

## **Management of common property brackish water by collective action: the case of shrimp farmers in Bangladesh**

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### **Abstract**

In rural areas of developing countries, common resource (water, grazing land and forest) management has especially been considered one of the most viable options for poverty reduction, enhancement of local level economic development, and biodiversity conservation. The prevention of their overexploitation is equally important. For these reasons, the reallocation of control over natural resources from government organizations to user groups has become a general policy in the past decade, especially in terms of community-based natural resource management. The transfer of full responsibility to organized users may increase the participation of the community in resource management. There are many examples that villagers collectively managing resources for extended periods. The study was conducted at Paikgacha Upazilla of Khulna district to determine the socioeconomic characteristics of shrimp farmers that influence and motivate common responsibility. To accomplish this, 115 farmers were interviewed of which 40 farmers were found as head ender and the rest 75 were tail enders. Tobit model have been used to analyze the degree of contribution of collective management of individual farmers separately for head-end and tail-enders. Because in the sample, some farmers are contributing money or labour, and some never contribute. It was found that head-ender farmers are less likely to engage in collective activities because of easy access to water. At the same time, small-scale tail-end farmers who have very small farms and didn't receive expected yields in the previous year because of water scarcity or disease, are usually not willing to contribute to water management. As a result, their yields and income from shrimp should be less in the current year and once again, they will likely not engage in water management. As an end result, they may lease out the land and leave shrimp farming altogether. So, water scarcity, decreased yields and water management have the potential to form vicious cycles for shrimp farmers.

## **Pond fish farming under NGO support and individual management: A comparative socioeconomic study**

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### **Abstract**

The study was conducted to compare the profitability of fish farming under NGO support and individual management and to evaluate the overall impact of NGOs' intervention on farmers' income. A total of 120 farmers (60 for own management and 60 for NGO supported) were selected by using random sampling technique for data collection from both Mymensingh and Tangail District. The data were collected through direct interview from the selected fish farmers. Data were analyzed with a combination of tabular and functional analysis. The BCR

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was 1.9 for own management and 2.4 for NGO supported pond fish farming which indicate that the fish farming is more profitable under NGO support. The Ravallion test results showed that the income was increased by the amount of Tk. 32500.50 due to NGO's intervention. Cobb-Douglas production function analysis was done to determine the effects of variables on pond fish production and out of six variables, three variables in case of own management and four variables in case of NGO supported management had significant impact on per acre output of fish production. The results of the efficiency computation indicated that labour, feed and lime and medicine were being underutilized and fingerlings and irrigation were being over utilized for own managed pond. Under NGO supported pond, labour, fingerlings and lime and medicine were being underutilized and feed and irrigation were being over utilized in the study area. The study also identified some problems faced by the farmers in fish farming and probable solutions related to those problems.

## **Marketing and value chain system of brackish water and marine fisheries products and by-products in Bangladesh**

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### **Abstract**

Brackish water and marine fish are the two important sources of fishes in Bangladesh. Brackish water fish such as bagda shrimp and live crab are exportable items whereas marine fish (hilsa, catfish, pomfret etc.) are locally consumed and also has export market. The main objectives of the present study were to determine the marketing costs and margins, and profit of intermediaries in domestic and export markets. Value chain of brackish water and marine fisheries products were addressed to determine the values added to marketed fish in different steps of marketing channels. A field level survey as well as FGD was conducted to have detailed information to address the objectives of the study. Data were collected both from primary and secondary sources. Data were collected for two successive years 2012-13. For fisheries product marketing, intermediaries involved in marketing channel were identified; marketing costs and margins, marketing profits of intermediaries both in domestic and export marketing, and marketing efficiency of brackish water and marine fish products were determined by using tables, flow diagrams and Composite Index Method. Marketing and value chain system are shown by using flow chart. Average marketing cost was relatively lower for frozen fish compared to dry fish in domestic market. Usually high valued species claimed higher costs compared to other species. Secondly, for fisheries product marketing, intermediaries involved in marketing channel were identified; and marketing cost and margins, marketing profits of intermediaries both in domestic and export marketing, and marketing efficiency of brackish water and marine fish products were determined. Fishermen received higher benefit when they sold their fish directly to landing station and minimum numbers of middlemen were involved in the chain. Fishermen share to consumer' price varied from 70-77% for different species of fish under marketing of different channels. However, shrimp as an exportable item seems to have brought some improvement in the value chain. They get relatively higher share (73-77%) of the consumer's price. Shrimp farmers usually bring shrimp to deport and/or shrimp processing factory for processing and shipment to ultimate destination. Most of the fish markets located both in rural and urban areas are poorly managed. Recently BFDC, DoF and other concerned authority took initiative

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to develop the infrastructure and to improve the management system. However, to create opportunity to add more value on fish marketed and to distribute fish to the consumers' level government should come forward and to play active role in providing physical facilities like refrigerated storage, refrigerated vans, good market places with related facilities like water, ice, electricity, drainage facilities and sitting arrangements etc.

## **The role of credit in food production and food security in a selected area of Bangladesh**

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### **Abstract**

This study examines the poverty and food security analysis of fishermen households in a selected area of Gopalganj Sadar Upazila in Gopalganj District in Bangladesh. A sample size of 60 households was selected purposively from four villages. Data were collected through field survey by using pre-designed and pre-tested questionnaire. Calorie intake levels were calculated and statistical comparisons were done. Multiple regression analysis was carried out to determine the factor influencing calorie intake in individual levels. Food consumption scores were used to determine calorie intake levels. The major findings of the study were that income, education, cultivable area and rented area had positive impact on calorie intake but age of the respondents and family size had negative impact on calorie intake. About 68.33% of the respondents belonged to hard core poor whose average calorie intake was 1692.32 k. calories and 25% of the respondents had an average calorie intake of 1890.93 k. calories and they belonged to absolute poor. The rest 6.67 % of the respondents took above 2122 k. calories and average calorie intake was 2193.50 k. calories. There was 20% households having poor food consumption and 42% having borderline food consumption. Only 6.67% fishermen households had acceptable low food consumption and 3.33% had acceptable high food consumption.