Application Of The Concept Of Eco Liability In Marine Pollution Due To Ship Accidents In Batam Waters Indonesia

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Abstract. Batam's waters are a very busy sea lane and important for regional and international trade. High maritime activity, including the traffic of cargo ships, tankers, cruise ships, and passenger vessels, is an integral part of the economic and transportation life of the region. However, as a consequence of heavy maritime activity, the risk of ship accidents increases and is often a serious concern for those involved in the shipping industry and governments. Ship accidents can cause oil spills, dangerous chemicals, and other waste that can pollute waters, and beaches, and affect marine animal and plant life. This research uses normative research methods with qualitative analysis. This research aims to determine the application of the eco liability principle in marine pollution due to ship accidents in Batam waters. One of the concepts proposed to address the environmental impact of ship accidents is eco-liability, which is environmental responsibility.A method that focuses on comprehending and rebuilding marine ecosystems is needed to apply the notion of eco-liability to combat marine pollution caused by ship accidents. The concept of eco liability focuses on environmental restoration so that each polluter is responsible for providing compensation for environmental restoration efforts carried out through coordination between the central government and regional governments. To compensate for damage caused by oil pollution sufferers and control civil liabilities brought on by pollution accidents, international treaties have been formed.

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1 Intoduction

Batam City is a city in Riau Islands Province, Indonesia, located on Batam Island. Since the mid-20th century, the city has experienced rapid development, especially after it was designated as a Free Trade Zone and Free Port by the Indonesian government in 1971. This status makes Batam one of the largest economic zones in Indonesia and an integrated industrial center that attracts many investors, both local and international.

Batam's waters, located in the Singapore Strait, are a very busy sea lane and important for regional and international trade. High maritime activity, including the traffic of cargo ships, tankers, cruise ships, and passenger vessels, is an integral part of the economic and transportation life of the region. However, as a consequence of heavy maritime activity, the risk of ship accidents increases and is often a serious concern for those involved in the shipping industry and governments.

Shipwrecks sometimes referred to as ship disasters by R.P. Suyono, can transpire due to[1]:

a. Human mistake
b. The harm that is done to the ship and its equipment;
c. Both internal and external variables say, a collision or blaze;
d. The elements or weather that facing the vessel;
e. An amalgam of all the reasons mentioned above.

Ship accidents that occur undoubtedly have an effect on the aquatic ecosystem in which the incident takes place. So, it is necessary to make efforts to preserve the marine environment and recover losses experienced by people who are directly affected by ship accidents. The skipper must prepare the ship that sail in a seaworthy condition seaworthy condition as evidenced by a safety certificate safety certificate. D.A. Lasse states that: "A ship a seaworthy ship is a ship that meets all the required regulations required, but state that it still needs basic for use sailing at sea."[2]

Article 87 paragraph (1) of Law Number 32 of 2009 concerning "Environmental Protection and Management (UUPPLH) confirms that every person in charge of a business and/or activity that commits an unlawful act in the form of pollution and/or environmental damage that causes harm to others or the environment is obliged to pay compensation and/or take certain actions." In the event of environmental pollution by the company, the company must be responsible for paying compensation for environmental damage, as also regulated in the Minister of Environment Regulation Number 7 of 2014 concerning Environmental Losses Due to Pollution and/or Environmental Damage, "environmental losses are losses arising from pollution and/or environmental damage that are not private property rights".

Given that several international instruments have been ratified by the national legal system regarding provisions governing compensation for oil pollution by ships, the loss claim made by the polluter to rehabilitate both the ecosystems' and people's (fishermen's) victims must of course be based on the interests of the marine environment as the concept of the blue economy launched by the government. [3]

In addition to obliging those responsible for activities and/or businesses to pay compensation for pollution and/or destruction of the environment, UUPPLH in Article 54 also emphasizes:

1. Every person who pollutes and/or damages the environment is obliged to restore the function of the environment.
2. The restoration of environmental functions as referred to in paragraph (1) shall be carried out in stages:
   a. cessation of pollution sources and removal of polluting elements; remediation;
   b. rehabilitation;

c. restoration; and/or
d. other methods by the development of science and technology.

