

# CBOs and Community Adaptation under Catastrophic Events: A study from Northeastern Bangladesh

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# Outline and the Context

## ❖ The Context

## ❖ Community Engagement and Local Institutions

## ❖ Study Site and Methodology

## ❖ Major Findings

## ❖ Discussion and Conclusion

- CBOs to conserve CPRs, and to increase productivity
- Wetland-community: Resources-dependent community
- Participatory Management of Natural Resources
- Local community strength and engagement (Sendai Framework 2015-30)
- Local institutions (i.e. CBO) and social processes (i.e. exclusion and inclusion) augment either adaptation or maladaptation under flood

# Community Participation to NRM and Local Institutions

- 'opportunity hoarding' (Tilly, 2006) for elite category.
- Local institutions (i.e., CBO) or social institutions may potentially foster both marginalization and exclusion (Johnson, 2012)
- Disaster recovery and resources access: Political economy of resource use requires special attention (Adger, 2000)
- Means testing criteria and targeting errors in social policy (Sen, 2000)
- Giddens' (1984) Structure of domination: Control over allocative and authoritative resources and power structure

# My argument

Memberships in CBO	Fishers	Non-fishers
Participate	Successful Adaptation	Inclusion error
Do not Participate	Exclusion error (Maladaptation)	Successful policy



*•Local political dynamics determine the membership into the CBOs, which eventually create inclusion and exclusion errors.*

*•CBOs render equivocal roles toward community adaptation.*

# Study Site and Methodology

◆ Triangulation: Data and Method

◆ Techniques of Data Collection:

✓ Sample Survey

✓ From PRA Tool Box:

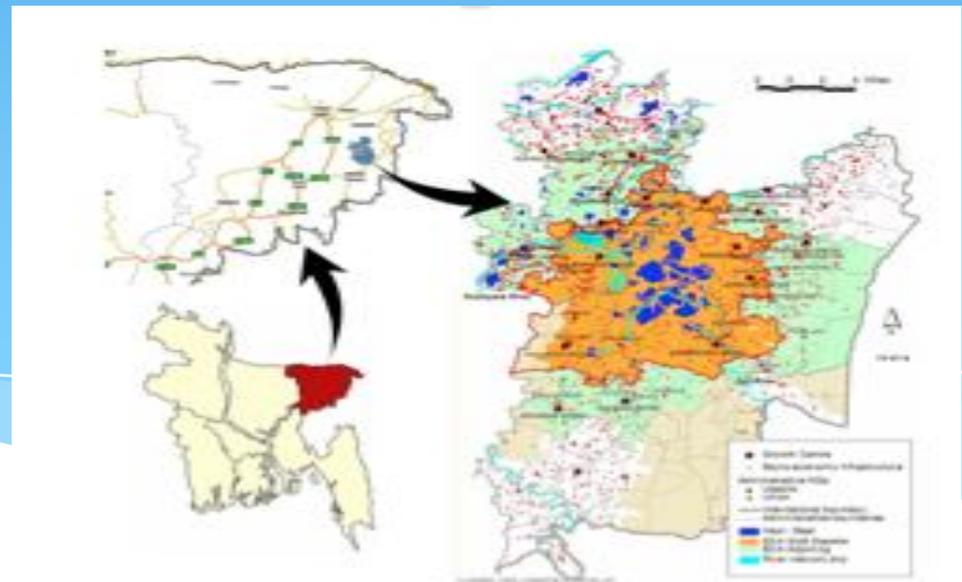
-Key informants interview

-Semi-structured interview

-FGD

◆ Local communities:  
'South Sunamgang' and  
'Hakaluki Haor.'

