# Study of Main Factors Caused Incompatibility of the Purse Seine Fisherman Zone in Panyula Village, Bone Regency, South Sulawesi Based on Regulation of the Minister of Marine and Fisheries Number 71 of 2016

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**Abstract**

Regulation of the Minister of Marine Affairs and Fisheries of the Republic of Indonesia Number 71/PERMEN.KP/2016 concerning Fishing Paths and Placement of Fishing Equipment in the Fisheries Management Area of the Republic of Indonesia in article 22 paragraph (1) that the placement of fishing gear and fishing aids in WPP RI is adjusted to the nature of fishing gear. Referring to these regulations, this research was conducted to examine the main factors causing the ignorance of the purse seine fishing zone for fishermen in Panyula Village, Bone Regency, South Sulawesi. This research was conducted from November 2016 to March 2017 in Panyula Village, which is the fishing base area of purse seine fishermen and the waters of Bone Bay. This study uses a combination of survey and case study methods. This study uses two types, namely primary data and secondary data.The analysis of the factors causing the non-conformance was analyzed descriptively, namely comparing the average productivity of ring seines that catch in the designated zone and ring seines that catch in zones that are not according to their designation according to Minister of Marine Affairs and Fisheries Regulation Number 71 of 2016. After the study, the main cause of non-compliance with the Regulation of the Minister of Maritime Affairs and Fisheries Number 71 of 2016 is the high productivity of ring trawl units that carry out fishing on non-designated fishing lanes compared to ring trawl units that catch on correct fishing routes.

***Keywords*****:** *Fishing Equipment, Fishing Zone, Government Regulation, Purse Seine.*

## A. INTRODUCTION

Regulation of the Minister of Marine Affairs and Fisheries of the Republic of Indonesia Number PER.02/MEN.KP/2011 concerning Fishing Paths and Fishing Aids in the Fisheries Management Area of the Republic of Indonesia, which was later changed to Regulation of the Minister of Marine Affairs and Fisheries Number 42/PERMEN.KP/2014 and lastly changed to Regulation of the Minister of Marine Affairs and Fisheries of the Republic of Indonesia Number 71/PERMEN.KP/2016 concerning Fishing Paths and Placement of Fishing Equipment in the Fisheries Management Area of the Republic of Indonesia in article 22 paragraph (1) that the placement of fishing gear and fishing aids in WPP RI is adjusted to the nature of

fishing gear. Selectivity level of fishing gear, type, and size of fishing gear, size of fishing vessel and fishing area.

Mallawa et.al. (2016 and 2017) reported that the operation of purse seines and the placement of FADs in the waters of Luwu, Bone Bay, Flores Sea are not in accordance with the designated route as regulated in the Minister of Maritime Affairs and Fisheries Regulation above. Mallawa (2016) reported that the number of skipjack fish caught by fishermen was more when catching in FAD areas than outside FADs. Ratnasari (2013) reported that in the waters of Barru, Makassar Strait, fishermen are more likely to make fishing outside their designated route, which is due to the fact that apart from the catch, there is also a lot of ignorance. them about fishing lane regulations. What about the purse seine fishery in Bone Regency?

Based on the description above, it is considered important to conduct research on ring trawl fisheries in Bone waters, Bone Bay in relation to the Minister of Marine Affairs and Fisheries Regulation number 71 of 2016.

## B. METHODS

### 1. Research Time and Place

This research was conducted from November 2016 to March 2017 in Panyula Village, which is the fishing base area of purse seine fishermen and the waters of Bone Bay. Map of research locations in Figure 1.

