Comparative Study on Ring Net and Bottom-Set Gillnet Fisheries in Thalaimannar Pier, Sri Lanka

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Thalaimannar Pier, Sri Lanka was dominant with Ring net (Surukku) and Bottom-set gillnet fisheries. Details with those fisheries were lacking in the literature. A comparative study of both fisheries in Thalaimannar Pier was vital towards sustainable exploitation of fishery resources. The study aims at determining Catch-Per-Unit-Effort (CPUE), catch composition, and supply chain analysis of selected species from two fisheries last October (2019) to early January (2020). Total catch was recorded to the nearest kilogram and effort in-unit kilograms per square meter (kgm^{-2}). The total catch of fish species in ring & gill nets was recorded. Results showed ring net catch mainly comprised of finfish (97.8%), crustaceans (1%), mollusk (1%); 1.2% were non-target species. Bottom-set gillnet catch comprises of crustaceans (50%), finfish (25%), mollusk (20%), and echinoderms (1%). Portunus pelagicus was the major target species, nearly 43% of the total catch. Out of the total, 29% of the bottom-set gillnet catch was discarded as non-target species. Gillnet produced more non-target species. Mean CPUE (kgm^{-2}) and standard deviation of ring & gill nets were 0.205 ± 0.062 and 0.0711 kgm^{-2} ± 0.018 respectively. CPUE for ring net increased from Late-November to Early-January; for gillnet, it decreased from mid November to early January. *Sardinella gibbosa* showed 71.11% of the price difference from wholesalers to outside retailers and Pampus argenteus (only exportable species) showed 47% of it from fishers to exporters in the supply chain. Ring net was harmful due to comparatively high catch per unit effort which may lead to overexploitation of commercially important fish populations. Gillnet was also harmful due to the high catch of non-target species. The current study provides baseline information that paves the way for sustainable exploitation of the aforementioned fisheries.

Keywords: Ring net & Bottom-set gillnet fisheries, Catch per unit effort, By-catch