

# Ecosystem Services and Reducing Migration

## Shrimp Aquaculture as an Adaptation Option: Reducing Migration

Sustainable yield of ecosystem services based shrimp aquaculture and its suitability as livelihood adaptation option and reducing migration in the context of climate change: a case study of southwest coastal Bangladesh

### Abstract:

Change in bio-physical features, adaptation and migration are many often inter related. Changes in salinity define proportion of agriculture and aquaculture practices. Changes in aquaculture over farming system due to such changes and longer period due to climate change condition may pose threat on livelihoods. In Bangladesh Shrimp Aquaculture initiated in 1980s and continue and expanded with several rise and fall. There conflict with this system and negative impact on environment too. However, integrated and mix culture system may be sustainable and with less conflict with society and environment and may ensure adequate employment opportunity to reduce migration. This investigation is aimed to look in to this aspect preliminary findings indicating that a sustainable shrimp aquaculture system may be prescribed for adaptation in climate changed condition where paddy cultivation may not be possible in many areas of coastal areas of Bangladesh. This will also reduce migration and displacement of people from their own areas. The study area is three Districts in coastal areas in Bangladesh

### Introduction and Background:

Sustainable yield of ecosystem services based shrimp aquaculture and its suitability as livelihood adaptation option and reducing migration in the context of climate change: a case study of southwest coastal Bangladesh. This work was done from IWFM-BUET, Bangladesh under CARIA-DECCMA Study

