

EVALUATING RESILIENCE OF COASTAL AGRICULTURAL SYSTEMS IN BANGLADESH

Ranjan Roy*

Executive Summary

About 40 million people of the coastal area of Bangladesh depend on agriculture (BBS, 2011). It has a key role to play in tackling the challenges of the growing population, poverty alleviation, maintaining food security and adapting climate change. Coastal zone in Bangladesh is highly vulnerable to climatic and non-climatic factors such as sea level rise, salinity intrusion and increasing production. Coastal agriculture has been facing a magnitude challenges around the world. Resilient coastal agricultural development is, therefore, becoming a crucial issue of flagship policy documents such as the 7th five year plan (FY 2016-2010) of Bangladesh. The objective of the study is to (i) Develop an essential set of indicators of resilient coastal agriculture, (ii) evaluate resilience of coastal agriculture system in Bangladesh (iii) determine the key factors of facilitating or impeding the institutional initiatives of building resilient coastal agriculture, and (iv) develop evidence-based strategies of building resilient coastal agricultural systems in this country. A set of indicators that correspond to three capacities (absorptive, adaptive and transformative) and five dimensions (social, economic, physical and institutional) of resilience were developed by applying an assemblage of top-down and bottom-up approaches. A total of 330 households from fifteen villages of five coastal sub-districts, Barishal Sadar, Babuganj, Galachina, Kala Para and Chakaria were surveyed using a structured questionnaire. Resilient of coastal agriculture was assessed by developing composite indices. The results revealed, in terms of capacities and dimensions, approximately two/ fifths of the coastal farmers had the ability (and capacity) to recover, reorganize and evolve following external stresses and disturbances. The majority of the coastal farmers were therefore experiencing a multitude of climatic and climatic challenges and these will reasonably be aggraded due to climate change. Development initiatives substantially improved farmer's absorptive capacity (72%). A number of institutional factors of building resilience of coastal agriculture were determined, inter alia, mainstreaming climate change in local development planning and promoting community-based organizations. The findings put forward several evidence-based strategies, like developing strong intuitional scaffoldings, leveraging social capital, investing in coastal infrastructure, and promoting diversity in agricultural production, in order to build climate resilient coastal agricultural systems in Bangladesh.

*Dept. of Agricultural Extension & Information System, SAU, Dhaka-1207