Monitoring on the use of Juvenile and Trash Excluder Device (JTED) in Samar Sea, Philippines

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I. Introduction

The Juvenile and Trash Excluder Devices (JTED) is a technical tool reducing by-catch and discard from trawl fisheries. JTED is promoted by the Southeast Asian Fisheries Development Center (SEAFDEC) Training Department under project on the "Reduction of Environmental Impact from Tropical Shrimp Trawling through the Introduction of By-catch Reduction Technologies and Change of Management or REBYC Phrase I", in collaborating with the Food and Agriculture Organizations of the United Nations (FAO). The demonstrations and experiments on the use of JTED have been conducted in most countries in Southeast Asian Region. In 2003, SEAFDEC has worked with the Philippine Bureau of Fisheries and Aquatic Resources (BFAR), Philippines to conduct the training and experiment on the use of JTED in major trawling ground initiated in Manila Bay and similar procedure in other pilot sites namely: Maqueda Bay/Samar Sea, Lingayen Gulf and San Miguel Bay to develop and determine the most appropriate of JTED for the fishery.

The Philippine Government realize on the capture of by-catch that would be cause mortality of juvenile and ecological impact. In order to promote sustainable use of resources and maintain biodiversity, the Philippine Government had declared the Fisheries Administrative Order No.237 Subject: "Regulations Requiring the installment of Juvenile and Trash fish Excluder Device (JTED) in Trawls in Philippine Waters" since 2010. Samar Sea is a small sea situated between the Eastern Visayas and Luzon where is the one pilot sites for the demonstration and experimentation of the use of JTED as well as the site selected to develop Fisheries Management Plan in Philippine. Regarding promoting sustainable fisheries practices by determine a rational approach to reduce by-catch from trawl fisheries considering on the use of JTED. It is interesting to monitor the current situation and study the characteristic of commercial trawl fisheries and the attitude on the use of JTED of trawl fisher in Samar Sea.

II. Methodology

The scope of this study is focusing on commercial trawl fisheries operated in Samar Sea, Philippines, the site selected to collect the data on the use of JTED is Calbayog city, which has the largest area of Samar. The Primary data was collected by using a questionnaire to interview the commercial trawler operator who operate trawl fisheries in Samar Sea, the data also gathered from observation of trawl fishing operations using JTED on bottom trawl. The Total number of fishers interviewed is 16 respondents mainly conducting interview at Calbayog fishing Port. The secondary data was collected from document and report concerning with trawl fisheries with JTED in Philippines. The data were analyzed using descriptive statistic in term of number and percentages.

III. Results

1. Socio-economic condition of Commercial trawl fishers

The result of the survey shows that most fishers are age 41-50 years old and all of them are married. There are 31.3% of respondents educated from Primary school, a few percentage of fisher interviewed do not gain education from school (6.2%). Most fisher household have member in their family 6-10 persons with 56.2% and the average family member per household is 6 persons.

2. Trawl Fisheries

Fishing experience and fishing boat, most fisher have experience on trawl fishing operation about 3-20 years (62.5%) and the average fishing experience of fisher interviewed is 20.6 years. Most fisher use fishing boat with length 16-19 meters (64.3%) and the average length of fishing boat is 18.1 meters and the average width of fishing boat is 2.4 meters.

Fishing operation and number of worker on board, most fishers spend 3 days per trip to go to operate trawl fisheries in Samar Sea and average trip in a month is 7 trips. They take a hauling 3 times per day. Most of trawl owner employed 6-10 workers to operate fishing on board, the average number of labor is 8 workers per boat.

Catch species and catch volume, most fisher has operated bottom trawl fisheries, the main target species are fish, shrimp and squid. The highest catch volume come from fish about 1,008.8 kilograms per trip which compose of species: Threadfin bream, lizard fish, mackerel, slip mount, pony fish, sardine, black Pomfret and the value of fish is 57,348.8 Peso per trip. The average catch volume of shrimp is 11.6 kilograms per trip with value of 2,297 Peso. The fisher had the average catch volume of squid is 47.3 kilogram per trip and value of squid is 5,701.7 Peso. It is observed that the fisher can catch target specie with a few by-catch/trash was caught because they install JTED with trawl fisheries.

3. Attitude on the use of JTEDs

Satisfaction on the use of JTED, most fishers feel satisfied on the characteristic of JTED include material and design of JTED with 75%. They believe that JTED help trawl fisheries reduce juveniles (62.5%). Most fishers think that the fishing cost is not increase while they operate trawl fishing with JTED (81.25%). They feel satisfied on the catch volume (81.25%) even they cannot earn income from by-catch/trash fish because it can catch only big fish after install JTED. However, 68.75% of fisher satisfied to continue operate trawl fisheries with JTED and intend to promote JTED to other people. The fisher had optimistic view that JTED would help to conserve the fisheries resources.

Advantage and Disadvantage on the use of JTEDs, the fishers interviewed express their view that JTED has benefit to reduce the capture of juvenile, it can escape and growth to mature and reproduce the fisheries resources that led to sustainable fisheries. They also noted that trawl fisheries with JTED tend to catch bigger fish and sorting fish catch is cleaner. However, some fisher respondents think that installation of JTED would increase fuel consumption. Sometime, the garbage has obstructed in JTED during trawl operation that it could damage the net. In case of anchovy trawl fishing, the fisher can catch less anchovy that affected to their income generating. Some fisher faced the problem of the use of JTED that make the speed on trawl slow down and high fuel consumption as well as the price of material making JTED is expensive if using stainless steel which is longer use than iron material.

The fishermen suggested to apply JTED to other fishing gear and they understood the benefit on the use of JTED that could conserve fisheries resources reducing juvenile which would

growth to propagate for the future. They asked the financial support for the installation of JTED. However, most fisher respondents showed a willingness to continue to use of JTED.

IV. Conclusion

Most fishers are age between 41-50 years old, graduated from primary school and they have 6 members in their family. The commercial trawl fishers have experience on trawl operation about 21 years, they use fishing boat with length 16-19 meters to operate fishing and catch mostly fish species such as Threadfin bream, lizard fish, mackerel etc. with fish value 57,349 Peso/trip. Most fishers feel satisfied on the characteristic of JTED include material and design of JTED with 75%. They believe that JTED help trawl fisheries reduce juveniles and satisfied to continue operate trawl fisheries with JTED as well as intend to promote JTED to other people. The fisher had optimistic view that JTED would help to conserve the fisheries resources by reduction of juvenile, and reproduce the fisheries resources that led to sustainable fisheries.

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