

# Overview of the Utilization of Grant Ships from the Ministry of Marine Affairs and Fisheries (KKP) Based in Sukabumi Regency, Indonesia

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## ABSTRACT

The Ministry of Maritime Affairs and Fisheries (KKP) has rolled out one program, namely ship grants for fishermen who are members of the Joint Business Group (KUB). Sukabumi Regency is one of the regions that received grant ships from the KKP. The provision of grants based in Sukabumi Regency is expected to increase the catch of fishermen. This research was conducted from August 2019 to January 2020. The research method used was descriptive method. The data used are primary data and secondary data, then tabulated and analyzed by descriptive analysis. The results of the research show that the grant boats are well utilized by fishermen in Sukabumi Regency by using gillnets and handlines. Grant ships with gillnet fishing gear are able to catch an average of 17-37 kg/trip of fish with the main catch being fringescale sardine. Meanwhile, grant ships with handline fishing gear are able to catch 9-37 kg/trip of fish with the main catch being haitail. The fishing areas for grant ships are in Palabuhanratu Bay, Ujung Genteng waters, Pangandaran and even extend to Cilacap waters.

**Keyword :** catch, fishing gear, fishing ground, grant ship, utilization

## 1. INTRODUCTION

Sukabumi Regency is one of the regencies in West Java that has great potential for fisheries and marine resources. The amount of capture fisheries production in Sukabumi Regency in 2015 was 13,790,420 kg with a value of Rp. 285,838,924,900 and the average increase every year [1]. The increase in production value is expected to be accompanied by an increase in the welfare of fishermen. The realization of this needs to be supported by the existence of adequate fishing vessels to increase catch production in Sukabumi Regency.

One of the Ministry of Marine Affairs and Fisheries (KKP) programs that focuses on fishermen and increasing capture fishery production in Indonesia is in the form of providing ship grants. This ship grant program is expected to support the success of fishermen in carrying out fishing operations and the vessels can be utilized properly by fishermen to increase catch production. One of the outputs of the Ministry of Maritime Affairs and Fisheries providing grant vessels is to improve the welfare of fishermen and can assist fishermen in carrying out fishing operations.

Fishing vessels have their own characteristics caused by the variety of activities carried out by these vessels. These activities include looking for fishing grounds, operating fishing gear (setting), chasing groups of fish and as a place to accommodate catches [2]. The condition of Sukabumi waters which is directly related to the Indian Ocean affects the characteristics of fishing vessels in the operation of fishing gear in these waters. Vessels that are in accordance with the type of fishing gear used and the conditions of the waters can support the safety and success of fishing operations [3].

There are only 2 out of 55 units of grant boats based in Pangandaran Regency that are used by fishermen [4]. This shows that fishermen in Pangandaran Regency have not yet optimally utilized the grant ship. This is unfortunate and it is hoped that this will not happen in other regions that receive grant ships. This information regarding the description of the utilization of the grant ship needs to be reviewed to evaluate the sustainability of the KKP program. Many factors may influence the utilization of the grant ship. Therefore, it is necessary to conduct a study on the utilization of grant ships, especially those in Sukabumi Regency so that the work program of the Ministry of Marine Affairs and Fisheries can be realized in increasing capture fisheries yields and fishermen's welfare.

## 2. RESEARCH METHODS

The research was carried out in August 2019 and January 2020. The research location was in Sukabumi Regency, Indonesia (Figure 1) with the object of research being a grant ship. The grant ships are spread across 4 coastal sub-districts in Sukabumi Regency, namely Cisolak, Palabuhanratu, Ciemas and Ciracap sub-districts.

