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IDENTIFICATION ANALYSIS OF CATCH COMPOSITION RESULT OF GILLNET IN BELITUNG DISTRICT WATER

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ABSTRACT

Belitung Regency is one area that has a large potential for fisheries and captures fisheries production is increasing every year. The research objective is the identification and composition of catches of gill nets fishermen. The research method uses descriptive quantitative research methods. The method of determining the location of sampling is using purposive sampling, wherein the sampling is based on the catches of fishermen using gillnet fishing gear. Secondary data in the form of data obtained from interviews with fishermen and based on literature. Data collection techniques using survey research designs. Sampling for 6 (times) for 1 month. Sampling is done by following the fishermen with the aim of catching in the Fishing Ground area. The results obtained identification of catches of 7 species of gill net catchments dominated by Mackerel Tuna species (Ethynnusssp) as much as 493.5 kg with a percentage of 40,1% and Narrow-barred Spanish Mackerel (Scomberomoruscommerson) as much as 475 kg with a percentage of 38.6% . The composition of the catch of the gill net fishermen is dominated by tuna and mackerel of 968.5 kg with the main catch percentage of 78.7%

Keyword:identification; composition of the fish; gillnet; Belitung Waters

INTRODUCTION

Belitung Regency is one of the areas in Bangka Belitung which is known for its fishing potential and is located in WPP-711, this is because in Belitung there is an Archipelago Fishery Port which is one of the right-hand ports that has potential fishery resources in Bangka Belitung, namely Port Tanjungpandan Nusantara Fisheries. Capture fisheries are the mainstay of the fisheries sector in Belitung Regency. This can be seen from the amount of capture fisheries production in 2012 and 2013 that exceeded the production target to reach the percentage of 127.39% in 2012 and 126.95% in 2013. Capture fisheries production in 2014 was quite increased with a percentage of achievements of 130.35 %, but in the year 2015 capture fisheries production in Belitung Regency decreased to 123.25% [1]. One of the fishing gear used in Belitung Regency Waters is gill net.

Gillnet is a rectangular net, has the same mesh in the entire net, shorter width compared to the length, in other words, the number of mesh sizes in the direction of the net length [2]. The business of catching fish using gill nets is no longer a new technology for fishermen, this is because the material is easier to obtain, technically easy to operate, economically accessible to fishermen, and more selective about the size of fish caught [3].

Research on marine biological resources in Belitung waters that uses the composition method of fishermen's catches using gill nets is still rarely conducted so research is needed on the analysis of the identification of fishermen's catch composition using gill nets in Belitung Waters. The purpose of this research is to identify catches and catch catches of gill net fishermen.

MATERIAL AND METHODS

Research methods

This research was carried out for 1 month in August 2019. The research was conducted at the TanjungPandan Fisheries Port, Belitung

Regency. The method used in this study was the survey method. Survey method is a method of collecting data directly in the field and conducting data collection by focusing research in an intensive and detailed case to get a comprehensive picture as a result of data collection and data analysis in a certain period and limited to certain regions [4].

Research procedure

In this study, data collection was carried out in several stages, namely directly following the fishing operation activities with gillnet during July - August 2019 as many as 6 trips using ships with a size of 6-8 GT to determine the catch composition data. Each sampling has a vulnerable time between 3-5 days. Fish that have been caught using gill nets are measured for total length and total weight.**Data analysis**