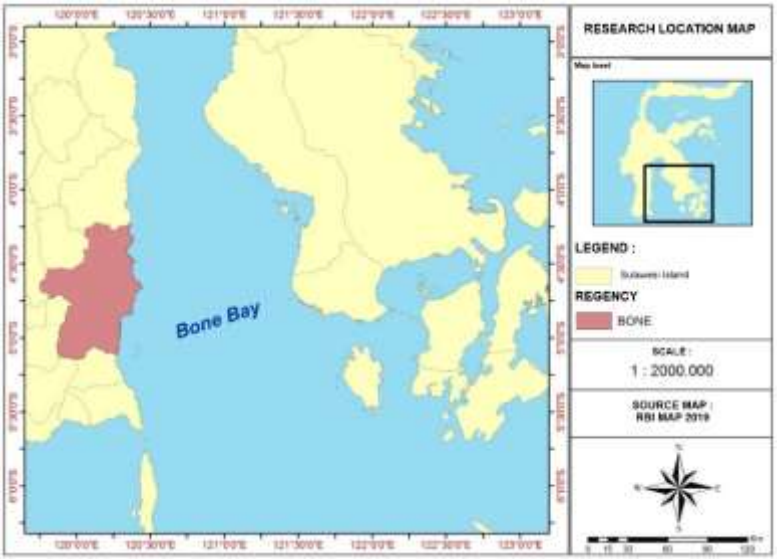


**Figure 1. Research Location Map**

### 2. Research Methods

This study uses a combination of survey and case study methods. This study uses two types, namely primary data and secondary data. Primary data were obtained through direct observations during fishing operations and observations and measurements at fisherman's landing centers as well as through interviews with fishermen, boat owners and policy makers. Secondary data was obtained from records of ship owners, the Fisheries Service and other agencies. In this study, 15 units of ring trawlers were used or as samples were selected using the Stratified Random Sampling

method, where the strata were the sizes of small, medium and large ships (Arikunto, 2010).

The analysis of the factors causing the non-conformance was analyzed descriptively, namely comparing the average productivity of ring seines that catch in the designated zone and ring seines that catches in zones that are not according to their designation according to regulation number 71 of 2016. Productivity (P) of ring seines is calculated using the equation, namely: P = C/H, and mean P =∑ P/n

Where P is the productivity (Kg/hauling), C is the number of catches (kg), H is the hauling, n is the number of hauls.

## C. RESULTS AND DISCUSSION

To find out the factors causing the violation of fishing lanes, a comparative analysis of the number of catches per hauling or the productivity of fishing gear between ships making catching on fishing lanes that are suitable for their designation and those that are not suitable has been carried out. Purse seine catches consist of small pelagic fish species, namely scad (*Decapterus* spp), mackerel (*Rastrelliger kanagurta*), tuna (*Auxis* sp), Cakalang, from data on fish landing sites in Panyula Village, Bone Regency. The catch of each of the 30 hauling vessels was calculated during the study as presented in Table 1.

**Table 1. Total Productivity of Purse Seine Ships During 30 Hauling**

| No | Ship Name | Ship Size (GT) | Number of crew | Productivity (kg) | | Total Productivity (30 Hauling) |
|---|---|---|---|---|---|---|
| | | | | Violate | Not violate | |
| 1 | Wisdom Jaya | 30 | 15 | 11112 | 4284 | 15396 |
| 2 | Twin Love | 19 | 10 | 6780 | 3846 | 10626 |
| 3 | Iswan Neidar | 19 | 14 | 9888 | 4272 | 14160 |
| 4 | Apostle's Light | 20 | 12 | 7440 | 4770 | 12210 |
| 5 | Paredeang 87 | 18 | 10 | - | 5504 | 5504 |
| 6 | Padly Jaya 01 | 16 | 10 | 4740 | 3332 | 8072 |
| 7 | Jusniati 01 | 19 | 12 | - | 4795 | 4795 |
| 8 | Rice Flower 01 | 24 | 14 | - | 7324 | 7324 |
| 9 | Masna Jaya 03 | 28 | 16 | 6420 | 4200 | 10620 |
| 10 | Mardi Jaya 01 | 17 | 10 | 3800 | 3760 | 7560 |
| 11 | Hotel Mandar 06 | 24 | 13 | - | 6022 | 6022 |
| 12 | Rice Flower 02 | 13 | 15 | - | 5410 | 5410 |
| 13 | Hope Star | 14 | 8 | - | 3780 | 3780 |
| 14 | Paddecengi 02 | 21 | 16 | 10580 | 3030 | 13610 |
| 15 | Masterpiece 05 | 29 | 15 | 9463 | 5422 | 14885 |
| **Total** | | | | 70223 | 69751 | 139974 |
| **Average Productivity Per Hauling (kg):** | | | | 7,803 | 4.650 | - |

