

Rice-based Cropping System

An innovative rice-based agricultural system has been piloted in saline-prone Satkhira district. This system has utilized some existing opportunities to address some serious limitations prevailing in this cyclone-affected, shrimp-farm dominated south-western part of the country where rice farming coverage has decreased significantly over the last few years.



To overcome severe crisis of irrigation water, mini-ponds are excavated adjacent to crop fields to hold rain water. Fish

varieties that withstand low salinity (e.g. monosex tilapia or carps) are farmed in these ponds from May to January. In the *boro* (dry) season, these mini-ponds supply water to the rice fields; and the pond owners receive a share of the crop production.

Given the saline condition of the soil, a cropping schedule has been introduced to this area: *aman* rice (June-November) – *boro* rice (November-March) – *Doincha* (*Sesbania* sp., N-fixer, fuel; March-June). Recently developed salt-tolerant rice varieties, like BINA 8 and BRRI Dhan 54 (for *aman* season) and BINA 8 and BRRI Dhan 47 (for *boro* season) have been tried. In some fields, salt-tolerant oil-yielding (e.g. BARI Sorisha-11 and BARI Sorisha-16) and pulse (e.g. local *Falon dal*) varieties were also tried in the winter.

Good results from this rice-based cropping system have underlined the opportunity to revitalize rice cultivation in saline-prone area through natural resource management and can strengthen local and national food security under envisaged changing climate.



The technological innovation described in this document has been piloted under the 'Community Based Adaptation in Vulnerable Coastal Areas of Bangladesh', a sub-project under the 'RETA 6422: Mainstreaming Environment for Poverty Reduction Project' of the Asian Development Bank. This sub-project (March 2011 –April 2013) is co-funded by the Asian Development Bank and Practical Action. It is implemented by Practical Action, Bangladesh in Shyamangar and Kaliganj upazillas of Satkhira district, Bangladesh.

© 2013 Practical Action Bangladesh

For further information: Practical Action, Bangladesh; House 12/B, Road 4, Dhanmondi R/A, Dhaka 1205, Bangladesh; Tel: +880 2 9672683, 9675236, 9675243; Website: www.practicalaction.org

