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Present Status of Fisheries in Puttalam Lagoon, Sri Lanka

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Abstract

The lagoon fisheries under small-scale fishery play a significant role in annual fish production in Sri Lanka. Puttalam lagoon is one of the major lagoons that contribute to fish production and provides livelihoods to the people in North-western Sri Lanka. However, the status of Puttalam lagoon fisheries is not well known due to a lack of detailed studies. Hence, the present study was conducted to evaluate the status of fisheries, the socio-economic status of fishers, and the management strategies adopted for the fishing activities in Puttalam Lagoon. In this study, two major fish landing sites at Sothupitiya and Norochholei and three fisher communities (n=77) in Anawasala, Sothupitiya, and Mampuri were comprehensively studied from May to June 2022. Both mechanized and non-mechanized crafts were used in lagoon fisheries with seven different types of fishing gear. Gillnets were the main and permissible fishing gear in the Puttalam lagoon. The catch composition of gillnet, mesh-wise CPUE (Catch Per Unit Effort), and species-wise CPUE were analyzed in this study. Altogether, 33 finfish species belonging to 26 families and five shellfish species belonging to two families were identified. The average total fish harvest of the lagoon was 21.6 ± 3.5 kg boat⁻¹ day⁻¹ and *Lates calcarifer*, *Mugil cephalus*, and *Gerres* sp were predominated over the other commercial fish species in the fish landings. The species-wise highest mean catch was recorded for *Lates calcarifer* (14.8 kg boat⁻¹ day⁻¹). The highest CPUE (P<0.05, ANOVA) was recorded for 4.5" meshed gill nets (19.2 kg boat⁻¹ day⁻¹), and the highest number of species was recorded in 3.5" meshed nets (11.4±1.3). According to the socio-economic analysis, more than 50% of fishermen earned over Rs. 50,000 per month through lagoon fishery. The daily income of fishers in Puttalam lagoon varied throughout the year and was the lowest in June due to the indirect impact of the country's prevailing economic crisis. The management of fisheries in the lagoon is in accordance with co-management. Hence, both government authorities and fishers are involved in decision-making processes aiming at the sustainable development of the fisheries in Puttalam lagoon. Based on the study, it can be concluded that lagoon fishery is the primary source of livelihood for the people nearby and is directly related to the socio-economic development of the stakeholder communities.

Keywords: Puttalam lagoon, Catch per unit effort, Fishing gears, Gillnet, Socio-economic analysis