Given the sea's crucial strategic importance and the fact that certain people depend on it for their survival, law enforcement must pay special attention to the sea, especially in light of the harm that pollution is causing to its environment. Marine pollution can have a variety of sources:

a. pollution caused by or originating from ships;
b. pollution originating from oil drilling installations;
c. sources of pollution on land; and
d. airborne pollution.

Marine pollution due to ship accidents is a serious problem that can cause extensive damage to marine ecosystems and the maritime environment. Ship accidents can cause spills of oil, hazardous chemicals, and other wastes, which can contaminate waters, and beaches and affect marine animal and plant life. In this context, it is important to have an effective approach to deal with these negative impacts and determine who is responsible for restoring the affected environment.

Fig.1. 1. Kampung Tua Beach Pollution, Batam

Efforts to restore the marine environment due to ship accidents need to be carried out by applying the principle of eco-liability so that polluters are responsible for damage to the marine environment that arises as a result of ship accidents, as a busy shipping center as a strategic area where ships carrying goods or passengers can sail. it is not permissible to ignore the impacts of damage to the marine environment due to the activities of ships sailing in Batam waters because of the principle of sustainability by considering long-term and sustainable impacts on the marine ecosystem and the people who live or make a living as fishermen in Batam waters.

2 Methods

This research uses normative juridical research discussing doctrines or principles in legal science, which is research that aims to find applicable legal principles or positive doctrines. To research legal principles, descriptive methods are used.[4] This research uses qualitative data analysis or normative juridical analysis which means providing exposure, description, and description of the results of research conducted by referring to statutory provisions.

To analyze legal issues regarding the application of the principle of eco liability in marine pollution due to ship accidents in Batam waters, the following steps are taken :

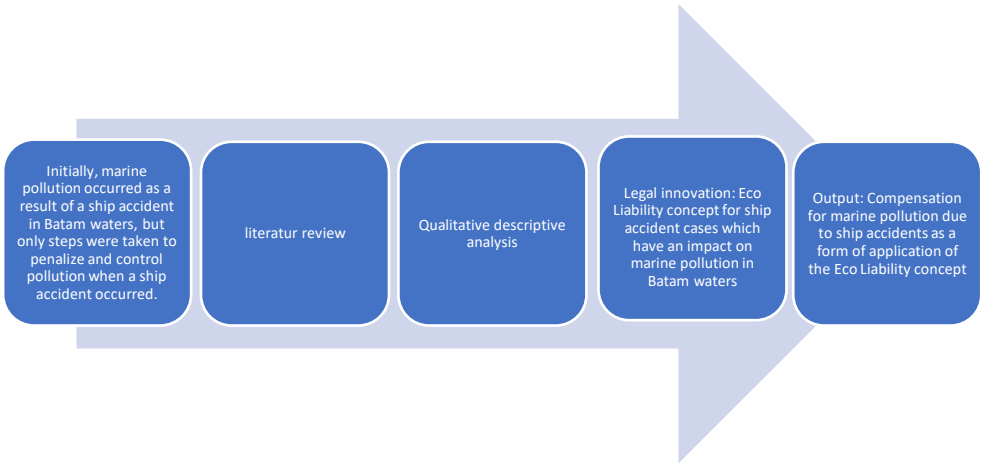

Fig 2. 1. Step of Analyze Legal Issues

Legal research requires research sources called primary legal materials, secondary legal materials, and non-legal materials.[5] The primary legal material from this research is Law Number 32 of 2009 concerning Protection and Management of the Environment, Law Number 17 of 2008 concerning Shipping, Government Regulation Number 62 of 2013 concerning Transportation Accident Investigation, and Minister of Environment Regulation Number 7 of 2014 concerning Environmental Losses Due to Environmental Pollution and/or Damage. The secondary legal materials in this research are books, legal journals, and comments on the judge's decision as well as conducting interviews with the Batam Harbormaster's Office and Special Port Authority abbreviated as KSOP Batam.

