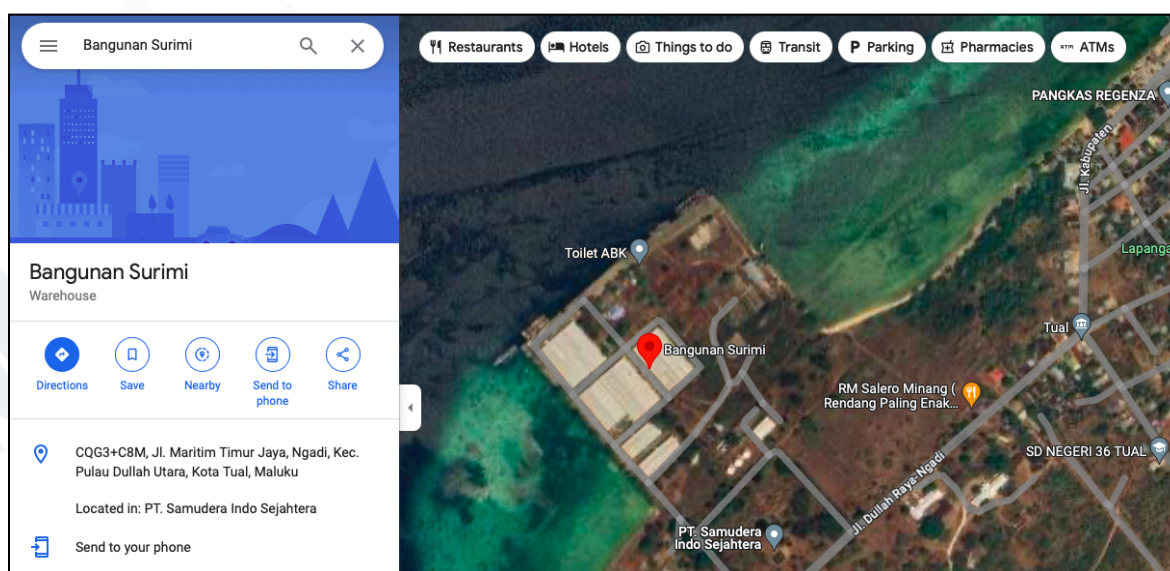


Figure 69. Image of the Departure Location of the Fu Yuan Yu F77 ship



Searches through open sources show that ships with the name "IGP" also operate at the PT dock. SIS mentioned above.



Figure 70. PT. SIS¹¹⁵



Figure 71. KM IGP 18 at PT. SIS¹¹⁶

¹¹⁵ Source: <https://www.google.com/maps/place/PT.+Samudera+Indo+Sejahtera/@-5.5765689,132.7550398,3a,75y,9Ot/data=!3m8!1e2!3m6!1sAF1QipN7N05KOZ6qaPZBEvYwhDLqeU4yS2azABbx5Geb!2e10!3e12!6shttps:%2F%2F1h5.googleusercontent.com%2Fp%2FAF1QipN7N05KOZ6qaPZBEvYwhDLqeU4yS2azABbx5Geb%3Dw203-h152-k-no!7i4032!8i3024!4m7!3m6!1s0x2d3011b18c0a9a37:0x2eda5e8d6e82eafc!8m2!3d-5.5762235!4d132.7547262!10e5!16s%2Fg%2F11pf691d53?entry=ttu>

¹¹⁶ Source: <https://www.google.com/maps/place/PT.+Samudera+Indo+Sejahtera/@-5.5765689,132.7550398,3a,75y,9Ot/data=!3m8!1e2!3m6!1sAF1QipN7N05KOZ6qaPZBEvYwhDLqeU4yS2azABbx5Geb!2e10!3e12!6shttps:%2F%2F1h5.googleusercontent.com%2Fp%2FAF1QipN7N05KOZ6qaPZBEvYwhDLqeU4yS2azABbx5Geb%3Dw203-h152-k-no!7i4032!8i3024!4m7!3m6!1s0x2d3011b18c0a9a37:0x2eda5e8d6e82eafc!8m2!3d-5.5762235!4d132.7547262!10e5!16s%2Fg%2F11pf691d53?entry=ttu>



PT SIS is a fish processing company that was visited by the President of the Republic of Indonesia on September 14 2022.¹¹⁷ Meanwhile, the ship with the name IGP is owned by PT Insani Gemilang Pualam (PT IGP).¹¹⁸

