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SEA TRANSPORTATION ACCIDENT ANALYSIS IN INDONESIA

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Abstract

To understand fully that human consciousness to a higher protection of the environment, in such a way as to accidents at sea, which could harm the environment (pollution) became a significant consideration. Increased transport activity at both the national dimension of transport by land, sea, air, railroad, also have an impact on the other hand an increasing number of incidents and accidents. High case of maritime accidents in Indonesia at that time should be the concern of all parties, not only the ship owner but also Governments, relevant agencies and communities to be more active in providing information. The main causes of maritime accidents in general due to excess cargo from the set, whether the carriage of goods and people. Service users often do not even force themselves on board cruise ships even filled with the determination of origin can place on the ship. In order to integrate facilities and transportation infrastructure that meets the requirements of security and safety of Trend Analysis Transportation, for the Study of Maritime Transport Accident or regulatory systems and procedures, as well as human resources professionals to realize the full implementation of transportation services and effective and efficient. This becomes important for a system of good government which has the functions of government as a guideline for transportation services include regulatory aspects, aspects of supervision and control aspects.

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1. INTRODUCTION

Transportation is the lifeblood of society and the economy in Indonesia. Transportation development activities in Indonesia are out of various dimensions (marine transport and others) increases. This is an impacts of economic activity and socio-cultural activities and community. In addition, the process of regulatory reform in the field of national transportation deregulation has also triggered an increase in transport activity. The ship is as a means of sea transport, and where many people crave his life. Each time the safety of human life at sea is threatened, both the sailors and the people on board. From the facts and the data obtained that the sea had swallowed accident victims and property which is not small, so that accidents can happen anywhere, anytime and happen to anyone. For that, the crew and passengers need to know about ways to escape if there is an accident on board, first aid and fire safety responsibilities. So the need for training of the crew, especially in the areas of safety for the crew members are experts in rescue techniques, as required by the Convention of the IMO (International Maritime Organization) and the State Governments concerned. Many of the victims of accidents at sea are caused by a lack of basic security knowledge and protection of the environment, according to the IMO to its numerous deaths which occurred in the sea caused by the human factor.

2. SAFETY RULES

Basically, the safety of transport is the right of every citizen, which is why the Indonesian Government must perform and protect the organization from transport that is safe, orderly, gentle and accessible. Passengers are transported must obtain a guarantee of security and the transported goods to the port of destination in a condition as when received at the port of loading. Transport with a guarantee of security services that give a feeling of certainty and peace of mind for the traveller or the owner of the goods, so that the activities of the community economic, social, noodles can be protected. If the aspects of safety in transport is assured, and the rights of the users that are protected, there would be no cost which appear productive pro unnecessary and counterproductive. Principles of safety of transport for the attention of the Government for long time., established in 1999 presidential decree number 105 year 1999 on the establishment of the National Transportation Safety Committee (NTSC).

To minimize the occurrence of accidents at sea, it requires an effort to rescue the soul in order to satisfy all the rules by the standards and even more to ensure the safety at sea, requires a support in the world there are three organizations that govern the safety of the ship. The IMO (International Maritime Organization), ILO (International Labour Organization) and ITU (International Telecommunication Union), Indonesia is one of the three members of the organization and has ratified the convention. As a consequence of its membership, Indonesia must implement the rules properly and concretely demonstrated in certification through an independent evaluation every 5 years. International conventions governing the safety of the ship include: 1. SOLAS 1974 (Safety of Life at Sea) and amendments; 2. MARPOL 73/78 and the protocols; 3. 1966 Convention on the load path; 4. Collreg 1972 (Collision Regulations); 5. Tonnage Measurement 1966; 6. STCW 1978 Amendments 95; 7. ILO. 147 of 1976 on Minimum Employment Standards for Commercial Ship crew; 8. ILO Convention. 185

Year 2008 on the SID (Seafarers Identification Document) which has been ratified by Law no. 1 Year 2009.

3. CAUSES OF ACCIDENTS

Accidents occur in rivers, lakes, and across to the Admiralty Court is due to human error factor (88%), and only a few incidents in the waters caused by natural factors. Given the reasons mentioned above should all accidents can be minimized if there is the prevention of all parties so as not to stumble on the same stone. Causative factors are: 1. Human factors is the biggest factor that includes the following: Lack of carelessness in carrying out the crew the ability to master a variety of problems that may arise in the operation of ships, boats aware of the excessive burden; 2. Technical factors are usually related to the lack of accuracy in ship design, ship maintenance neglect resulting in damage to parts of the ship or vessel that caused the ship crashed, burning the ship as the ship experienced; 3. Natural factors, invoice bad weather is a problem that is often regarded as the cause major in marine accidents. This problem usually experience storms, high waves is influenced by season/hurricane, a large current, the resulting fog limited visibility. A lot of ship accidents occurred every year on Indonesian waters, described in Table 1, and the number of victims in Table 2, and the sample of ship accident in Figure 1 & Figure 2.