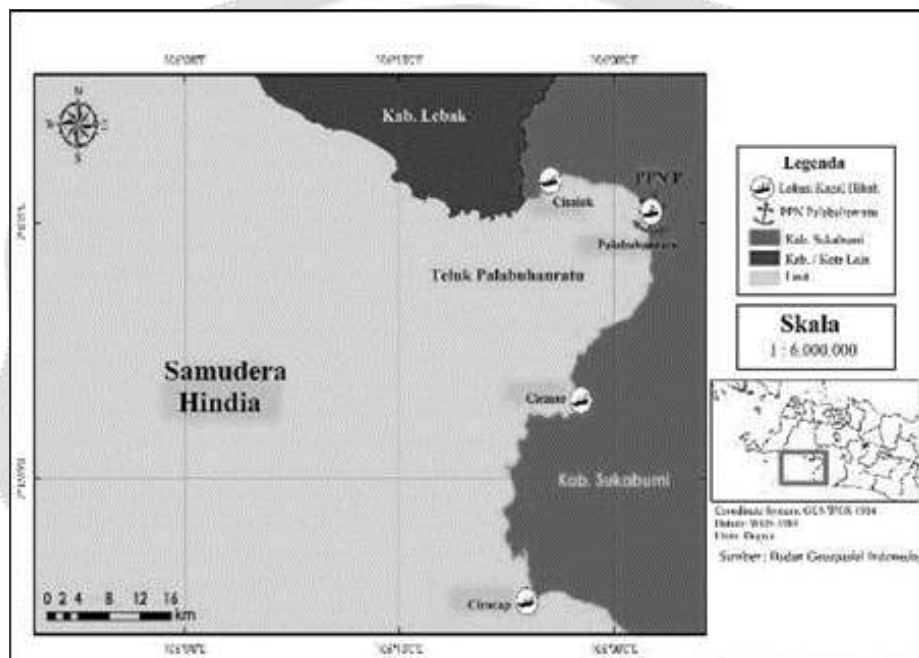


Fig-1. Peta Lokasi Riset

This research was conducted using descriptive methods and survey data collection techniques. All grant ships in Sukabumi district were observed during this research. The data used are primary data and secondary data, then tabulated and analyzed by descriptive analysis. Primary data collected in the form of the construction of the fishing gear used, the type of catch, the number of catches, the number of trips and fishing areas. Secondary data collected in the form of data on the number of grant ships and their distribution in the Sukabumi Regency area as well as literature studies.

## 3. RESULTS AND DISCUSSION

Based on the Sukabumi Regency Marine and Fisheries Service, the Ministry of Maritime Affairs and Fisheries in 2017 to 2018 has provided 79 units of grant vessels. The ship consists of 78 units measuring 3 GT and 1 unit measuring 10 GT. The existence of the ship is spread over 4 coastal sub-districts in Sukabumi Regency namely Cisolak, Palabuhanratu, Ciemas and Ciracap sub-districts. The grant ship in Sukabumi Regency is used optimally by fishermen. This is indicated by the increase in capture fisheries production from 2017-2018. The increase in capture fisheries yields in Sukabumi Regency was from 9,705,690 kg to 10,523,920 kg [5].

### 3.1 Fishing Gear

Fishing operations are inseparable from the use of fishing gear. The fishing gear used by grant ships in Sukabumi Regency consists of 2 types, namely gillnets and handlines. Based on the operating method, the two fishing gears are static fishing gear or operated when the ship is stationary. The fishing gear is adapted to the condition of the ship, which is a type of static gear ship. A static gear ship is a ship that operates fishing gear that has static or stationary properties [6]. Based on data from the Sukabumi Regency Marine and Fisheries Service in 2018, the number of fishing gear operated on grant vessels operated in Sukabumi Regency can be seen in solid Table 1.

Table 1. Fishing gear operated on grant vessels operated in Sukabumi Regency

No	Fishing Gear	Total (Unit)
1	Gillnet	465
2	Handline	1161

Gillnets are classified into 3 types based on the layout of their placement in waters, namely surface, mid-water and bottom gill nets [7]. The gillnet used by the grant ship is classified into a surface gillnet because it is operated on the surface of the water [8]. The gillnet is rectangular in shape, the mesh size is the same throughout the main net [9]. The construction of rampus fishing gear operating in Sukabumi Regency can be seen in Figure 2.