LAYANAN PERIZINAN BERUSAHA SUBSEKTOR PENANGKAPAN DAN PENGALUTAN IKAN										
ow 10 entries		Search: insani gemilang								
PERORANGAN / BADAN HUKUM	NOMOR SIUP	NAMA KAPAL	NOMOR SIPI/SIKPI	TANGGAL TERBIT	TANGGAL BERLAKU	ALAT TANGKAP	GT KAPAL	TANDA SELAR	DAERAH PENANGKAPAN	PELABUHAN PANGKALAN
INSANI GEMILANG PUALAM, PT	04.17.01.0046.9072	IGP 08	33.23.0001.139.53869	22 Desember 2023	31 Desember 2024	Pukat Labuh	196.00	AMBON/GT.196 No.1659/MMa	ZEEI WPP NRI 718	PPTual
INSANI GEMILANG PUALAM, PT	04.17.01.0046.9072	IGP 09	33.23.0001.139.53099	21 Desember 2023	31 Desember 2024	Pukat Labuh	196.00	AMBON/GT.196 No.1660/MMa	ZEEI WPP NRI 718	PPTual
INSANI GEMILANG PUALAM, PT	04.17.01.0046.9072	IGP 16	33.23.0001.139.51514	19 Desember 2023	31 Desember 2024	Pukat Labuh	196.00	AMBON/GT.196 No.1691/MMa	ZEEI WPP NRI 718	PPTual
INSANI GEMILANG PUALAM, PT	04.17.01.0046.9072	IGP 18	33.23.0001.139.02527	28 Maret 2023	27 Maret 2024	Pukat Labuh	196.00	AMBON/GT.196 No.1689/MMa	ZEEI WPP NRI 718 (ZEEI L. Arafura dan ZEEI L. Timor bagian Timur)	PPTual
INSANI GEMILANG PUALAM, PT	04.17.01.0046.9072	IGP 19	33.23.0001.139.02534	29 Maret 2023	27 April 2024	Pukat Labuh	196.00	AMBON/GT.196 No.1690/MMa	ZEEI WPP NRI 718 (ZEEI L. Arafura dan ZEEI L. Timor bagian Timur)	PPTual

Figure 72.IGP ship licensing information (Source: Perizinan.kkp.go.id)

2!8i3024!4m7!3m6!1s0x2d3011b18c0a9a37:0x2eda5e8d6e82eafc!8m2!3d-5.5762235!4d132.7547262!10e5!16s%2Fg%2F11pf691d53?entry=ttu

¹¹⁷ <https://www.presidentri.go.id/siaran-pers/presiden-jokowi-tinjau-unit-pengolahan-ikan-dan-budidaya-grass-laut-di-provinsi-maluku/>

¹¹⁸ <https://perizinan.kkp.go.id/grid.php?target=aktif&doc=6&q=>



Figure 73. Visit of the President of the Republic of Indonesia to PT. SISTER¹¹⁹

"IGP" fishing fleet, referring to Ministry of Transportation data, were previously vessels with the name "BINAR" owned by PT Binar Surya Buana, one of the fishing companies that was sanctioned by the Minister of Maritime Affairs and Fisheries for the 2014-2019 period.

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Source: https://mediaindonesia.com/nusantara/523325/kunjungi-pt-sis-wujud-jokowi-dukung-pengolahan-ikan-di-tual#google_vignette

Ditkapel		Pencarian Data Kapal												
	Nama Kapal	Eks Nama Kapal	Call Sign	Jenis Kapal	Nama Pemilik	No. Tanda Pendaftaran	Panjang	Lebar	Dalam	LOA	GT	Isi Bersih	Nomor IMO	Tahun Pembuatan
	IGP 29	BINAR 116	YDC4561	Fishing Boat	PT. INSANI GEMILANG PUALAM	2023 Pst No. 1700/N	44.18	7.50	4.00	49.50	361	109		2014
	IGP 17	BINAR 106	YEB4786	Fishing Boat	PT. INSANI GEMILANG PUALAM	2022 Pst No. 1237/N	35.39	6.40	3.15	39.80	196	90		2012
	IGP 16	BINAR 73	YEB4783	Fishing Boat	PT. INSANI GEMILANG PUALAM	2022 Pst No. 1236/N	35.39	6.40	3.15	39.80	196	90		2012
	IGP 19	BINAR 72	YEB4782	Fishing Boat	PT. INSANI GEMILANG PUALAM	2022 Pst No. 1223/N	35.39	6.40	3.15	39.80	196	90		2012
	IGP 18	BINAR 71	YEB4781	Fishing Boat	PT. INSANI GEMILANG PUALAM	2022 Pst No. 1222/N	35.39	6.40	3.15	39.80	196	90		2012
	IGP 09	BINAR 105	YEC4604	Fishing Boat	PT. INSANI GEMILANG PUALAM	2021 Pst No. 797/N	35.39	6.40	3.15	39.80	196	82	8577073	2012
	IGP 08	BINAR 103	YEC4603	Fishing Boat	PT. INSANI GEMILANG PUALAM	2021 Pst No. 796/N	35.39	6.40	3.15	39.80	196	82	8576940	2012

Figure 74. IGP ship data from the Ditkapel data center, Ministry of Transportation

It is not yet known what the relationship is between the Fu Yuan Yu F77 ship and the operations of PT SIS and PT IGP in Tual. Fu Yuan Yu F77 vessel was once operated by PT Binar Surya Buana¹²⁰ and in the MMAF fishing license database, there is no license found for vessel Fu Yuan Yu F77 currently.¹²¹

C.2.2. Other Fishing Vessel Activities in the Arafura Sea

On January 3 2024, a research conducted by Fernando Paolo, *et al.* showed that, “72-76% of the world’s industrial fishing vessels are not publicly tracked, with much of that fishing taking place around South Asia, Southeast Asia and Africa.”¹²²

¹²⁰<https://finance.detik.com/berita-ekonomi-bisnis/d-2844216/terbesar-nama-fu-yuan-yu-besar-dipakai-usaha-kapal-tangkap-ikan>. Accessed January 2, 2024.