Table 1 Number of ship accidents acc to Marine Court Decision

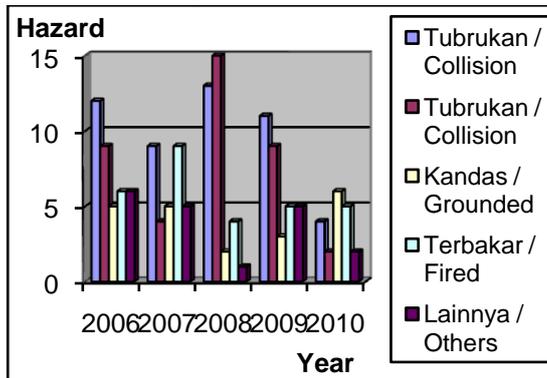


Table 2. Number of Victims acc to Marine Court Dec

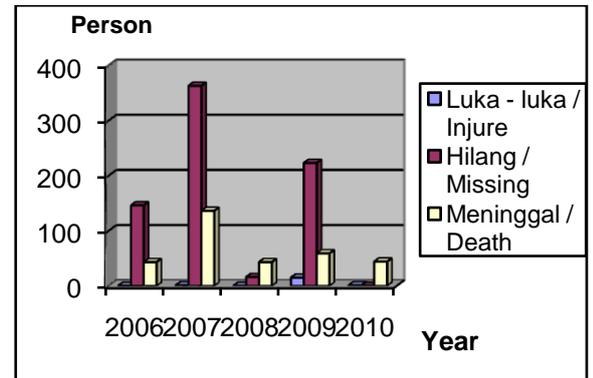


Figure 1. Ship founder and rolled



Figure 2. Overloaded Boat

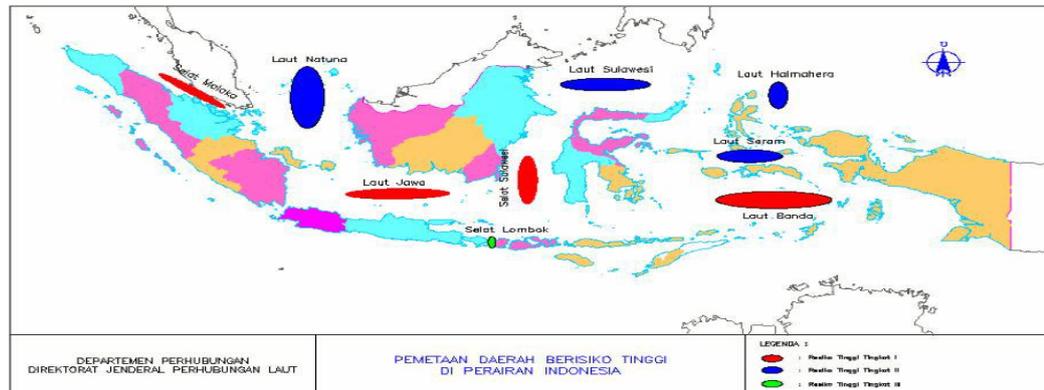


Figure 3. Mapping of high risk accident area

From the results of the investigation it turns out the human factor in causing the error so that the occurrence of accidents is very dominant. According to statistics from year to year that 80-85% of accidents are caused by human error, so that there is an opinion, which ultimately are directly or indirectly, all due to human factors. If the company is limited in scope (in terms of micro), it appears that the occurrence of accidents due to imbalance between the three main elements of production (sub-human system, the physical environment and management) that resulted in acts and unsafe conditions.