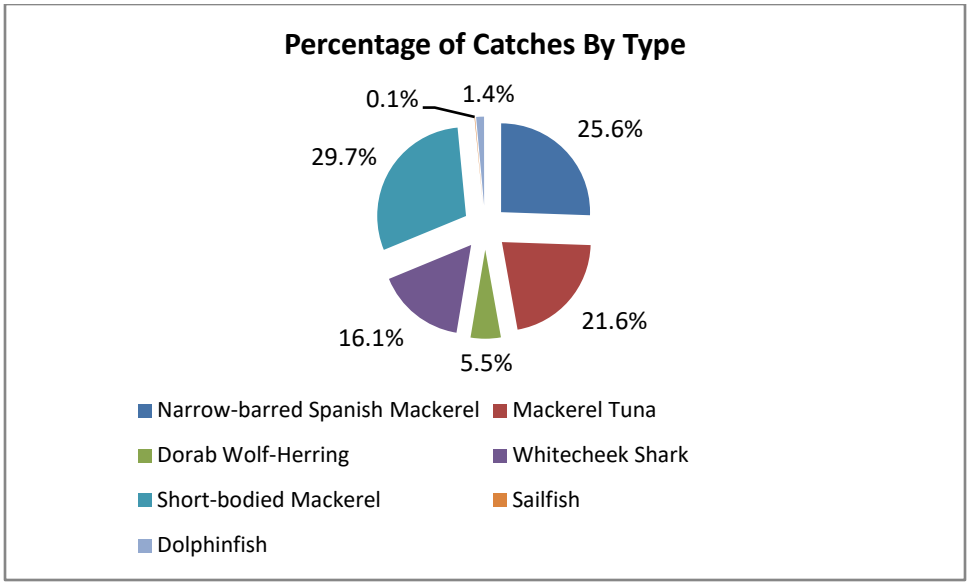
1. Identification of Catches
   Fish identification from fishermen's catch uses gill net at the time of operation in each down to the field in several hauling, then measuring morphometry either in total length or weighing for main catches "main catch" so that the data obtained about the composition of the catch of fishermen using gill nets. Measurement of the total weight of the catch of fishermen with gillnet fishing gear is done on the boat using a digital scale (not large fish size) and measurement of total weight on land using large scales (size of large fish) and measurement of the length of fish from the catch of the fishermen carried on board.The method of calculating catches [5] is as follows:
   P (%) = (n1 / N) x 100
   Note: P = Percentage of one type of fish caught
   N1 = Fish specific gravity each time sampling (kg)
   N = Total weight of each catch hauling (kg)
   Identification is done using the Saanin identification book (1991) [6]. Once identified, the data is grouped according to species, then weight and amount are calculated. The fish species are then tabulated to see catches composition
2. Composition of Fishermen's Catches
   Data analysis using catch composition method using gill net that has been classified, tabulated, and analyzed in table and graph format and percentage.Analysis of fishermen's catch composition data using a formulation from Akiyama (1997) [7], using the main catch, by catch, and discard comparison method, namely:
   Main catch rate = (∑ play catch / ∑ total catch) x 100%
   Rate by catch = (∑by catch / ∑ total catch) x 100%
   Discard rate = (∑discard // ∑ total catch) x 100%
   The results of the descriptive-quantitative analysis of the data presented will illustrate the magnitude of the percentage (%) of main catch, bycatch, and discard.

RESULT AND DISCUSION

The gillnet is a type of fishing gear made of monofilament or multifilament net material which is formed like a rectangle, and is equipped with floats on the top and the ballast (sinkers) which makes the gill nets can be installed in the catching area in an upright aquatic biota blocking position because there are two opposing styles [8]. This is in line with the gill nets used in Belitung Regency waters. The gill nets used in Pangandaran waters consist of a net with a ballast attached to the lower ris rope and a float on the upper ris rope, a float mark as a marker of both ends of the net, and a sheet string to pull the net. the size of the gill mesh used is 4 inches. Gill net is a fishing gear that can catch various types of fish commodities that can be adjusted to the size of the mesh size depend-ing on the season of the fish to be caught[9].