3 Results And Discussion

3.1 Marine Pollution Due to Ship Accident (Study of Batam Waters)

Several marine pollution events are indicated to be the result of ship accidents, namely: Oil Spill Pollution Countermeasure Report MV. ARKLIFT, based on the results of a report from PT Mc Dermott Indonesia on Monday, March 27, 2023, at 4:45 pm to the Patrol Response Team of the Batam Special KSOP office that there has been marine pollution by oil spills in the area around the waters of the PT Mc Dermott Indonesia dock allegedly arising from the MV. ARKLIFT. In the case of marine pollution allegedly caused by oil spills originating from the bilge tank of the MV. ARKLIFT with Panama flag GT. 5782, causing marine pollution around the waters of PT Mc Dermott Indonesia Dock with a distribution of ± 100 meters radius diameter on Monday, March 27, 2023, at 2:15 pm. The initial countermeasures taken by the Patrol Team of the Batam Special KSOP office and the management of PT Mc Dermott Indonesia, namely PT Gesuri Lloyd Indonesia (ship agency) by installing an Oil Absorbent Boom (Slickbar) around the ship, using Oil Absorbent socks and Oil Absorbent pads in polluted water areas so that pollution can be overcome in less than 8 hours and the rest of the Oil Absorbent socks and Oil Absorbent that have been used and mixed with oil are placed in TPS (Temporary Disposal Site) owned by PT Mc Dermott Indonesia. Then, on Tuesday 28 March 2023, monitoring and supervision of marine pollution that has been minimized around the MV. ARKLIFT and no more marine pollution in the

form of oil spills was found, but there were still traces of oil spills attached to the hull of the ship.

Fig.3. 1 Oil Spill by MV. ARKLIFT

Oil Spill Pollution Countermeasures at Kampung Melayu Beach, Nongsa. A report was made by the community of Kampung Melayu, Nongsa that there had been marine pollution at Kampung Melayu Beach, Nongsa on May 03, 2023, at around 07.40 am to the Quick Response Team of the Batam Special KSOP office. Based on the results of the report, it was found that there was marine pollution in the form of oil spills suspected to be MFO (Marine Fuel Oil), but the exact origin and cause of the oil spill that caused marine pollution around the Malay Beach Waters of Nongsa with a pollution distribution area of ± 1.5 Km radius and quite thick. As for the initial steps taken in overcoming marine pollution, the Quick Response Team of the Batam Special KSOP office installed an Oil Absorbent Boom along 100 meters and an Oil Absorbent pad ± 500 sheets belonging to the Batam Special KSOP Office around the polluted water area at Kampung Melayu Beach, Nongsa. The tools used to absorb oil spills will be brought to temporary shelters and replaced with new ones periodically.

Fig.3. 2. Oil Spill at Kampung Melayu Beach, Nongsa

Report of Oil Spill Pollution Countermeasures at Several Points in Batam Waters. There was a report received by the Patrol Team of the Batam Special KSOP office from Syukri (HSE) from PT Pax Ocean-Tanjung Uncang that there was marine pollution at several points in Batam waters on Wednesday, November 30, 2023 at 09.24 am. Suspected marine pollution in the form of Marine Fuel Oil (MFO) spills whose source is unknown. PT Pax Ocean - Tanjung Uncang is willing to make efforts to mitigate pollution by installing a 250 meter long Oil Absorbent Boom in the area around the docks of polluted waters such as the waters around the Batu Ampar Bintang 99 jetty; Waters around the Magcobar Jetty; and Waters around the Mc Dermott, Ultraco and Profab Jetties as well as in the Northwest area of Janda Berias Island waters because the area is quite badly polluted and it is feared that it will spread to coastal residential areas.

Fig. 3. 3. Oil spill pollution in the waters around Ultraco Jetty

Based on the interview with KSOP Batam, Oil Spill Report MV. KOGA REVOLUTION, The Batam Special KSOP office team received a report of pollution around the waters of PT Sarana Citra Nusa (SCN) jetty 3, Kabil at the position of 01° 06' 612" LU and 104° 08' 983" East. on Wednesday, November 09, 2023, at 09.30 am which allegedly experienced a leak in the right hull of the stern section of the MV. Koga Revolution with Liberian flag GT. 8963. Based on the results of the supervision report of the Pollution Control Team of the Batam Special KSOP on Salvage (Underwater Inspection) activities on Friday, November 11, 2023, at 10:11 am which was solely to ascertain the origin of the source of the leak that occurred, so that the results of these activities stated that the source of the leak that caused pollution was thought to have originated from the outlet valve of the ballast tank which was adjacent to the sea chest ballast tank of the MV. Koga Revolution. In addition, initial countermeasures were carried out by PT SCM and PT Pelayaran Rickmus Samudera (ship agency) by installing Absorbent Boom, Absorbent Sock, and Absorbent pad and spraying Oil Spill Dispersant around the polluted waters.