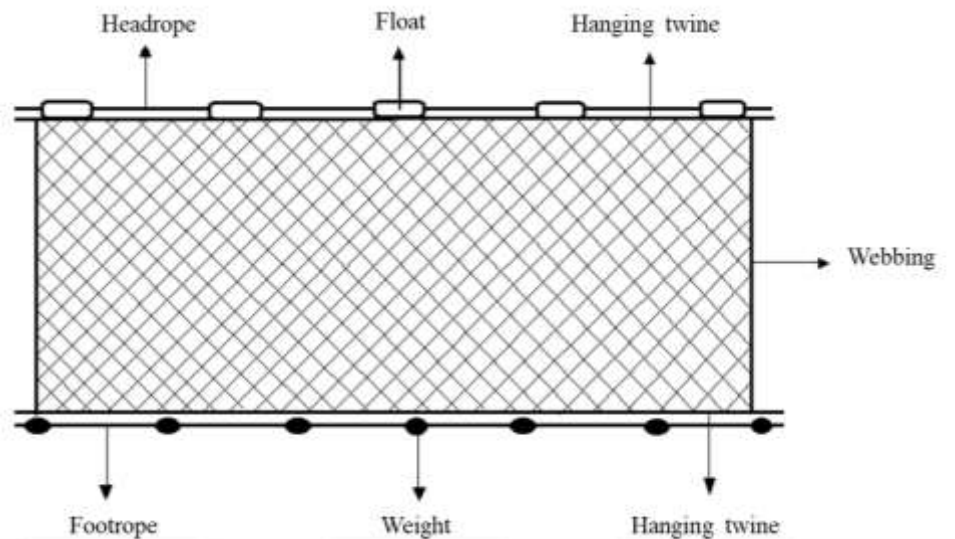
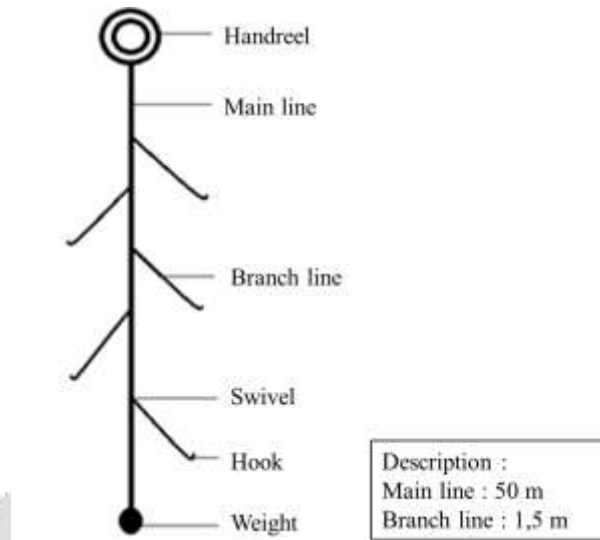


Fig – 2 Gillnet construction in Sukabumi Regency

Based on its construction, the hanging twin gillnet is made of polyethylene multifilament while the webbing is made of polyamide monofilament (nylon). Nylon was chosen as the basic material for gillnets because it has the appropriate characteristics and is needed when gillnets are operated in water [10]. The size of the gillnet webbing is 4 x 8 m per pcs. The size of the mesh used there are two types, namely the size of 2 inches and 2.5 inches which are able to catch various types of catches in the form of large fish and small fish. Gillnets are used by fishermen to catch small pelagic fish such as fringescale sardine (*Sardinella fimbriata*) and hair tail (*Trichiurus lepturus*) [11]. In addition to gillnets, the fishing gear used by fishermen in operating grant ships is using handline fishing gear (Figure 3).

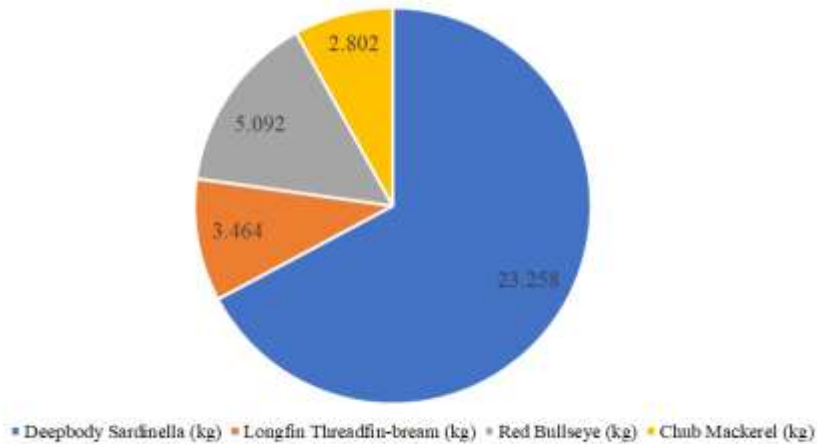


**Fig – 3** Handlines Construction in Sukabumi Regency

Based on the construction drawing above, it can be seen that the hand line operated in the waters of Sukabumi Regency consists of the main line, branch line, swivel, hook and weight. Hand line is included in the fishing gear group, consisting of two main components, namely line and hook [12]. The main line on the hand line used is made of polyamide monofilament (nylon). Nylon is a strong fiber, has high tensile strength, and is elastic [13]. The number of hooks used in the fishing line under study amounted to 50 hooks, according to the number of branch lines contained in the main line. In addition to its simple construction, its operation also does not require large capital [14]. Hand line is a traditional fishing gear used to catch pelagic fish such as scad and mackerel [15].