¹²¹Based on checking the fishing vessel registration database (<https://perizinan.kkp.go.id/grid.php?target=active&doc=6&q=>) on January 1 2024.

¹²² Paolo, F., Kroodsma, D., Raynor, J. *et al.* Satellite mapping reveals extensive industrial activity at sea. *Nature* 625, 85–91 (2024). <https://doi.org/10.1038/s41586-023-06825-8>



The use of vessel tracking devices like AIS on a vessel is something that a flag state should have in order to conduct monitoring and control of vessels flying its flag or coastal states regarding activities that occur in the sea under its jurisdiction. However, there is always man intervention to avoid monitoring such as turning off the AIS or falsifying the AIS information.

Indonesia is not free from this phenomenon. Fernando Paolo's study states “*Indonesia, South Asia, Southeast Asia and the northern and western coasts of Africa all show substantial amounts of activity not publicly tracked.*”¹²³

Fernando Paolo's statement above can be understood in 2 (two) ways. **First**, by looking at the population of the Indonesian fishing fleet. Referring to data from the Ministry of Maritime Affairs and Fisheries, there were 2,359,064 fishermen with a fleet of 1,161,332 vessels in Indonesia in 2020.¹²⁴ The number of vessels consists of 159,417 without motors, 503,955 outboard motor boats and 497,960 motor boats. For the motorboat category, the number of vessels is divided into several groups based on size:

- a. Size < 5GT totaling 388,618 vessels;
- b. Size 5 - 10 GT totaling 64,708 vessels;
- c. Size 10 - 20 GT totaling 21,589 vessels;
- d. Size 20 - 30 GT totaling 17,652 vessels;
- e. Size 30 - 50 GT totaling 975 vessels;
- f. Size 50 - 100 GT totaling 2,786 vessels;
- g. Ship sizes 100 - 200 GT totaled 1,616 ships;
- h. Size > 200 GT totaling 16 ships.

¹²³ *Ibid.*

¹²⁴ Maritime Affairs and Fisheries in figures for 2022, http://ndrive.kkp.go.id/index.php/s/KPDA_2022#pdfviewer.



If this group of vessels is simplified to two: vessel with sizes 0-30 GT and >30 GT, then the number of ships with sizes 0-30 GT is 1,155,939 ships (99.54% of the national ship fleet) and ships with sizes >30 GT are 5,393 ships (0, 46% of the national ship fleet). By using the previous norm (PermenKP 10 of 2019 which has been revoked and declared invalid by PermenKP 23 of 2021), vessels that are required to use Vessel Monitoring Systems (VMS)/SPKP are the ones with a size of >30 GT, then 99.54% of the total fleet of Indonesian ships are dark vessels.

INTERMEZZO: SPKP and PIT

The installation of VMS or SPKP that refer to PP 11/2023 on Measured Fishing, it cannot be clearly concluded how the SPKP obligation applies. This is because PP 11/2023 regulates that SPKP obligations are excluded for "small fishers" where the definition of "small fishers" itself is "people whose livelihood is fishing to meet their daily living needs, whether using fishing vessels or not. using a fishing boat." The detailed and technical operational indicators to determine whether a fisherman/a vessel meets this definition in PP 11/2023 or other derivative regulations are not explained further.

Furthermore, the enactment of PP 11/2023 was postponed by SE MKP Number: B.1954/MEN-KP/XI/2023 (even though Article 28 PP 11/2023 states that the PP takes effect on the date of promulgation and legally a Circular Letter cannot stop the PP's coming into force) . Assuming it is true that SE can "postpone" the implementation of PP 11/2023, then the provisions regarding SPKP refer to Permen KP 23/2021 concerning SLO and SPKP. The problem is, Permen KP 23/2021 does not include



exceptions to the installation of SPKP for small fishermen as regulated by PP 11/2023, but rather exceptions to the SLO obligation (operating worthy letter). Using the principles of statutory regulations, the norms of PP 11/2023 should apply because Government Regulations are "higher" statutory regulations than Ministerial Regulations. However, on the other hand, PP 11/2023 has been postponed.