### Objectives:

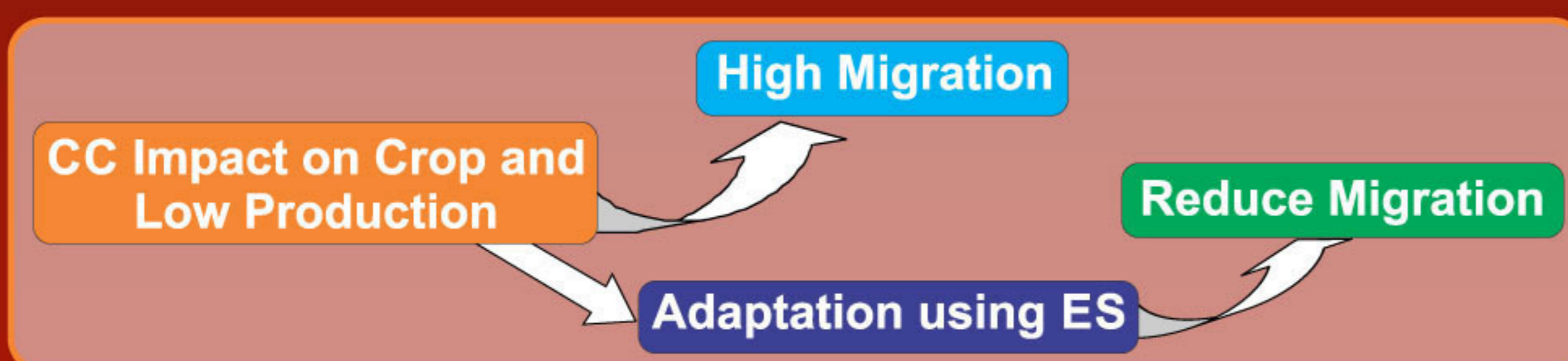
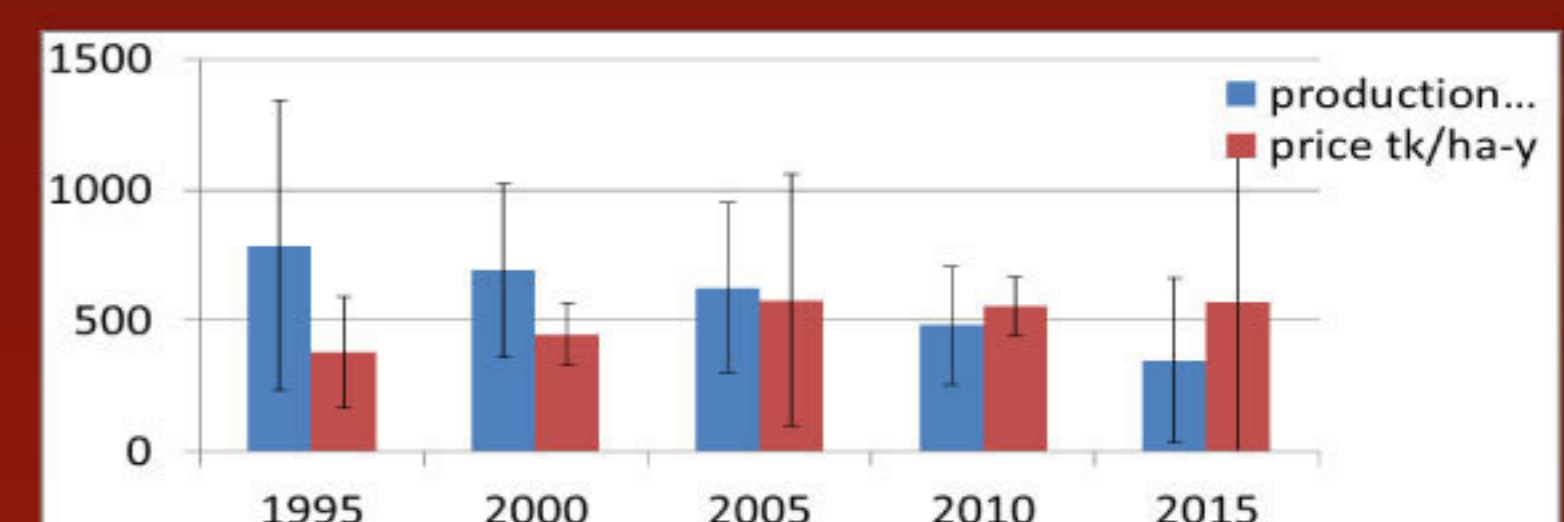
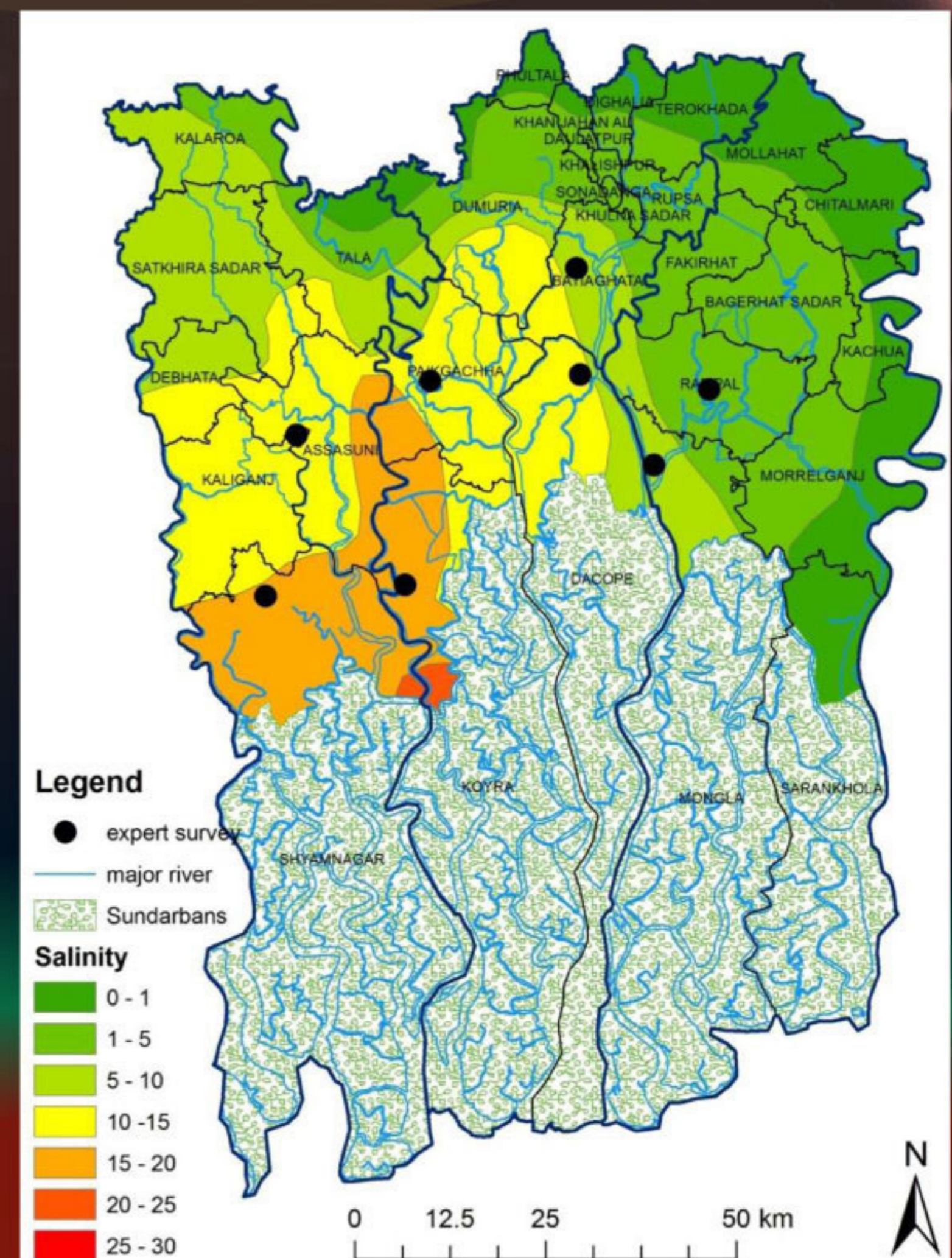
- To see if Ecosystem Services contribute Shrimp Aquaculture as an adaptation
- To see if successful adaptation reduce migration

### Approach and Methods:

- KII, GD, FGD, Questionnaire Survey (214) from 6 Upazila and total 3 Districts
- Tidal Flow was considered as Ecosystem Services

### Observations:

- Mix or integrated shrimp aquaculture appeared better adaptation
- Farming pattern was Bagda Bagda, Bagda Fish, Bagda Golda, Golda, Golda Fish, Golda Rice, Bagda Golda Fish Vegetable/Rice
- Observed that where integrated shrimp (Golda Bagda Fish Vegetable/Rice) farming) is profitable, sustainable and farmers are quite happy and job opportunity is more
- It is found that where Ecosystem Service is more functional the shrimp aquaculture is better
- Areas where such types of adaptive aquaculture was found, outgoing migration is minimum



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Deltas, vulnerability and Climate Change; Migration as an Adaptation