

Context of salinization and adaptation preferences in the coastal areas of Bangladesh: Bringing together farmers' salinity perspectives into policy to achieve SDGs

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Abstract

The increasing salinization of coastal areas of Bangladesh reduces options for rice intensification but offers a suitable environment for shrimp and salt farming. Under these contested land use settings, adaptation decisions to address salinity require an understanding of the salinity perspectives of all farmer types. Primary data was collected from randomly selected rice, shrimp and salt farmers in two coastal sub-districts through semi-structured interviews at household level. Also, key informant interviews (KIIs) were conducted with personnel from research and extension organisations from different levels (e.g. national and local). Salinity perceptions among the various types of farmer differed. While the majority of rice farmers (87%) perceived increased salinity, just over half of the salt and shrimp farmers perceived that salinity has decreased over the past 20 years. Most rice farmers (62%) perceived anthropogenic factors as the main cause of increased salinity, while the majority of shrimp and salt farmers focused more on natural factors. Rice farmers perceived under saline conditions a yield loss (42%), followed by less income (30%). In contrast, shrimp farmers (70%) and salt farmers (55%) perceived production gains when high salinity prevailed. Rice farmers' adaptation preferences to cope with salinity is development of salinity-tolerant rice varieties that have greater tolerance at the reproductive stages, while shrimp and salt farmers' preferences are engineering-based solutions. Thus, research and extension services on integrated coastal resources management need to consider all livelihood perspectives, as this approach could accelerate the pace of achieving the SDGs (i.e.. SDG-1, SDG-2 and SDG-3).

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