As explained above, the exception for small fishermen regulated in PermenKP 23/2021 is due to SLO obligations. In the SLO sheet itself there are SPKP points. It could be that PermenKP 23/2021 intends to exclude small fishermen from SPKP obligations through the exception of SLO obligations for small fishermen. However, referring to 3 letters h of MKP circular letter Number B.1954/MEN-KP/XI/2023 which reads "Installation and activation of the Fishing Vessel Monitoring System (SPKP) for **Fishing vessels migrate from business permits issued by the Governor to business permits issued by the Minister of Maritime Affairs and Fisheries** as well as **for fishing vessels whose business permits are under the Governor's authority, this must be implemented no later than 31 December 2024**", it seems that small fishermen are also expected to install and activate SPKP even though PP 11/2023 regulates exceptions for small fishermen from SPKP obligations.

A clear legal interpretation must be given by MMAF regarding this issue. The unclear sounding of the SPKP exception article in PermenKP 23/2021, the applicability of PP 11/2023 and the sounding of point 3



letter h of the MKP circular letter B.1954/MEN-KP/XI/2023 have the potential to cause confusion in the fishing community.

Furthermore, Minister of Transportation Regulation Number 18 of 2022 regarding AIS (Permenhub 18/2022) regulates that fishing vessels that are required to install AIS are vessels with a size of at least 60 GT.¹²⁵ Fishing vessels of 60 GT and above are a very small part of the Indonesian fishing vessel fleet, referring to the Indonesian fishing vessel fleet data above. This means that the number of fishing vessels that can be detected with AIS is very small compared to the number of Indonesian fishing vessel fleets as a whole.

Using this first approach, it can be concluded that Fernando Paolo's statement represents the Indonesian situation.

Second, by understanding the fact that in Indonesian seas not only Indonesian fishing vessels operate. Many fishing vessels other than those with Indonesian flags can pass through the WPP-NRI or may operate in the WPP-NRI "illegally". Trying to find, using existing technologies, the existence of suspicious activities that have the potential to harm Indonesia is a logical step that must be taken if based on this approach.

The Arafura Sea is a sea that is very rich in fish resources. It is not surprising that this area is a magnet for many parties. Based on this, IOJI tried to observe their presence using radio frequency electromagnetic wave detection technology from *Unseenlabs*.¹²⁶

The detection results presented in the following image:

¹²⁵ Article 4 paragraph (2) letter c Minister of Transportation Regulation 18/2022

¹²⁶ Ships traveling or at sea periodically emit electromagnetic signals through various communication and navigation systems installed on board. The Unseenlabs satellite is capable of capturing these signals over a very wide area at sea (the Unseenlabs satellite constellation has a land coverage of 500 km x 500 km). After the signal data is captured by the satellite, this technology is able to detect, geolocate and characterize all signals frequency radio this and reveal ship activities at sea.

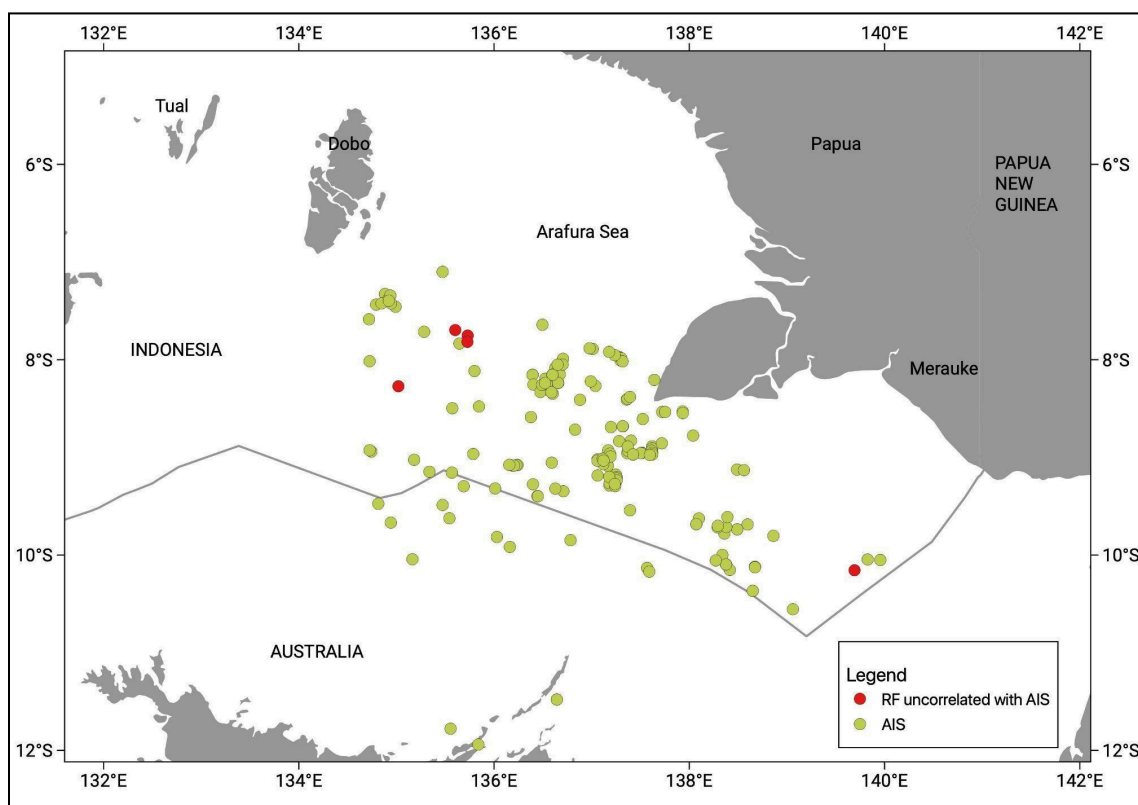


Figure 75. Radio Frequency Vessel Detection in the Arafura Sea on October 16 2023 at 02:07 GMT
(source: Unseenlabs)