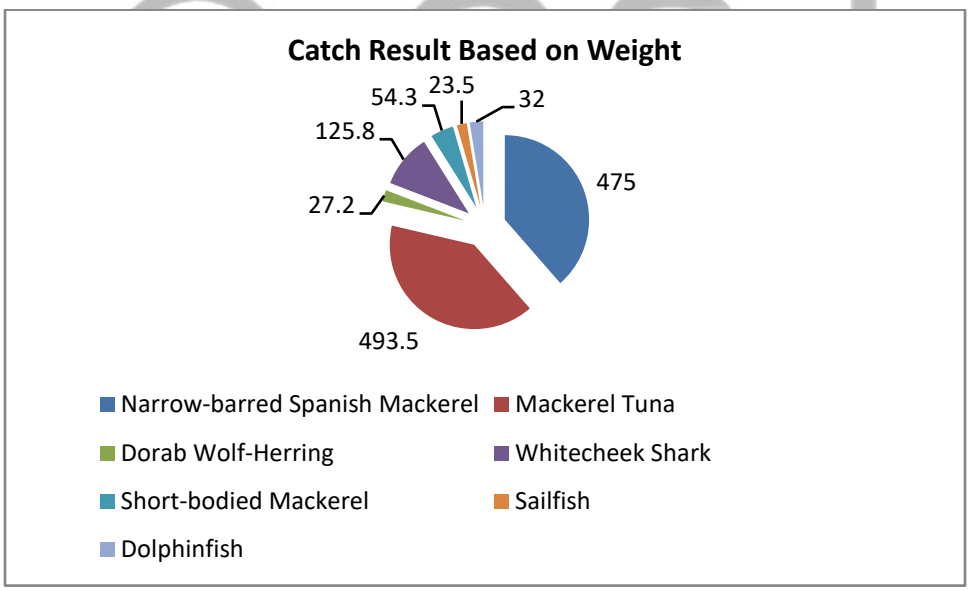
1. Percentage of Catches By Type

The results of research on catches using gill nets found several types of fish namely Scomberomorinisp, Euthynnusaffinis, Chirocentrussp, Shark, Restrilligersp, Istiophorusplatypterus, and Coryhaenahippurs. The diversity of species caught is due to the similarity of habitat between the catch target fish and non-target fish [10]. The results of the identification of catch using gill nets obtained the highest catch is short-bodied Mackerelas much as 29,7%, while the lowest catch is the sailfish by 0.1%.



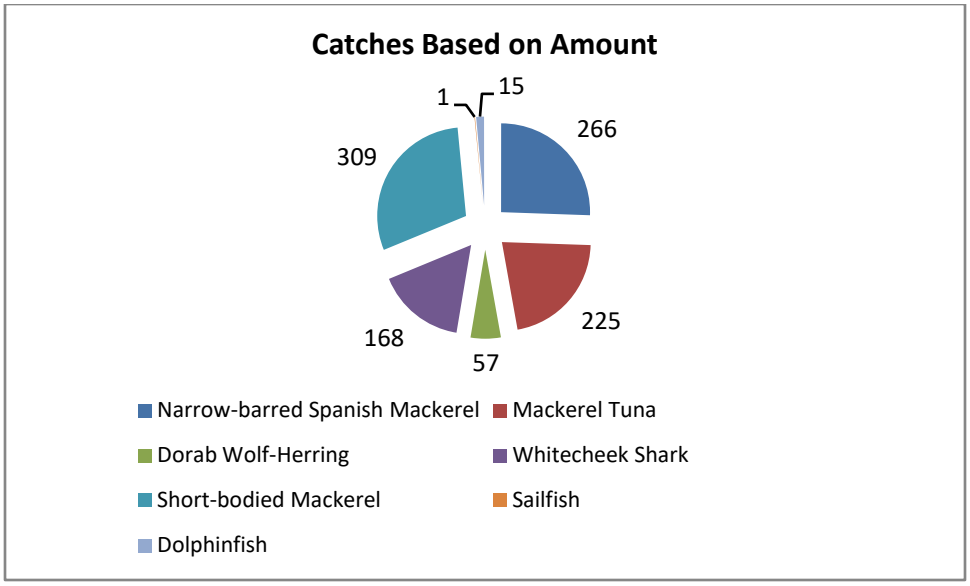
2. Catch Result Based on Weight

Identification is based on the overall weight of the catch as much as 6 times hauling and made comprehensive, it is obtained, namely 493.5 kg of Mackerel Tuna, 475 kg of Narrow-barred Spanish Mackerel, 32 kg of Dolphinfish, 125,8 kg of whitecheekshark, 54,3 kg Short-bodied Mackerel, 27,2 kg of Dorab Wolf-Herring, and 23,5 kg of Sailfish. The overall catches of the fishermen were identified based on the weight of the largest yield, namely Mackerel Tunaof 493.5 kg and the smallest weight of the catch was 27,2 kg of Dorab Wolf-Herring.