On June 8, 2022, there was a ship accident, namely the MV Dumai Line ship fire, the ship was reported to have caught fire during anchoring at Sekupang Port Batam, the fire originated from the trunk room of the ship, which caused 1 (one) crew member (ABK) died, this case was handled by Polair (Water Police).

3.2 Application of Eco Liability Concept in Marine Pollution due to Ship Accident (Study of Batam Waters)

One of the concepts proposed to address the environmental impact of ship accidents is eco-liability, which is environmental responsibility. Eco Liability holds the involved parties, such as ship owners, operators, and cargo carriers, accountable for addressing and paying for the environmental harm caused by the accident.

Regarding environmental protection, there has been debate about the effectiveness and efficiency of the eco-liability approach in responding to and preventing further impacts of marine pollution. Questions around the implementation and monitoring of environmental liability also need to be considered for this system to function effectively.

The case of a ship accident in Batam was brought to the criminal realm based on the results of interviews with KSOP Batam Mr. Rahmat Nasution, for civil liability was not carried out for this case so the application of the principle of eco-liability cannot be done and there has been no civil prosecution for all ship accidents that occur in Batam waters, even though ship accidents cause pollution of marine areas in Batam waters.

Fig. 3. 4. Waste oil pollution in Batam Waters

If it is determined that a business entity has harmed the environment, it may also face additional sanctions or disciplinary actions, including the confiscation of profits made from criminal activity, the closure of all or part of the business location, the obligation to fix any damage caused as a result of the action, the obligation to do what is ignored without rights, and the establishment of the company under pardon for a maximum of three years. But not only criminal sanctions but civil sanctions can also be imposed on perpetrators of marine pollution.

A method that focuses on comprehending and rebuilding marine ecosystems is needed to apply the notion of eco-liability to combat marine pollution caused by ship accidents. The concept of eco liability focuses on environmental restoration so that each polluter is responsible for providing compensation for environmental restoration efforts carried out through coordination between the central government and regional governments. To compensate for damage caused by oil pollution sufferers and control civil liabilities brought on by pollution accidents, international treaties have been formed. The treaties' main objective is to create an international framework based on a single standard of culpability To compensate for damage caused by oil pollution sufferers and control civil liabilities brought on by pollution accidents, international treaties have been formed. The treaties' main objective is to create an international framework based on a single standard of culpability for (1) damage done by pollution by escape or discharge of oil, and (2) the cost of measures taken reasonably to mitigate such damage. [6]

Efforts to increase the role and responsibility are very important, so in the implementation of its operations often experiences obstacles in the form of transportation accidents. This accident will result in material losses and casualties. One of the efforts to reduce the number of accidents is not only to carry out the supervisory function, but it is also necessary to conduct fact-finding (investigation) which is useful to prevent ship accidents with the same cause. One of the efforts made is to include in Law Number 17 of 2008 concerning Shipping, especially in CHAPTER XII Ship Accidents and Search and Rescue Article 256 states that ship accident investigations are carried out by the National Transportation Safety Committee (KNKT) to find facts to prevent ship accidents with the same cause. The NTSC is an institution authorized to investigate the causes of accidents. Investigations are carried out on every ship and not to determine fault or negligence for the occurrence of ship accidents.

The results of the investigation are submitted to the Minister of Transportation accompanied by recommendations to improve policies related to transportation systems, facilities, and infrastructure as well as human resources. In Government Regulation Number 62 of 2013 concerning Transportation Accident Investigation, the contents are Ship Accidents that are investigated including sinking ships, burning ships, colliding ships, and/or running aground ships. Ship accidents that must be investigated by the NTSC include ship accidents with a weight of more than GT 100 (Gross Tonage) for passenger ships, ferry boats,

and fishing vessels; and ship accidents with a weight of more than GT 500 (Gross Tonage) for cargo ships and tank ships. In addition, the ship accident resulted in casualties, damage or inoperability of the ship and/or water facilities, and/or marine pollution.