Based on the data from Table 4.21, the productivity of the purse seine units that engage in fishing violating the fishing line ranges from 3,800-11,112 kg with an average productivity of 7,803 kg, while the productivity of the purse seine units that carry out non-violating operations ranges from 3,030 kg-7324 kg and an average productivity of 4,650 kg. This data explains that the main cause of violations of fishing lanes by fishermen in Panyula Village, Bone Regency in the waters of Bone Bay is the high productivity of business if catching on fishing lanes that are not designated. Ratnasari (2013) explained that one of the causes of fishermen catching fishing on non-designated fishing lanes is the high productivity of fishing gear in coastal waters where FADs are installed. Wilantara (2017) reported that total yields and catches per haul in ring seines were much higher when catching in FAD areas than fishing in schools, where FADs were installed on fishing line I. Davies et.al. (2014) explained that the increasing number of catches from the use of FADs in Indian Ocean waters could provide added economic value for fishermen but had a negative impact on fish resources. Chassot et.al. (2015) the use of fish collection aids (FAD) in the tropical Pacific waters of Mallawa can increase fisherman catches but cause ecological problems. Mallawa (2016) reported that the catch of skipjack tuna by fishermen in Luwu Teluk Bone Regency was much higher in the FAD area than outside the FAD area. Mallawa et.al (2017) reported that the number of skipjack catches and the success of fishing operations was much higher in FAD areas than outside FAD areas.

## D. CONCLUSION

The main cause of non-compliance with the Regulation of the Minister of Maritime Affairs and Fisheries Number 71 of 2016 is the high productivity of ring trawl units that carry out fishing on non-designated fishing lanes compared to ring trawl units that catch on correct fishing routes. The Maritime Affairs and Fisheries Service of Bone Regency periodically checks in the field for the suitability between the ship capacity documents in the field and reports to the service.

## REFERENCES

1. Arikunto (2010). *Research Procedure a Practical Approach*. Jakarta: Rineka Cipta.
2. Chassot, E., Goujon, M., Maufroy, A., Cauquil, P., Fonteneau, A., & Gaertner, D. (2014). The use of artificial fish aggregating devices by the French tropical tuna purse seine fleet: Historical perspective and current practice in the Indian Ocean. *16ème Groupe de Travail Sur Les Thons Tropicaux. CTOI, Victoria, p. 17p*.
3. Davies, T. K., Mees, C. C., & Milner-Gulland, E. J. (2014). The past, present and future use of drifting fish aggregating devices (FADs) in the Indian Ocean. *Marine policy*, *45*, 163-170.
4. Regulation of the Minister of Maritime Affairs and Fisheries of the Republic of Indonesia number 71 of 2016 concerning Fishing Paths and Placement of Fishing Equipment in Fisheries Management Areas of the Republic of Indonesia.
5. Mallawa, A., Amir, F., & Safruddin. (2017). *A study of the waters of WPP RI 713 as an area for sustainable use and management of skipjack tuna (Katsuwonus pelamis) resources*.

(Report on the Results of Leading Higher Education Applied Research, TLP2M UnHas Makassar).

6. Mallawa, A., Amir, F., & Sitepu, F. (2016). *Study of the waters of WPP RI 713 as an area for sustainable use and management of skipjack tuna (Katsuwonus pelamis) resources*. (Report on the Results of Leading Applied Research in Higher Education LP2M Hasanuddin University, Makassar).
7. Regulation Number 02 of 2011 concerning Fishing Paths and Placement of Fishing Equipment and Fishing Aids in WPP RI.
8. Ratnasari, A. (2013). *Study on the Implementation of Fishing Route Policy in Bagan Perahu Fishery in Barru Regency*. (Thesis, Hasanuddin University, Makassar).
9. Wilantara, W. (2017). *Comparison of skipjack (Katsuwonus pelamis) catches using and without FADs in Makassar Strait Waters*. (Thesis, FIKP Hasanuddin University Makassar).