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Local Fishermen's Willingness to Accept Compensation for Commercial Sea Cucumber Farms in Jaffna Lagoon, Sri Lanka

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Abstract

This study aims to investigate local fisherman's willingness to accept compensation for commercial sea cucumber farms in Jaffna Lagoon, Sri Lanka, and analyse the factors influencing the selected attributes for this study. A choice experiment was applied in this study. A well-structured questionnaire was employed, and a random sample of 164 participants was chosen from the local fishing community within the Jaffna Lagoon. This study focuses on five attributes- rearing area of sea cucumbers, breeding sites of fishes and crustaceans, tourist facilities, mangroves, and cost. A random parameter logit model was used to estimate respondents' preferences. The results revealed that local fishermen are willing to accept compensation for commercial sea cucumber farms and are willing to pay for improvements in the breeding sites for fish and crustaceans, tourist facilities, and mangroves. Fisherman's annual mean willingness to accept compensation for the establishment of commercial sea cucumber farms in Jaffna lagoon is estimated to be LKR 1,842.25 and fisherman's annual mean willingness-to-pay for enhancing breeding sites, tourist facilities, and mangroves is estimated to be LKR 1,622.48, LKR 1,272.48, and LKR 700.48 per year, respectively. Furthermore, our research has highlighted that fisherman's choices regarding breeding sites for fish and crustaceans are significantly influenced by their educational background and monthly income. In addition, the level of education among fishermen plays a significant role in determining their inclination toward tourist facilities and mangroves. The results of this study provide valuable insights for policymakers, aiding in the development of sustainable policies for commercial sea cucumber farms in the region. By understanding the preferences of local fishermen, policymakers can work towards striking a balance between economic development and environmental conservation.

Keywords: Choice experiment, Sea cucumber farms, Random Parameter Logit Model, Willingness-to-accept, Willingness-to-pay