Article 14 of Government Regulation No. 62 of 2013 concerning Transportation Accident Investigation also states that "Transportation accident investigations of foreign vessels that have accidents in the territory of the Unitary State of the Republic of Indonesia are carried out at the request of the flag state of the ship concerned by international provisions and national law". Finally, Article 15 of Government Regulation No. 62 of 2013 concerning Transportation Accident Investigation also explains "If an Indonesian-flagged ship has an accident outside the territory of the Unitary State of the Republic of Indonesia, the National Transportation Safety Committee conducts a Transportation Accident Investigation in the country where the accident occurred by international provisions". Detailed again in PP No. 62 of 2013 article 8 there are 4 types of accidents investigated by the NTSC, namely:

a. Ship sinks ;
b. Ship on fire ;
c. Ship collision; and
d. Ship aground.

The state can have legal standing for damage to the marine environment due to ship accidents, However, based on findings in the field regarding ship accidents in Batam waters, the state did not make civil prosecution efforts to obtain compensation for environmental damage caused by ship accidents, if we look at the comparative legal study in the case of the MV Lyric Poet and the MT Alex vessel that hit the coral reef are two examples of incidents that endangered and/or polluted newly explored coastal ecosystems. Through the Ministry of Environment and Forestry, the state requested that both vessels pay more than $2.5 million in damages. The value of ecosystem services, restoration costs, and verification costs make up the value of this compensation. The government is responsible for the restoration activities as the cost of restoration is covered by USD 2.5 million. The mechanism for determining whether or not the US$2.5 million is based on a recovery plan has not been disclosed by the Ministry of Environment and Forestry.

A recovery plan that includes identification of damaged and/or polluted environmental components, recovery locations, recovery period, recovery costs, standards for ecosystems declared recovered, and monitoring mechanisms should be based on a recovery budget of USD$2.5 million to cover all damaged coral reef functions in Bangka Belitung. Establishing criteria for when an ecosystem can be considered recovered is critical to prevent recovery efforts from becoming a formality. Once those requirements are met, recovery activities are complete. The government is tasked with overseeing post-recovery activities and recovery efforts to ensure coral reefs can return to normal function and avoid further damage. [7]

Based on the Chief Justice of the Supreme Court Decree No. 036/KMA/SK/II/2013 on the Application of Guidelines for Handling Environmental Cases (KMA Decree No. 36/KMA/SK/II/2013), the formulation of Article 90 of Law No. 32/2009 explains more explicitly what is meant by the Central Government Agency is the Minister of Environment, the Provincial Government Agency is the Governor, which in this case can be delegated to the Provincial Governor Environmental agency that has power of attorney from the Governor, the Regency / City Regional Government Agency is the Regent / Mayor can be assigned to the Director of the City or Regency Environmental Agency that has power of attorney from the Regent / Mayor.

Theoretically, the mandate of several laws and regulations that mention the basis of the government's authority to file a lawsuit for representing environmental interests, we can relate to the idea proposed by Stone in his article "Should Trees Have Standing?-Toward Legal Rights for Natural Objects." In the article, Stone mentions that: [8]

> "It is not inevitable, nor is it wise, that natural objects should have no rights to seek redress on their behalf. There is no answer to say that streams and forests cannot have standing because streams and forests cannot speak. Corporations cannot speak either; nor can states, estates, infants, incompetents, municipalities, or universities. Lawyers speak for them, as they customarily do for the ordinary citizen with legal problems. … On a parity of reasoning, we should have a system in which, when a friend of a natural object perceives it to be endangered, he can apply to a court for the creation of a guardianship".