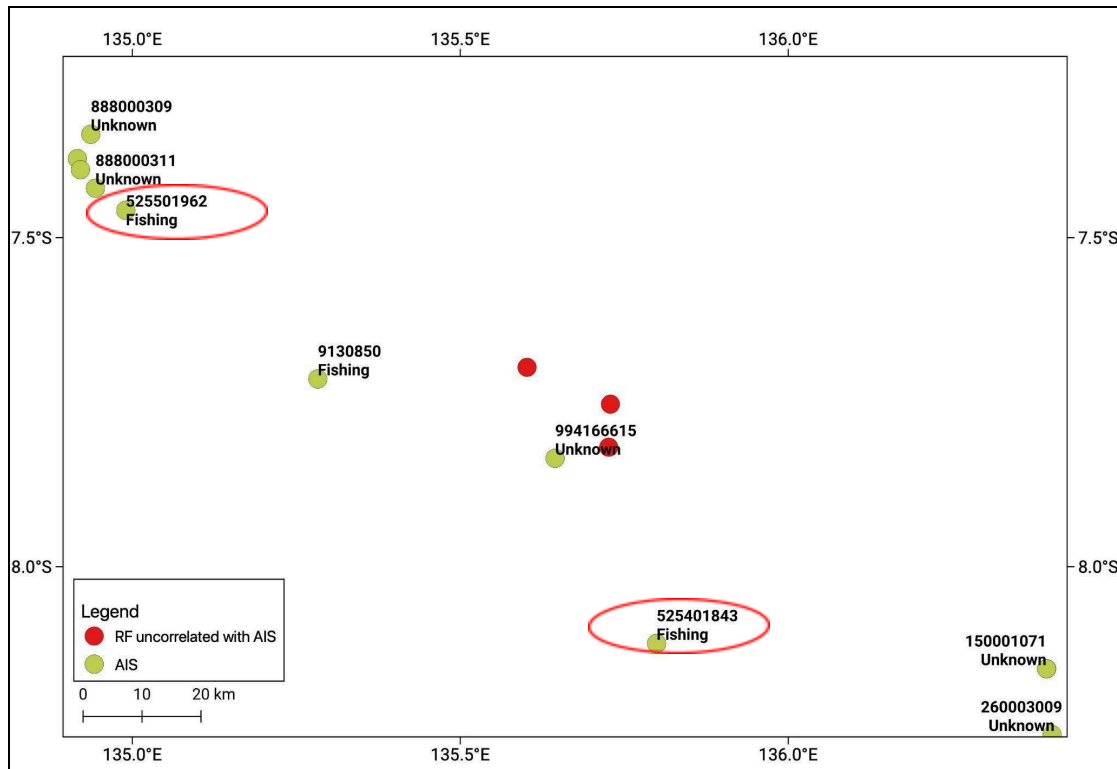


Figure 76. Enlargement of Figure 75: Radio Frequency Vessel Detection in the Arafura Sea on 16 October 2023 at 02:07 GMT (source: Unseenlabs)

In simple terms, tracking vessels by using detection radio frequency technology is to track the existence of electromagnetic waves transmitted by navigation equipment on board the vessel. This technology is able to find the presence of a vessel even if the AIS or other tracking device is turned off. Of course, vessels that can be found with this technology are vessels that are equipped with electronic navigation, so rowing vessels or other small vessels with traditional technology cannot be tracked. Although this technology cannot provide comprehensive conclusions about what activities a vessel is doing, it can provide initial clues or indications of the vessel's presence at an area of interest and this information can be analyzed further by combining it with other data.

Figure 75 The above shows the presence of several vessels in the Arafura Sea that do not have AIS on (marked with red dots). Figure 76 indicates that the vessel whose AIS is not active is among 2 (two) fishing vessels whose AIS is on (MMSI code 525501962 and

MMSI code 525401843. The first three numbers, namely "525" are the Indonesian MMSI country code).

From this information, we suspect that certain activities may occur due to:

1. The presence of the vessel's radio frequency was detected but the AIS signal was not detected.
2. Was in the middle of other fishing vessels detected based on AIS.
3. Located in the fishing ground WPP 718 that is fish resource rich is not in archipelagic sea lane (ALKI).

On Figure 76, there are several AIS signals with the first 3 (three) digits of the MMSI code not representing any country (MMSI 994166615, 9130850, 888000311, 150001071, and 260003009). An AIS signal with an MMSI like this could be an AIS signal from fishing buoy.