Vessel accident analysis of Sink 1. The root of the problem to the root causes of accidents are usually caused by the sinking of the ship, because ships take in water, the penetration of water into the vessel can leak through the skin or stomach due to the State of the vessel at the moment is too bias, or body/vessel damaged skin. Hull/skin gap receptacle may be caused by a condition of the old ship or can also be caused by the thin Construction Corps and not worth it to withstand pressure when the vehicle moves forward in volatile sea. 2. Document Leak Nautis ship where the territorial waters of Western Indonesia, reasonable suspicion that the territorial waters of many reef data/rocks or other disorders, such as marine or frame/frame buildings collapse, not informed and was described and published in documents Nautis and familiar with right SBNP (Sarana Bantu Navigasi Pelayaran) or shipping navigational aids. 3. Skills good sailor (shipping) at navigational because spreader capacity and skippers in terms of maintaining and controlling the ship to get to know the various threats to the waters sank the ship, is indispensable. Science associated with it is if it moves, ship building, stability and handling of cargo. Sports-related motion that knowledge in ways surfing maneuvers, though-motion in bad weather (tropical storm) is a science that applies at the time of carrying out the task. 4. The ship building ship building in this case is knowledge relating to Bouyancy-Metacentris ($BM = I / V$), the permeability of vessels and boats on the performance (torque and power). Stability includes knowledge about the stability of negative and flooding (floodable). Handling of cargo (cargo handling) that is devoted to knowledge spreader to the safety limit load (line load) ships and boats saging and circuitous conditions.

Ship crashes out 1. Factors into the existing data in maps and tide. Into the sea chart related to the marine survey conducted by the agency in charge of the map of the sea, in Indonesia which has a vast sea with more than 17 thousand islands, the activity of the depth map is very difficult and expensive scintillating big enough to do it, because it sounds done only in certain places only, so the depth of ocean data that has been lacking for so long been well received, especially in coastal soil erosion is quite high as the north coast of P. Java and East Coast beaches P. Sumatra and South Kalimantan. 2. Navigation capabilities wardroom Sometimes factors existing theories and accepted in navigation education can not fully support the work at sea, such as for sailing the waters of the depth data is not real close to the mainland then chances are likely to run aground can occur, because the cruise ship as thought in the dark and this is very dangerous for ship founder cause. 3. Navigational tools and the distance it seems. Navigation tool that works as well as, radar, echo sounder, etc.. Will be able to correctly solve some problems while sailing founder in the dark, especially when sailing in a river or many shallow coastal water

Ship of Fire 1. Usually ships crew mentality of various levels have received training in fire control / fire department (fire department), and proficiency certified, crew competency, so no doubt, but the courage and act with appropriate speed required. Conditions must be other than miraculous event fires on the ship out of control because of the crew lost the courage to act to extinguish the fire. For other ships or the opposite situation of high confidence and courage formed with the existing situation of trust related to the crew closely with the equipment available and well maintained and courage presented itself from the crew that already has or can be forged education through adequate long training time. 2. Types of tools and fire that spreads rapidly and is followed intense fire explosions, making it difficult to control. Another situation, a fire that occurred in the engine generators and safety equipment to extinguish the fire becomes difficult due to pump water to extinguish electricity comes from generators. While the use of portable extinguishers independently to a large volume of fire is a generator for being effective. So the equipment and the type and volume of highly related fires when there is fire on the ship because of the fire becomes uncontrollable. Ship Collision Another factor underlying cause of collision between ships at sea are: 1. If the motion of such a narrow space, super tankers if the movement is limited capabilities, and has made an application to pass in certain waters area (eg Strait of Malacca) and vessel towing the boat with the same conditions, which move slowly take another ship must diverge in any condition. Ships can only move in the lanes that are difficult to make deviations from the arc that follows the flow path, and therefore something that prevented him and when collision not be much benefit compared to an outflow vessel foundered because it would certainly almost being collide in shipping area, because this is much like the events collision of ships in the strait of Malacca.

CONCLUSION

1. High maritime accidents in Indonesia at that time should be the concern of all parties, not only the ship owner but also Governments, relevant agencies and communities to be more active in providing information. From the observations, the main causes of marine accidents due to excess cargo from the set, whether the carriage of goods and people. Service users often do not even forced himself to climb aboard the cruise ship was full, despite the determination of origin may post on the Board.
2. Many accidents happened on the boat size < 500GT (Non-Convention) vessel, which was not governed by the agreement, both maritime, certification and security equipment, so it should be reorganized the standard system includes the requirements of the ship was seaworthy, the procedures you must perform in predicting the risk of accidents at sea, as found on vessels more than 500 GT (SOLAS, MARPOL and STCW).
3. Indonesian waters are dominated by motor boats, motor yachts, sailing folk and traditional fishermen (fleet ants), so that vulnerability to the risk of accidents during this time many overwrite and often occur in bad weather seasons such as NE Monsoon and SW Monsoon (January and July), ocean currents and tides, the lack of shipping navigational aids (lighthouses, lighthouses buoys, traffic separation schemes, AIS, etc).

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