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OPTIMIZATION OF GRANT FISHING VESSELS BASED IN PANGANDARAN, INDONESIA

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ABSTRACT

Fishing operations are one of the main livelihoods in the coastal areas. One of the coastal areas in southern West Java is Pangandaran Regency.Therefore, the potential of capture fisheries resources in Pangandaran must be utilized optimally. Resource use must be support-ed by adequate fishing units.In an effort to exploit the potential of marine fisheries, the Ministry of Marine Affairs and Fisheries (KKP) has a program in the form of fishing unit assistance to fishermen. This program is in the form of providing fishing vessel assistance for fishermen. The condition of the grant vessel based in Pangandaran is not utilized optimally by fishermen. The purpose of this research is to find out the factors that cause the grant vessel not to be used by fishermen and the opportunity to utilize the grant vessel.This research conducted on August-September 2018 in the waters of Pangandaran Regency, West Java, Indonesia. The object of the study was the 55 units of grant vessels. The study was conducted using a case study method. The study was analyzed in a comparative descriptive. Data collection through field surveys conducted by interviewing fishermen and stakeholders using questionnaires that contains the physical identification of the vessels, the factors causing the vessel not to be utilized by fishermen, the extent to which the vessel is optimizing opportunities and what steps fishermen must take to be able to utilize the vessel in fishing operations. The existence of vessel transportation factors and the physical condition of the vessel that is not appropriate causes the grant vessel not to be used by fishermen, besides the legal process that is too long also becomes an obstacle. The physical condition of the grant vessel needs intensive repairs. Meanwhile, fishermen need infrastructure to support the repair of the vessel. The fishermen have been optimizing the effort to utilize the grant vessel through independent repairs but at a high cost.

Introduction

Correct fishing operations and supported by an adequate fishing fleet, both owned by the people and fishing companies, will be able to carry the meaning of the use of marine resources [1]. Fishing vessels also become one of the important factors in increasing the production results of fishing operations to meet the food needs of the community that comes from fish meat [2].The design and construction of the main dimensions of fishing vessels are determined by considering the optimum load capacity and the characteristics of the waters where the vessel will be used. Then detailed in the general plan drawings for the design and construction of fishing vessels [3]. It is important for designers and operators of fishing vessels to know the characteristics of the main dimensions of fishing vessels that are below the surface of the water. The main dimensions of the fishing vessel are considered for several conditions of the waterline and in optimum loading conditions in the framework of safety and efficiency of fishing operations [4].

Fishing operations are one of the main livelihoods in the coastal areas. One of the coastal areas in southern West Java is Pangandaran Regency. Pangandaran has vast marine resource potential. The geo-graphic condition of Pangandaran which is in direct line with the Indian Ocean explains that Pangandaran has rich marine fisheries resources [5]. Therefore, the potential of capture fisheries resources in Pangandaran must be utilized optimally. Resource use must be supported by adequate fishing units.

In an effort to exploit the potential of marine fisheries, the Ministry of Marine Affairs and Fisheries (KKP) has a program in the form of fishing unit assistance to fishermen. This program is in the form of providing fishing vessel assistance for fishermen. The existence of this grant vessel is expected to increase revenue and at the same time have an impact on increasing fisheries production so that it can advance the marine fisheries sector in Pangandaran.

Pangandaran Regency received 55 units of grant vessels from the KKP. The vessel has 33 GT units with 33 units and 5 GT units with 22 units. One indicator of the success of the grant program is that goods/services received by the community can be utilized properly and optimally. The condition of the grant vessel based in Pangandaran is not utilized optimally by fishermen. Only 1 grant vessel is used by fishermen for fishing operations. Based on Maulana et al. [6] that the physical condition of the vessel that was not by following the proper conditions had made the grant vessel no longer used by fishermen. The use of grant vessels 1 of the 55 available vessels is the basis of this study. The purpose of this research is to find out the factors that cause the grant vessel not to be used by fishermen and the opportunity to utilize the grant vessel.

