

Chapter 03:-

3.0. Methodology

3.1. Study Area

Nigombo is a popular base for longline fishing operation. Because export quality catch from longline vessels has easy access to the international market through the Katunayaka international air port. Further Negombo is a popular venue for dry fish industry. Most of the fish uses for dry fish production are inferior quality harvest from deep sea vessels and excess from fish supplies to the market demand. Gillnet vessels pass considerable amount of fish to the dry fish production. Therefore Negombo fishery harbour operates considerable amount of longline and gillnet fishing boats and it is an ideal place for a research on longline and gillnet fishing. First objective of the research will be worked out from the field data collection from Negombo fishery harbour.

To evaluate the trend of longline fishing, statistical data are used from MFARD and FAO.



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3.2. Sample Procedure

Samples of vessels were selected using purposive sampling technique. Purposive sampling mean that Samples are selected based on the judgment of appropriate for the study. For economic efficiency (ARR), data were collected during February 2011 to October 2011, from 100 longline vessels. However 7 samples were given contradictory data related to a cost and revenue. Therefore researcher had to eliminate these exceptions by not considering those data for the study. Therefore the total longline vessels concede in this study is 93. Similarly out of 50 data collected vessels only 48 numbers were considered for gillnet fishing. For Evaluate the quality stranded (PHFL), it is considered 50 number of samples for each fishing method.

Total number of registered fishing vessels in Negombo Fishery Harbour for deep sea fishing is 220 (Ceylon Fishery Harbour Coperation, 2011). But the numbers of actively operate figure is not known. Total number of registered multiday vessels in Sri Lanka is

3,346 (Statistic: MFARD, 2010). Then the sample frame work for research is as of Table 3.1 below

Type of the vessel -A	Total number of vessels in deep sea fisheries- Negombo Harbour-B	Percentage to the Negombo deep sea vessels B/220	Number of samples -D	Percentage of the sample D/B	Total number of vessels in the country E	Percentage of total vessels of Country D/E
For Economic Efficiency (ARR)						
Longline	150	68.2%	93	62.0%	2,500*	3.7%
Gillnet Fishing	70	31.8%	48	68.6%	846*	5.6 %
Total	220	100.0%	141		3,346	4.2 %
For Quality Standard (PHFL)						
Long Line	150	68.2%	50	33.00%	2,500*	2.00%
Gillnet Fishing	70	31.8%	50	71.00%	846*	5.90%
Total	220	100.0%	100	0	3,346	3.00%

Legend : * :- approximate figures

Table 2.4: Sample Frame of the Study

No official figure for the longline, and gillnet fishing vessels operate in the country separately. The total number of the both type of vessels is 3,346. However rough estimation based on the information from the major fishery harbours, indicates it as around 2,500 numbers. This figure has been used to calculate the percentage of total vessels of the country. The questions asked were for one trip. The answers were then used for calculating the annual results of this study by multiplying the net figure from the number of trips per year. This may have had an effect on the results of the study. All study results were based on data that was given by the vessel captains. Some time they are reluctant to unveil their exact income figures. Moreover it is unknown samples equally represent the population of the vessels operating in the longline and gillnet fishing in the Sri Lanka. The above facts may have had some effect on the results of the study.

3.3. Sources of Information and Collaboration Institutions

Relevant information were collected from Ministry of Fisheries and Aquatic Resources Development (MFARD), Food and Agriculture Organization (FAO, www.fao.org) and National Aquatic Resources Research and Development Agency (NARA). Specially NARA resource library provide lot of information related to the research.

3.4. Data Collection

In order to achieve the objectives of this study, the relevant data and information were collected through primary and secondary sources. For the primary data collection from 150 Fishing vessels Field observations and informal discussion were mainly focused on individuals such as Fishery harbour managers, fishermen, CFHC Jetty supervisors, Ice Plant operators, and Fishing bites suppliers.

Secondary data were collected from internet, research reports, and publication and data base from Statistical division of Ministry of Fisheries and aquatic Recourse development. Relevant web sites of FAO, NARA were helpful to get additional information related to research.

3.5. Data Analysis

After completing the field survey, numerical data were tabulated in the excel sheets. Then data were analyzed using excel to get ARR and PHFL. These techniques helped to take the general idea about the ARR of each fishing methods. All the data use for analysis are quantitative data.