

Efficient and Sustainable Management of Shared Fisheries in Thailand: Self-Governance or Regulation?

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Abstract

Artisanal fisheries are significant for poverty alleviation, but they are severely threatened by overfishing and climate change effects. Governance solutions can be hard to find when their implementation and success depend on both social and ecological contexts. In this study, our objective is to increase our understanding of behavioral strategies adopted by artisanal fisheries under different types of regulations using a field experiment in the form of a so-called common-pool resource (CPR) experiment with 540 artisanal fishers in Nakorn Si Thammarat province, Thailand. Our results reveal that: (i) a quota treatment provide higher overall efficiency and leads to more sustainable management compared to the treatment with an unregulated fishery. (ii) the higher probability of punishment in the quota treatment promotes more equal sharing of payoffs from the experiment among group members compared to a quota treatment with a low probability of punishment; and (iii) a higher degree of monitoring in the quota system prevents resource depletion. Our results suggest that the community empowerment in these artisanal fishery communities is not strong enough to make fishers cooperate effectively without regulation and that a quota system may be one plausible solution. Our results also suggest, however, that the design of the monitoring and punishment systems may need careful consideration to ensure a sustainable solution.

Keywords: *quota; self-governance; artisanal fisheries; lab-in-the-field experiment*

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