Method

This research conducted on August-September 2018 in the waters of Pangandaran Regency, West Java, Indonesia. The location used as a research site in 13 locations of a fishing base from 4 districts in Pangandaran. The object of the study was the 55 units of grant vessels by the KKP. The vessel had 33 units of 3 GT grant vessels and 22 units of 5 GT grant vessels which has been landed to 6 fish auction (TPI) in Pangandaran. The study was conducted using a case study method. The study discusses the grant fishing vessels by KKP. The case in this study that became the focus was the use of grant vessels by fishermen in Pangandaran. The study was analyzed in a comparative descriptive. Data collection through field surveys conducted by interviewing fishermen and stakeholders using questionnaires that have been prepared by researchers about the optimization of grant vessels.The questionnaire contains the physical identification of the vessels, the factors causing the vessel not to be utilized by fishermen, the extent to which the vessel is optimizing opportunities and what steps fishermen must take to be able to utilize the vessel in fishing operations.

Results and Discussion

Utilization of Grant Vessels in Pangandaran

The use of grant vessels based in Pangandaran has not been felt to be optimal. That was caused by constraints with the condition of the defective vessel. There are cracks and abrasions on the hull of the vessel as in Figure 1. It can only cause more damage if it is not immediately repaired and if used for fishing activities can cause water to enter the hull. So that it can threaten the safety of fishermen who use it in fishing operations.

Figure 1 Cracks and scuffs on grant vessels

The vessel's cracks and abrasions are a result of the poor distribution process of the KKP grant vessel. Figure 2 is a portrait of how the KKP grant vessel distribution is based in Pangandaran. The vessel is distributed using a truck that is arranged neatly and is stacked irregularly. Piles between vessels that touch the hull and the keel of the vessel certainly cause friction and a heavy burden during the trip. This causes cracks in the body of the vessel and damage to certain parts of the vessel.

Figure 2 Grant vessels distribution process

The process of repairing damaged vessels for re-use is not cheap, especially if the time spent is not short. While the vessel should be used immediately. Considering that the KKP policy in the form of the aid of a grant vessel has a good purpose, to help fishermen who do not yet have their own vessel to go to sea to use the vessel in addition to being able to exploit the marine potential that is owned by Pangandaran Waters. The problem with small vessels lies in the maintenance, repair, and construction of vessels. Maintenance and repair of vessels basically consist of four parts including fishing gear, propulsion engines, assistive devices and vessel's hull. The process of maintenance and repair of vessels in the hull is in principle carried out through several stages including washing and cleaning all parts of the vessel, patching, stealing, smoothing, basic coating and laying. Limitations in the process of maintenance and repair of vessels directly affect the security and safety of fishermen during fishing [7].

In addition, there are very unfortunate things in the process of vesselbuilding. The surface of the hull on this grant vessel has a very rough surface. Unlike existing vessels found in Pangadari waters, they have smooth hull surfaces and no serrations that indicate the vessel is covered with fiberglass repeatedly. The untidy laminating process of vesselbuilding has an inconsistent coating effect. Although the vessels ordered are not small, it should not be a reason to make vessels with poor quality.

The length of the vessel rests in the waters around TPI because it is not being used. Figure 3 shows that there was a bend in the vessel's supporting ceiling and many parts of the vessel began to rust. Darmanto et al.[7] stated that the routine vessel maintenance process is carried out annually by painting the hull of the vessel. The hulling of the vessel is carried out not only on vessels undergoing major maintenance but also on vessels that are not physically damaged. Damage to the hull's protective coating (which is a paint coating) needs to be cleaned and refill every year and the painting process begins with applying paint to all parts of the hull.

