Present trends of small meshed gillnet fishery on the West coast of Sri Lanka

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Small pelagic fishery on the West coast of Sri Lanka plays a vital role both in terms of livelihood and food security. The present study was carried out using the time series data of 2001–2020 extracted from the Small Pelagic Database of the Marine Biological Resources Division, NARA, in order to provide the present status of the small pelagic fishery on the West coast. The West coast which comprises four fisheries districts namely Chilaw, Negombo, Colombo and Kalutara contributes around 58% to the total small pelagic fish production of the country. There are more than 4000 Outboard Engine Fiber Reinforced Plastic (OFRP) boats engage in this fishery. The target fish include sardines, herrings, anchovies and mackerels which are mainly caught by small meshed gillnets having a wide range of mesh sizes between 1.2 cm and 5.7 cm. The observations of recent five-year landings (i.e., 2016-2020) showed that the highest the average Catch per Unit Effort (CPUE) of 85 kg per OFRP boat per trip was reported from June to February which encounters the period from the onset of Southwest monsoon up to the end of the Northeast monsoon. The CPUE of the small pelagic fishery showed a great inter-annual variation with an average of 66.7 ± 17.3 kg per OFRP boat per trip during the past decade. The mean trophic level calculated for the coastal fisheries landings of the past twenty years ranged between 3.14 and 3.62. It was evident that the average CPUE of the key species, *Amblygaster sirm* has shown alarming signals with a 27% drop from 2001-2010 to 2016-2020. Further, a declining trend of the percentage contribution of *A. sirm* was observed; 50% in 2001-2010; 37% in 2011-2015 and 34% in 2016-2020. The findings of the present study will be fundamental for the management plan on small pelagic fishery in the West coast of Sri Lanka which is being formulated at present under the bilateral project of Norway -Sri Lanka.

Keywords: *Amblygaster sirm*, coastal fisheries, CPUE, mean trophic level

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