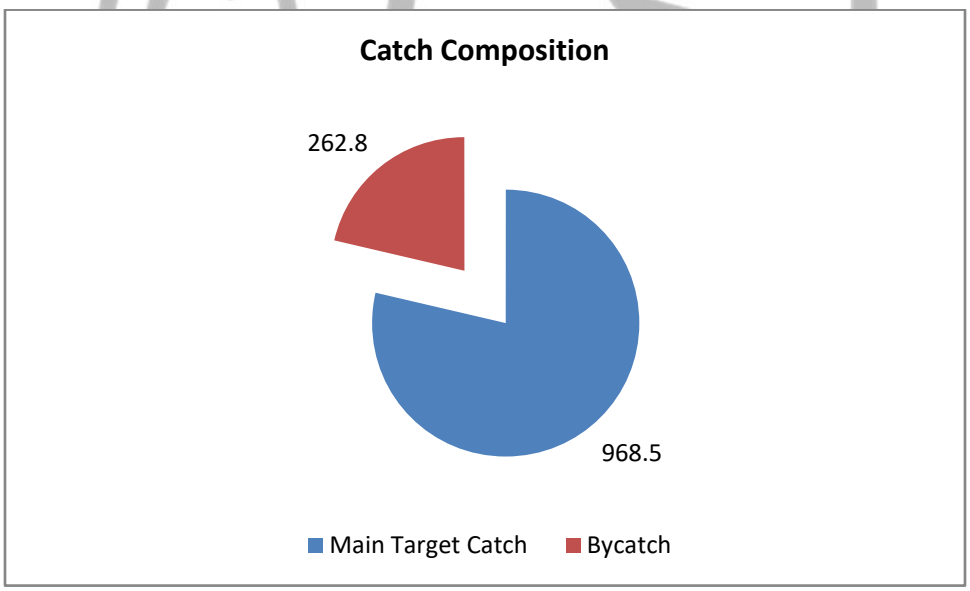
3. Arrest Based on Amount

The catch of Drift Gill Net fishermen based on the number of identification of fishermen's catches obtained the number of several species obtained, namely: 225 of Mackerel Tuna; 266 of Narrow-barred Spanish Mackerel; 57 of Dorab Wolf-Herring; 225of Whitecheek sharks; 309Short-bodied Mackerel; 1 ofSailfish, and 15 of Dolphinfish. The highest catch is Short-bodied Mackerel as much as 309 fish and the lowest is Sailfoshas much as 1 tail.



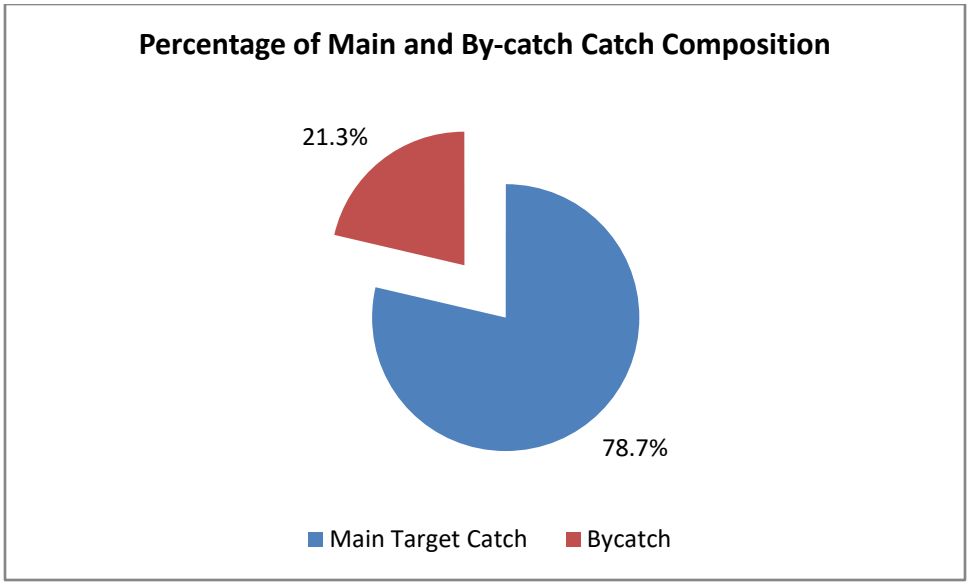
4. Composition of Main and By-products of Catches

The catch is divided into two, namely the main target catch which means the species that are the target of the capture operation and the bycatch which means the species is outside the target of the catching operation. The main catches of gill nets that have important econym-ical value are mackerel and tuna [11]. Likewise with the main catch of the gill net that is operated in the waters of Belitung Regency, which consists of 968.5 kg of Mackerel Tuna and Narrow-barred Spanish Mackerel. The bycatch consists Dorab Wolf-Herring, Whitecheek Sharks, Short-bodied Mackerel, Sailfish and Dolphinfish as much as 262,8 kg.



5. Percentage of Main and By-catch Catch Composition

Data on catches using the percentage of catch composition obtained main catches of 78.7% and bycatches obtained by 21.3%, so from these percentages explained that gill net fishermen in Belitung Regency are fishermen who catch the main catch in the form of Mackerel Tuna and Narrow-barred Spanish Mackerelaround Belitung waters.



Conclusion

Based on research on the identification and composition of fishermen's catches using gill nets obtained the following conclusions:

1. Identification of gill nets caught in Belitung waters found 7 species, where Short-bodied Mackerel are the most obtained species with a percentage of 29,7%.
2. The composition of the catch is dominated by Mackerel Tuna and Narrow-barred Spanish Mackerelof 968.5 kg with a percentage of the main catch of 79,7%%. The composition of the bycatch was 262.8 kg with a percentage of 21,3%.

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