



Assessing the current status of parrotfish (Family: Scaridae) fishery in southern Sri Lanka: a candidate to be protected

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Abstract

Parrotfish are one of the important groups that maintain ecological stability in the coral reef ecosystem which is mainly impacted by reef fisheries. However, information on parrotfish abundance and availability in the market in Sri Lanka is scarce. In this study, parrotfish community structures were studied during October to December 2023 time period in Southern Sri Lanka. Utilizing the underwater visual census method along the belt transect (2 × 25 m, 5 transects/site), diversity indices were calculated to assess the reef fish diversity structure in Polhena, Kottegoda and Dodanduwa areas. The (%) abundance of parrotfish was calculated to estimate the population status of parrotfish in their natural habitat. The fish market surveys were conducted for the fishermen (46) and consumers (30) to gain better understanding on their attitude, opinion and suggestions on parrotfish fishery. Fifteen visual belt transects yielded 16 fish families including Scaridae fish family. The (%) abundance of the Scaridae family was recorded as 15.76%, 10.39%, 25.43% in Polhena, Kottegoda, Dodanduwa respectively. Seven parrotfish species were identified. The analysis revealed that the perspectives and practices of key stakeholders influence the conservation status of parrotfish species. More fishermen caught parrotfish as bycatch and few fishermen (Polhena-20%, Kottegoda-0, Dodanduwa-6.67%) target parrotfish specifically. The parrotfish are abundant in fish markets during non-monsoonal periods. The identified fishing methods for the parrotfish were spearfishing, fishing net used to catch lobsters (Polo del), and hook & line (Panna). Most of fishermen (75.56%) and consumers (60%) agreed that the parrotfish are ecologically important, and this species should be protected. Fishermen remarked that over the years' parrotfish harvest declined in all the locations. In summary, this study highlights the importance of sustainable management and conservation of parrotfish species in Sri Lanka.

Keywords

Coral reef, market survey, fishermen, consumers, Parrotfish