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4s2a: Food system transitions in deltas under pressure

Drivers of shrimp farmer adoption of Associated Mangrove Aquaculture in Bangladesh

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We investigated factors that facilitate or hamper the adoption of Associated Mangrove Aquaculture (AMA) among shrimp farmers using conventional extensive culture practices in South-West Bangladesh. AMA integrates shrimp production with cultivation of mangroves, presenting a sustainable alternative to harmful conventional practices. Additionally, it has the potential to address environmental challenges farmers are facing and mitigate financial risks of production. By means of a cross-sectional survey among adopters and non-adopters of AMA, we assessed the understanding farmers have of the AMA system and other factors determining adoption. Proximity to neighbouring farmers using AMA, suitability of a pond for AMA and the level of technical understanding of AMA proved to be the most important drivers of adoption. We found no remarkable differences in other farmer characteristics between adopters and non-adopters. Therefore, transition to more sustainable use of mangroves can be best promoted using trainings that focus on the heterogenous effects of location specific complexities. Improving farmers' technical understanding of AMA can aid in promoting its ultimate adoption (by non-adopters) by overcoming perceived technical barriers and for adopters by improving current practices for improved and more convincing benefits of AMA adoption.

Keywords: associated-mangrove aquaculture, drivers of technology adoption, climate change