

Institutional robustness averts Hardin's tragedy of the commons in the community-based beach seine fisheries in Sri Lanka

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Small scale coastal fisheries accounts for nearly 40% of world fish catches and provide direct employment for more than 90% of the world fishers employed in capture fisheries. Subsequent recognition of the failures of centralized fisheries management led the governments to accept community-based management as an invaluable means to formulate fisheries management. Such traditional management practices exist in beach seine fisheries of Sri Lanka. Study ascertains and documents the rules and norms that are in general not formerly codified in writing, and evaluate empirically the compliance of elements of customary governance with Ostrom's modified design principles (MDP) for long enduring commons management systems. Eight beach seine fisher communities were studied using standard ethnographic methods, and evaluation of compliance with MDP was carried out by administering structured questionnaires. Fishing rights in contiguous sea were vested to the villagers who lived in the sea front, as a residential proximity right. Due to this tradition, the ownership of a beach seine and fishing rights came in three ways identified as: exclusive right, primary rights and secondary right. Sole authority for governing the commons was vested to community organization termed "madelsamithi", considered as the local administrative unit. Institution governing the commons addressed the excludability problem by defining fishing territory, eligibility rules and intercommunity access rule, while subtractability problem was addressed by gear rules, temporal allocation rules, first comer rules, fishing behaviour rules, conservation rules, and rules for distribution of benefits. Institutional architecture of beach seine fisher communities exhibited the high compliance with MDP. Out of the 11 MDP, fisher communities showed very high compliance with four MDP and high compliance with six MDP. Only one MDP had a lower level compliance. As empirical evaluation on architecture of customary institutions shows high compliance with MDP, beach seine fisher communities can be treated as those govern commons through self-governing institutions. Beach seining in southern Sri Lanka is, therefore an example for well-managed commons that relies on strong, locally crafted rules as well as evolved norms, where institutional and governance mechanisms have essentially averted the "tragedy of the commons". Study provides the starkness to the notion that local actors in tropical community-based marine resource systems overcome the tragedy of the commons through robust self-governing institutions.

Key words: common pool resources, coastal fisheries, sustainability, customary rules, fisheries governance, modified design principles

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