Figure 3 Damage to the vessel grants

Damage to vessels was added to the length of time the vessels were anchored at TPI because they were only left to lean on TPI without being given care because of the uncertain status of the vessel causing the grant vessel to need a lot of repairs before being reused. The fishermen mentioned that the long legal process caused the vessel could not be used yet. So that the process of giving vessels to fishermen is stunted regarding the problem. Even for vessels measuring 3 GT from April 2018, the vessels were anchored at 5 TPI points, so far they have not yet dropped their vessel's matters. Even though for vessel grants anchored at TPI Cikidang with a size of 5 GT, the vessel's documents have been dropped, some fishermen are reluctant to use them regarding the cost of repairing the vessels that must be borne by the fishermen.

Figure 4 Grant vessel repair process

The process of vessel repair is shown in Figure 4. The process of vessel repair is done by adding accessories and reducing the part of the vessel that has been given from the vesselyard according to the tastes of the vesselowner. The addition and subtraction of parts of the vessel are intended to facilitate the work of fishermen who are per under their habits when fishing. Inadequate vessel maintenance facilities became a separate problem faced by Pangandaran Regency. In general, fishermen only repair rudimentary vessels with simple equipment. According to the results of interviews with the nearest vesselyard fishermen are in the Cilacap Regency area. So that in the repair of vessels will spend a lot of time and not a small amount of money. This is the reason why the KKP grant vessel is based in Pangandaran.

Optimization of Grant Vessels in Fishing Operations

Fishing is the most dangerous work, so fishing has a high rate of fatal accidents [8]. According to Suwardjo et al. [8] states that the cause of the fatal accident of the crew is due to the low awareness of the crew about work safety on vesselping and fishing activities, the low mastery of competence in vesselping and fishing safety, the vessel is not by following how it should be. So in addition to the ability of fishermen who need to be improved, the suitability of the vessel also needs to be improved so that it can be utilized in fishing operations.

Pangandaran waters included in the waters of South Java. Fadika et al.[9] state that the waters of the Java Sea are influenced by the monsoon wind system which affects the fluctuations in water characteristics such as wind, currents, and temperature distribution. Pangandaran waters have an average wind speed of 11.1 knots which can cause high waves and changes in direction and the average speed of surface currents up to 0.4 knots [9]. The unique characteristics of Pangandaran waters, need to be supported by the shape and condition of the vessel that is appropriate to improve the catch and provide safety to fishermen during the fishing operation process.

Inappropriate grant vessels need repair of the vessel before it is utilized to support the implementation of fishing operations. Vessel repair in the form of removal or addition of vessel parts and repairs to parts of a defective vessel. Grant vessels consisting of 55 vessels spread to 6 TPI in Pangandaran. There are only 4 vessels that are in the process of being repaired. There are 3 units of 5 GT

vessels at TPI Cikidang and 1 unit of 3 GT vessels at TPI Bojong Salawe. The vessel was repaired by replacing parts of the vessel that had been damaged and adding parts of the vessel that helped with fishing operations. Besides, 1 unit of 5 GT vessels at the Cikidang TPI and 1 unit of 3 GT vessels at Bojong Salawe TPI have been used in fishing operations. Looks at the physical vessels that have been utilized, the vessel is fit to be used by fishermen after the process of repair and renovation is first seen.

Figure 5 Utilized grant vessels

Figure 5 shows the grant vessel that was leaning in the waters around the TPI. It can be seen that the vessel can be used because there are additional accessories attached to the vessel in the form of bamboo attached to the left and right side of the freeboard, the addition of vesselbuilding, addition of katir on both sides of the vessel, the addition of wood to the main dimensions of the vessel, giving the flag of the vessel and a set of fishing gear. According to the results of an interview, one of the fishermen stated that the grant vessel could have been used, but needed to be supported by improvements and changes in the part of the vessel to support the fishing operations.

Conclusion

The conclusion of this research shows that the existence of vessel transportation factors and the physical condition of the vessel that is not appropriate causes the grant vessel not to be used by fishermen, besides the legal process that is too long also becomes an obstacle. The physical condition of the grant vessel needs intensive repairs. Meanwhile, fishermen need infrastructure to support the repair of the vessel. The fishermen have been optimizing the effort to utilize the grant vessel through independent repairs but at a high cost.

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