The right to sue the government contained in some of the existing articles is closely related to the common law tradition that developed in the American and British territories, The public trust doctrine originated in England, as do many American common laws. According to English common law, the King held jus publicum/res communes property in trust for his subjects. Such property mostly consisted of tide-affected rivers and coastal seas, which were crucial to the community as a source of food, trade, and navigation. [9]

The common law tradition states that "the government's right to sue based on the provisions of Article 28H paragraph (1) of the 1945 Constitution is closer to the doctrine of parens patriae." The Latin phrase "parens patriae" (which translates to "father of his country") is used. This doctrine allows the state to sue for expenses or damages resulting from conduct that endangers the health, welfare, and security of its inhabitants, including in cases involving environmental contamination or damage. Such state interests are then recognized as "quasi-sovereign interests".[10]

Departing from the theoretical basis described in the previous section, it can be understood that constitutionally the right to sue the government in Indonesia arises from the consequences of the implementation of the state's responsibility to ensure a good and healthy environment for the welfare of its citizens, or in the context of Article 90 paragraph (2) of Law No.32/2009 the right to sue the government arises from the government's responsibility for environmental loss/damage that is not privately owned. However, the main objective of a government lawsuit has not been achieved if it only reaches the payment of compensation/compensation for environmental losses by the destroyer/polluter. This goal will be fully achieved if the damaged/polluted public resource site has been restored or its ecological functions have returned to their basic conditions as before the pollution/damage occurred. Consequently, any compensation obtained from the government's lawsuit should not be considered mere state revenue. It must be ensured that the compensation will be used for the restoration of the environment that the government claims has been damaged. Only in this way can the public interest in a good and healthy environment be guaranteed again.

One example of a court decision relating to an environmental case where the plaintiff is the government is the Government of Indonesia cq. Minister of Environment vs PT Selat Nasik Indokwarsa and PT Simpang Pesak Indokwarsa. PT Simpang Pesak Indokwarsa

Is a company engaged in quartz sand mining, mining activities carried out resulted in environmental destruction in the form of forest destruction when building roads into community forests and production forests. Air conditions worsened due to these activities, tree damage and physical changes to the forest, and the destruction of mangrove forests became the basis for a lawsuit by the government. For the environmental destruction, the Ministry of Environment filed a lawsuit to the North Jakarta District Court on December 19, 2008, claiming compensation for environmental restoration for Rp 18,190,720,000 (eighteen billion one hundred ninety million seven hundred twenty thousand rupiah) to PT Simpang Pesak Indokwarsa and Rp 8,458,339,000 to PT Simpang Pesak Indokwarsa. [11]

The application of the principle of eco liability is important to be applied if a ship accident harms the marine environment, especially in the Batam region, given that environmental losses cover costs associated with implementing environmental dispute resolution, such as those associated with field verification, laboratory analysis, experts, and

supervision of environmental loss payments, as well as losses associated with overcoming pollution and/or damage to the environment and/or ecosystem losses.

Based on Article 4 (1) The calculation of environmental losses is carried out by experts in the field:

a. pollution and/or environmental damage; and/or;
b. environmental economic valuation

Article 8 paragraph 1 explains that compensation for environmental pollution will be included in PNBP (Non-Tax State Revenue):

a. Payment for environmental losses is non-tax state revenue.
b. All non-tax state revenues from payment of environmental losses must be deposited into the State treasury.

In the Guidelines for Calculating Environmental Losses Due to Environmental

According to the concept of eco-liability, a person or civil legal body is required to be accountable for damages or to take specific steps in response to the acts and losses they, either individually or collectively, commit. Because of this, the idea of eco-liability is always linked to the burden of proof. [11]

Some concepts of the doctrine of liability in civil law are:[11]

1. Liability based on fault, which implies that the defendant is liable if he can be proven guilty, this concept is associated with Article 1365 of the Civil Code on tort, but this concept has the disadvantage that usually the defendant is in a weak socio-economic position so it is difficult to prove the mistakes made by the plaintiff who is usually a large company.
2. Liability is based on fault with a reverse burden of proof, this concept of liability includes a sharpened type of liability, namely by reversing the burden of obligation. The plaintiff does not need to prove the defendant's fault, but the defendant himself must prove that he is innocent because he was careful and he cannot be blamed.
3. Strict liability, where liability arises immediately upon the occurrence of the act, without regard to the fault of the defendant, but not all activities can be applied to this principle, but only in cases of major environmental harm.
4. Joint liability, this concept is applied if the defendant consists of several persons or legal entities and the plaintiff cannot specifically point out the perpetrators of pollution from the many companies that are indicated to be the cause of pollution and environmental damage.
5. Liability based on its share in the pollution, this concept is used by stipulating that each defendant is liable for its share of the loss incurred by its share in the pollution.

