

Mangrove social-ecological systems in Jaffna Peninsula: Mapping stakeholder perceptions for mangrove conservation

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The mangrove ecosystem has been broadly recognised as a Social-Ecological System, in which the ecological dimension is in constant interaction with the human population living in its proximity. In the Jaffna Peninsula of Sri Lanka, mangroves represent the main type of forest of the area and the second largest mangrove patch of the country. A destructive civil war, which lasted for more than 25 years, heavily affected the local vegetation and inhabitants. Large patches of mangrove forests were damaged and not accessible for a considerable time, while most of the population was obliged to temporarily abandon their habitations and move to other districts. Through this study, we demonstrate a significant distancing of the local communities from mangrove goods and services, combined with a poor understanding of this ecosystem. Furthermore, we assess the perspectives of multiple mangrove management stakeholders (i.e., Government, Non-Governmental Organisations, scientific community), to reveal major challenges and propose possible solutions for effective mangrove conservation in the Jaffna Peninsula. Weak interactions among different departments that have jurisdiction over the mangrove ecosystem combined with the failure of replantation attempts and scarcity of scientific data expose mangroves to unsuccessful conservation efforts. Addressing these major issues is the first step to guaranteeing more effective mangrove management and conservation in the Jaffna Peninsula which can be adapted to other districts in Sri Lanka and beyond.

Keywords

Mangroves; Social-Ecological Systems; Ethnobiology; Q Methodology; Northern Indian Ocean