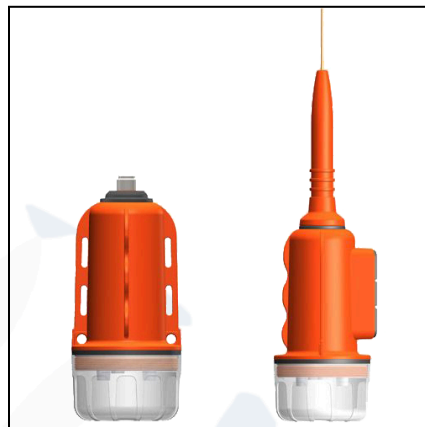


Figure 77. *Fishing Buoy Equipped with AIS*

Conclusion

A. Regarding the Activities of Foreign Scientific Research Vessels

1. Marine scientific research conducted by foreign vessels in Indonesia's jurisdiction is required to apply for permission and be conducted in accordance with the applicable provisions and regulations of the Republic of Indonesia. Conducting marine scientific research without a permit is a criminal offense that can be subject to imprisonment and/or fines as well *blacklist* sanction.
2. Considering the Chinese research vessels Nan Feng and Jia Geng activities in the NNS, it is appropriate for the Indonesian Government to ask the Chinese Government for clarification regarding the alleged marine research activities carried out by these two vessels at NNS. The Indonesian Government must take firm legal steps in the event that research activities are found to be detrimental to Indonesia, such as doing research activities without permission and/or research activities that result in damage to Indonesia's marine environment.

B. Regarding Marine Pollution Activities from Oil Spills

1. Shipping activities in the Malacca Strait-Singapore Strait to the waters east of Johor, Malaysia, are very busy. Therefore, marine pollution due to shipping and port activities in this area is unavoidable. In fact, the Singapore and Malaysian governments must be responsible for all activities that occur in their waters so that they do not pollute Indonesian waters. In other words, Oil spills that often occur in waters east of Johor, Malaysia, which pollute Indonesian seas, must be handled jointly with the two neighboring countries. This is in line with the principle of *customary international law*, that is "*so use yours to do no harm to others/no harm*



*principle*¹²⁷ which means, all activities that occur within the territory of a country must not harm the territory of another country. This principle has also been stated in the provisions of Article 194 paragraph (2) UNCLOS.

2. There is a trilateral mechanism that can be used by the Malaysian Government to ensure that pollution due to oil spills does not happen again, by utilizing the Revolving *Fund Committee* (RFC).
3. As an affected country, Indonesia must be more assertive towards the Malaysian Government through foreign diplomacy strategies, one of which is by regularly submitting notifications to the Malaysian Government regarding ships in Johor waters which are strongly suspected of having polluted the sea and asking the Malaysian Government to deal with oil spills in this area so that it does not enter Indonesian territorial waters. Legal action can also be taken by the Indonesian Government in accordance with UNCLOS provisions in the event that the Malaysian Government does not respond well to the Indonesian Government's requests.
4. On the other hand, the Indonesian Government needs to strengthen the implementation of laws and regulations regarding oil spill handling, one of which is through the formation of a Regional Oil Spill Response Team in areas prone to oil spills, namely the Riau Islands Province (North Natuna Sea and Singapore Strait) in accordance with Presidential Regulation Number 109 of 2006 concerning Management of Emergency Situations of Oil Spills at Sea, Decree of the Minister of Transportation Number KP. 355 of 2008 concerning the National Command and Control Center for Oil Spill Emergency Management Operations at Sea and Decree of the Minister of Transportation Number KM 263 of 2020 concerning Procedures for Handling Emergency Oil Spills (tier 3) at Sea ("Kepmenhub 263/2020").

¹²⁷ *Trail Smelter Arbitration Case (United States v. Canada)*, Arbitral Tribunal, Washington, D.C., 16 April 1938, 11 March 1941, III R.I.A.A. 1905, online: UN <http://legal.un.org/riaa/cases/vol_III/1905-1982.pdf>