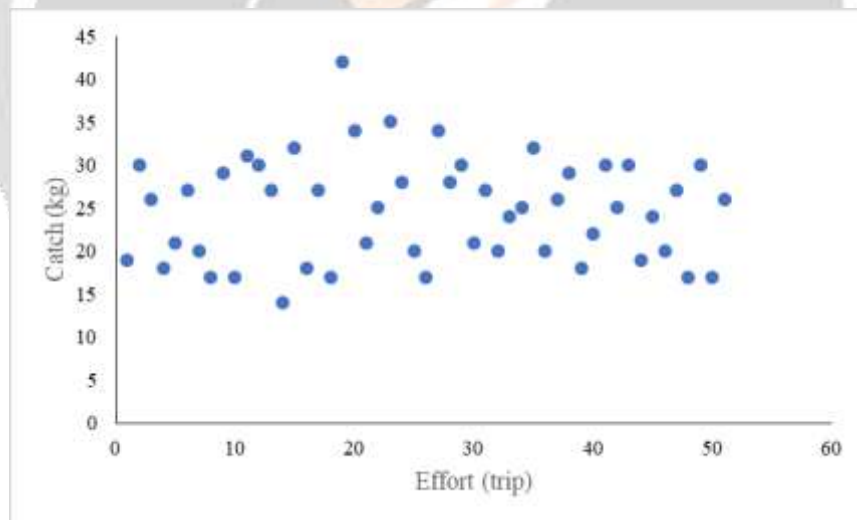
### 3.2 Catch

The grant ship in Sukabumi Regency is very well and optimally utilized by local fishermen. This is indicated by the fact that the number of catches obtained by the grant ship is able to match the number of catches from existing vessels in Sukabumi Regency. The grant ship made many arrests around Palabuhanratu Bay because of its small size, which was 3 GT. Fishing fleets with a capacity of <10 GT are operated in the bay (coastal fisheries) while fishing fleets >10 GT are operated outside the bay (offshore fisheries) [16]. The sample of the grant vessel that uses the handline fishing gear used is KM Fisherman 2018 – 382. The sample of the grant vessel that operates the gillnet fishing gear is KM Fisherman 2018 – 067. Data on the catch and number of trips for each vessel are taken from January to April in 2019. The gillnet used by fishermen in Sukabumi Regency is used to catch pelagic fish. The catch obtained by the grant ship with gillnet fishing gear can be seen in Figure 4.



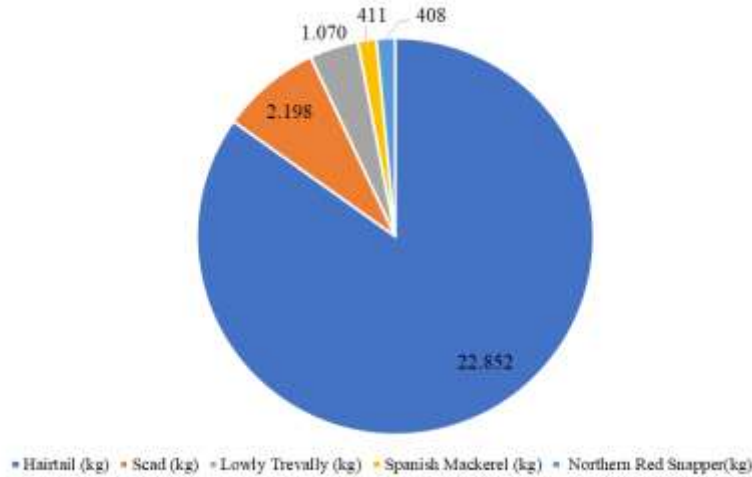
**Fig -4** Gillnet's Catch

Figure 4 shows the types of gillnet catches from the grant ship, which consist of deepbody sardinella, longfin threadfin-bream, red bullseye, and chub mackerel. Deepbody sardinella fish is one of the fish resources that has economic value and an important role in Indonesian fisheries [17]. Deepbody sardinella fish is sold for IDR 10,000 per kg so it is in demand by the people of Sukabumi Regency. The catch is immediately sold at the fish market which is located adjacent to the Palabuhanratu Fishing Port. The amount of catch production on grant ships using gillnets can be seen in Figure 5.