Based on Article 501 of Government Regulation Number 22 of 2021 concerning the Implementation of Environmental Protection and Management which reads:

> "Civil law enforcement as referred to in Article 500 paragraph (4) letter b can be carried out by proving absolute liability. (2) Proof with the principle of absolute liability as referred to in paragraph (1) must be requested by the plaintiff and contained in a letter of claim. (3) Absolute liability as referred to in paragraph (2) may be applied to the person in charge of the business and/or loss whose actions, business and/or activities: a. use B3 b. produce B3 Waste and/or manage B3 waste; and/or c. pose a serious threat to the environment. And the defendant can submit a defense with evidence".

In general, the calculation of environmental losses due to environmental pollution and/or damage. The monetary worth of environmental economic losses is also the economic value of environmental losses that the party who pollutes and/or damages the environment is

required to pay to the injured party. Based on the Minister of Environment Regulation No. 7/2014, the cost of environmental damage is calculated by:

Total Environmental Damage Cost = per-gallon environmental cost x 0.5 (freshwater modifier + wildlife modifier) x number of spills.

The modifier table used as a reference is presented below:

Spill response cost = US$ 385 x 1 x 750 = US$ 288750 (assuming 10% mechanical reduction)

Socio-economic cost = US$ 300 x 0.75 x 750 = US$ 168750 (assuming moderate impact)

Environmental cost = US$ 80 x (0.7(0.4) + 0.3(1.7)) x 750 = US$ 47400
(assuming that waters are used for industry (70%) and wildlife (30%) (see table multiple)

Total cost of loss = US$ 504900

Based on the above analysis of liability, the application of the concept of eco liability should be implemented for cases of marine pollution due to ship accidents in Batam waters by first verifying the marine pollution, and finding out who the perpetrators are and the extent of the impact of marine pollution due to ship accidents, if it is known then it can be analyzed the application of the concept of civil liability if for the impact of severe environmental damage then the concept of strict liability can be used.

When comparing with China regarding compensation due to ship accidents, The extent of compensation and its constituent parts, such as environmental damages, economic losses (such as lost income and property), and response expenses, are essentially the same everywhere in the world. The first two are fairly certain, but the environmental damage assessment is a persistent problem. [12] The Chinese government formally introduced pollution insurance as a new economic instrument in environmental governance to control environmental risk and compensate for environmental damage in 2006. This was done to address the growing number of environmental litigations (quarrels on compensation) and overworked environmental state agencies. "The Guidelines on Environmental Pollution Liability Insurance were published in 2007."[13]

The Financial Services Authority hereinafter referred to as Financial Services Authority (OJK) recommends insurance products hull dismantling insurance products that are handled in the form of a consortium to make it easier for ship owners to follow the above rules. make it easier for ship owners to follow the rules above. The association consists of many national insurance corporations that promise certainty to shipowners for their obligations in the event of a shipwreck. for their obligations in the event of a shipwreck.5 This is an alternative solution to potential This is an alternative solution to the potential that may occur to the ship. [14]

The principle of eco-liability often involves a requirement that the shipowner or responsible party must carry sufficient insurance to cover the costs of dealing with ship accidents and marine pollution that may occur. This ensures that a source of funding is available to address the consequences of ship accidents. The Principle of eco-liability encourages recovery and restoration of polluted marine environments. This may include restoration of marine ecosystems, compensation to affected local communities, and other measures aimed at returning the marine environment to its original state or at least close to it. criminal aspects rather than compensation for environmental restoration and in various

cases of marine pollution in Indonesia itself prioritizes short-term economic losses rather than coastal and marine environmental protection which makes the management of pollution problems in Southeast Asian seas lag behind Europe. [15]

4 Conclusions

The application of the eco liability principle has not been implemented for marine pollution due to ship accidents in Batam waters, because only penal efforts have been made for marine pollution, even though existing laws and regulations require perpetrators of marine pollution to compensate for losses by restoring the marine environment to its current state. Initially, the principle of responsibility and legal standing of the state to demand compensation for restoration of the marine environment became important in efforts to consider the long-term impacts of ship shipping activities in Batam waters.

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