C. Regarding Illegal Fishing Activities

1. Based on IOJI observation in WPP 711 so far, it shows that fishing activities from Vietnamese fishing vessels and the Vietnamese government vessels (VFRS) is still rampant. The incursion of Vietnamese fishing vessels that have occurred since 20 years ago has posed a maritime security threat that is detrimental to Indonesia.
2. The increasing activity of Vietnamese fishing vessels, which is often marked by the presence of Vietnamese Government vessels at NNS, indicates the Vietnamese Government's action of not respecting in good faith the EEZ boundary agreement between Indonesia and Vietnam which was made on 22 December 2022.
3. Since the agreement was made until now, neither the Indonesian Government nor the Vietnamese Government have clearly and clearly published the EEZ maritime boundaries (coordinate points and lines) that have been agreed upon between the two countries. Clarity of territorial boundaries is key in carrying out effective law enforcement against maritime security threats, especially regarding *illegal fishing* activities which threatens the sustainability of Indonesia's marine and fisheries resources.
4. IOJI also found two examples of fishing ground violations committed by Indonesian fishing vessels using jaring tarik berkantong fishing gear (fishing gear code: SV-JTK) in WPP-711 (North Natuna Sea). The large ship SV-JTK (99 GT) is strongly suspected of violating the provisions of PermenKP 18 of 2021 because it was detected operating outside the fishing area permit. Based on the permit, the ship was supposed to operate above 30 nautical miles, but IOJI detection showed suspected fishing activity below 12 nautical miles at WPP-711. Regarding this violation, the Indonesian government has to provide firm sanctions against perpetrators of violations because the violations of these fishing areas can trigger widespread social conflict. Social conflicts between local fishermen and jaring tarik berkantong fishermen are prone to occur in Natuna waters and the Karimata Strait.



5. About the fishing tackle jaring tarik berkantong SV-JTK, IOJI do not find any scientific study regarding the environmental friendliness of this fishing gear. Before the Government issues provisions and permits for the use of SV-JTK fishing gear, the scientific study should be produced and published first. The high population of vessels with SV-JTK fishing gear, especially in Java Sea (WPP-712), whose demersal fish population is already *over-exploited*, should become the basis for the Indonesian Government to temporarily stop the use of SV-JTK fishing gear.
6. IOJI found allegedly a Chinese fish carrier vessel Fu Yuan Yu F77 in eastern Indonesian waters which departed from the port owned by PT SIS and PT IGP in Tual towards the Arafura Sea. On the other hand, IOJI also did not find an active permit for the Fu Yuan Yu F77 ship in the MMAF licensing data publication.
7. Radio frequency detection on October 16 2023 succeeded in capturing five radio frequency signals in the Arafura Sea. This radio frequency signal does not correlate with the AIS signal, so that it means there are five vessels deactivating its AIS. Three of the five radio signals detected were somewhere in between fishing vessels in the Arafura Sea. This indicates the possibility there is a certain activity that can't be monitored by AIS and may not have been known to Indonesian fisheries inspectors.

Recommendation

Based on detection and analysis reports as described above and in order to improve maritime security in Indonesian territorial waters and jurisdiction, IOJI recommend as follows:

1. The Indonesian government needs to evaluate *major project* security implementation of the Natuna Sea so that its implementation in the field in the following years can be carried out in a mature and planned manner. *Major project*



Strengthening the security of the Natuna Sea must continue to be implemented in the next presidential period, taking into account that there are still widespread Vietnamese fishing vessels carrying out fishing activities without permits using fishing gear *pair trawl* which damages the environment in the North Natuna Sea region and there are still various maritime security challenges in NNS waters and jurisdiction.

2. For effective law enforcement in NNS, the Indonesian Government needs to immediately publish broadly regarding the coordinate points of the EEZ boundaries that have been agreed upon between Indonesian government and Government Vietnam since last December 22, 2022.
3. Indonesian law enforcement officials need to take action, said the Vietnamese fishing vessel that was found fishing in the Indonesian EEZ. These strict measures are also included to prevent incursion by Vietnamese fishing vessels. Government should more routinely patrol along the Indonesia-Vietnam Continental Shelf line.
4. Regarding alleged *illegal fishing* activities by Indonesian fishing vessels using jaring tarik berkantong fishing gear, the Indonesian Government needs to take firm action against violations committed by these fishing vessels, one of which is the alleged violation of fishing routes which threatens the welfare of small fishermen.
5. The Indonesian government, together with national research institutions, needs to conduct a comprehensive scientific study about jaring tarik berkantong fishing gear (SV-JTK) to find out effectiveness and level of friendliness of SV-JTK fishing gear to the marine environment.
6. Due to alleged unauthorized activities by the fish transport vessel Fu Yuan Yu F77 in the Arafura Sea, law enforcement officials need to do research to the vessel, especially if there are indications of transshipment without permission (*illegal transshipment*) with AIS off.

7. The Indonesian government needs to increase detection capabilities or maritime domain awareness, transparency of fisheries data, as well as the intensity of patrols and maritime security operations in:
 - WPP-711, specifically to capture and dislodge Vietnamese fishing vessels; And
 - WPP-718, especially to monitor dark fishing vessel activities.
8. In the aspect of supervision and law enforcement, the Indonesian Government needs to generally strengthen the maritime security system with the main focus “*the 3A+1 abilities*”, that is:
 - a. *ability to detect* - the ability to timely and accurately detect activities at sea by using integrated multi-source data and information of surveillance technology from several ministries and institutions supported by adequate surveillance facilities and infrastructure in the field;
 - b. *ability to respond* - ability to respond and/or take firm action against violations that occur, including:

Arrest foreign fishing vessels that are illegally fishing in the Indonesian EEZ without permission and continue the legal process to the level of investigation and prosecution;

Verify whether foreign vessels have a license to conduct marine research in Indonesia’s EEZ, and if not, Indonesia should ask the flag state of the vessel for clarification regarding the research vessel’s incursion into Indonesia’s EEZ; And

Demand accountability for vessels that should be responsible for oil spills in Indonesia’s EEZ and coastal areas, and strengthen national capacity to handle domestic as well as transboundary oil spills incidents.
 - c. *ability to punish* - the ability to impose sanctions and/or penalties that provide a deterrent effect against perpetrators of maritime security threats in



accordance with national as well as international applicable laws and regulations;

And

d. *ability to cooperate with the international community* - the ability to prevent and handle maritime security threats through international cooperation, either directly with the other countries governments or with international institutions that specifically handle certain maritime threat issues.