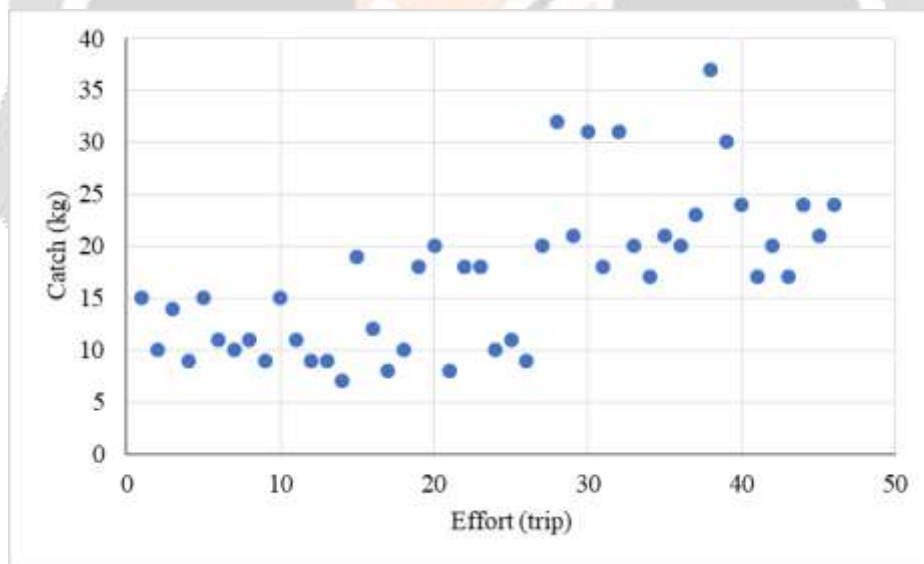
**Fig -5** Average Gillnet Catch per Trip

Figure 5 shows that KM Fisherman 2018–067 has around 50 trips during January-April 2019. KM. Fishermen 2018-067 (grant vessels) are able to catch as much as 17-37 kg of fish per trip with an average of 25 kg/trip. KM. Fishermen 2018-067 have different fishing area coverage based on the GT size of the vessel. So that the ship carried out many fishing operations outside Palabuhanratu Bay, namely around the waters of Banten, Ujung Genteng Sea to Pangandaran which caused the number of KM Fishermen 2018-067 to have quite large and potential catches. These ships usually do one day fishing.



**Fig – 6 Hasil Tangkapan Pancing Ulur**

Figure 6 shows the types of handline catches on the grant ship, which consist of Hairtail, Scad, Lowly Trevally, Spanish Mackerel, and Northern Red Snapper. The number of catches of Layur is high because March-April is the peak season for catching hairtails [18]. Hairtails caught with handlines are still in good and fresh condition so they have a high selling value [19]. The selling price of hairtails marketed in Sukabumi Regency is Rp. 55,000/kg. The results of boat catches with handline fishing gear during observations can be seen in Figure 7.



**Fig – 7 Average Handline Catch per Trip**

Figure 7 shows the average catch obtained by grant vessels based in Sukabumi Regency using handline fishing gear. KM. 2018-382 fishermen were able to catch 9-37 kg of fish per trip with an average of 17 kg per trip. The fishing ground for the grant ship in carrying out fishing operations covers the Ujung Genteng area to the Banten waters. The far reach of the fishing area causes the number of trips for fishing operations to tend to be small.

**4. CONCLUSIONS**

Based on the general description of fishing activities by grant vessels, it shows that the grant vessels provided by the Ministry of Maritime Affairs and Fisheries are optimally utilized by fishermen in Sukabumi Regency. There are 2 types of fishing gear used on grant ships, namely gillnets and handlines. Vessels with gillnets are capable of



catching as much as 25 kg of fish/trip while those with handlines are capable of catching as much as 17 kg/trip. The fishing ground for the grant ship is around Palabuhanratu Bay. This shows that the grant ship activities are able to match the existing ship activities in Sukabumi Regency.

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