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Environmental Impacts and their Socioeconomic Consequences of Shrimp Farming in Bangladesh

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Abstract

Commercial shrimp culture in Bangladesh has expanded dramatically over the last two decades for its high demand in the international market and its potential for making quick profit. Large farm size, very low input, low stocking density, diseases infestation and low production are the characteristics of most shrimp farms. While other Asian countries like Taiwan, Malaysia, Thailand, India and Srilanka have been successful in increased production through better management and eco-friendly cultural technologies, Bangladesh is still struggling with lower production and high production costs. Traditional or improved traditional or extensive cultural system is providing her 70–250 kg ha⁻¹ of production. To survive in competitive international market, Bangladesh is trying to increase production through horizontal expansion in terms of area rather than attaining efficiency in production system. The shrimp farming has also expanded from 20,000 ha in 1980 to 150,000 ha in 2001. This study was carried out to investigate the environmental impacts and to identify their socio-economic consequences for horizontal or area expansion of shrimp farming in southwest coastal belt of Bangladesh. From this study, it is found that this development has caused serious environmental impacts *e.g.*; deforestation, cutting of mangrove forests, intrusion of saline water, decreased crop diversity and fisheries, water pollution and changing hydrological characteristics. These ecological imbalances again create negative impact on socioeconomic environment at surrounding areas like as lower production from crops and vegetables, loss of valuable fruit trees, fresh water crisis for drinking and related diseases like diarrhoea and dysentery, loss of grazing lands as well as livestock and poultry resources, lack of fuel wood, decline in household incomes from both on-farm and off-farm sources, extra burden on women and children for collecting drinking water and fuel wood from far places. Shrimp cultivation is no doubt economically beneficial for a selected group of people as well as for Bangladesh, but it has negatively affected the livelihoods of landless and marginal farmers, making difficulties for them to survive in the area.

Keywords: Environmental impact, socioeconomic impact, horizontal expansion