APPENDIX

Data on Vietnamese Fishing Vessels Arrested by Indonesian Law Enforcement Agencies 2021-2023 (3 Year Period)

Institution	Date	Month	Year	Number of Ships	Source
CTF		1-12	2021	25	Final Notes for 2021 and Projections for 2022. MMAF YouTube Channel: https://youtu.be/KOUivOtWWZI
CTF	16	11	2022	2	https://x.com/ditjenpsdkp/status/1595045359323316224?s=20
CTF	10	9	2022	2	https://x.com/ditjenpsdkp/status/1570624475921780736?s=20
CTF	24	7	2022	2	https://kkp.go.id/stasiunpontianak/artikel/43291-kkp-berhasil-gagal-aksi-2-kapal-ikan-asing-berbendera-vietnam-di-wilayahperairan-laut-natunautara
CTF	27	3	2023	1	https://kkp.go.id/artikel/50173-kkp-tangkap-kapal-ilegal-asal-vietnam-di-laut-natuna
TNI AL	11	8	2021	1	https://pim-tni.mil.id/news-detail/2484/TNI-AL-Tangkap-KIA-Berbendera-Vietnam-Pelaku-Illegal-Fishing-di-Laut-Natuna-Utara/
TNI AL	22	1	2021	1	https://www.tnial.mil.id/berita/18595/TNI-AL-TANGKAP-KAPAL-IKAN-ASING-BERBENDERA-TAIWAN-DI-LAUT-NATUNA-UTARA/
TNI AL	24	7	2022	2	https://www.tnial.mil.id/berita/49577/TNI-AL-TANGKAP-DUA-KAPAL-IKAN-ASING-VIETNAM-DI-LAUT-NATUNA-UTARA/



TNI AL	10	1	2022	3	https://www.tnial.mil.id/berita/39715/TNI-AL-TANGKAP-3-KAPAL-IKAN-VIETNAM/
TNI AL	21	6	2022	1	https://koarmada1.tnial.mil.id/berita/detail/8250-tni-al-kri-sts-376-menangkap-tangan-kia-vietnam-di-perairan-indonesia
Bakamla RI	16	5	2021	1	https://x.com/HumasBakamlaRI/status/1393849687388524545?s=20
Bakamla RI	3	4	2021	1	https://x.com/HumasBakamlaRI/status/1378334372948897794?s=20
Bakamla RI	24	12	2021	1	https://x.com/HumasBakamlaRI/status/1474337010936528900?s=20
Bakamla RI	20	8	2022	1	https://bakamla.go.id/publication/detail_news/bakamla-ri-tangkap-kia-vietnam-di-perairan-natuna-utara
Bakamla RI	14	8	2023	1	https://x.com/HumasBakamlaRI/status/1690894789011746816?s=20
Police Polairud	26	11	2023	1	https://korpolaairud-news.com/2023/12/05/kp-bisma-kembali-tangkap-kapal-asing-berbendera-vietnam/
POLRI Polairud	22	10	2023	2	https://korpolaairud-news.com/2023/10/28/penangkapan-dua-kapal-asing-berbendera-vietnam-di-amanakan-oleh-kapal-polisi-bisma-8001-diperairan-natuna-utara/
Police Polairud	26	8	2023	2	https://korpolaairud-news.com/2023/08/31/ditpolair-korpolaairud-baharkam-polri-tangkap-2-kapal-ikan-berbendera-vietnam-di-perairan-natuna-utara/
Police	27	8	2021	4	https://korpolaairud-news.com/2023/08/31/ditpolair-korpolaairud-baharkam-polri-tangkap-2-kapal-ikan-berbendera-vietnam-di-perairan-natuna-utara/



Polairud					1/08/31/baharkam-polri-tangkap-4-kapal-ikan-vietnam-di-natuna/
Police Polairud	5	6	2021	2	https://korpolaairud-news.com/2021/06/08/kapal-polisi-bisma-8001-ditpolair-korpolaairud-baharkam-polri-tangkap-2-kapal-ikan-asing-berbendera-vietnam-diperairan-natuna-utara/
Police Polairud	18	3	2021	2	https://korpolaairud-news.com/2021/03/24/kapal-polisi-bisma-8001-ditpolair-korpolaairud-baharkam-polri-tangkap-2-kapal-ikan-asing-ka-di-laut-natuna/

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