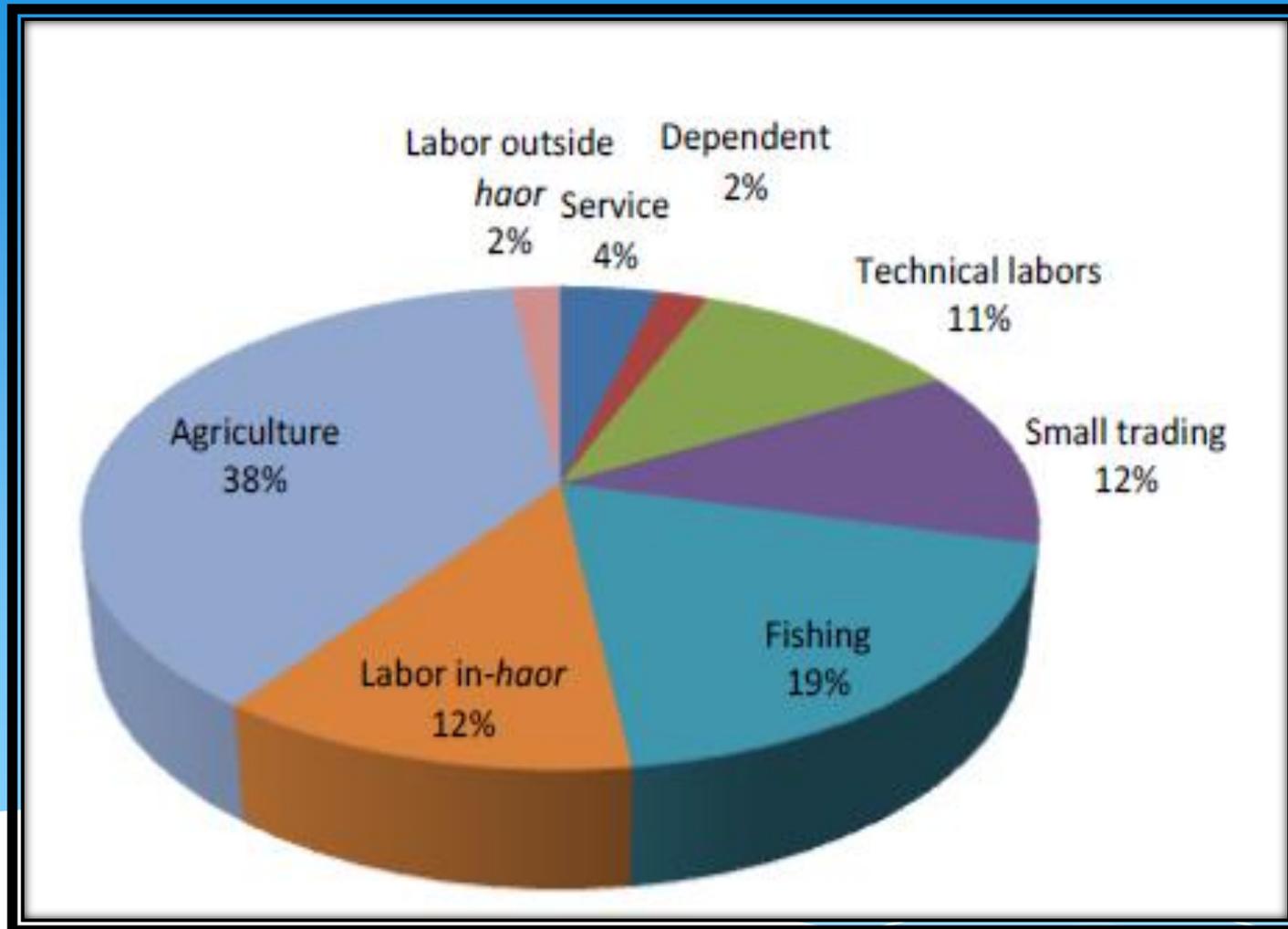
◆ Time of data collection:  
(Apr-Sep) 2015



# Objectives and Methods

Scales	Objectives	Methods
Community	1. To understand how asymmetrical power structure shapes community adaptation	-Key informants interview (5) - FGD
Household	2. To understand how community people adapt with new governance	-Semi-structured in-depth interviews for in-depth Cases (10) -survey (n=30)

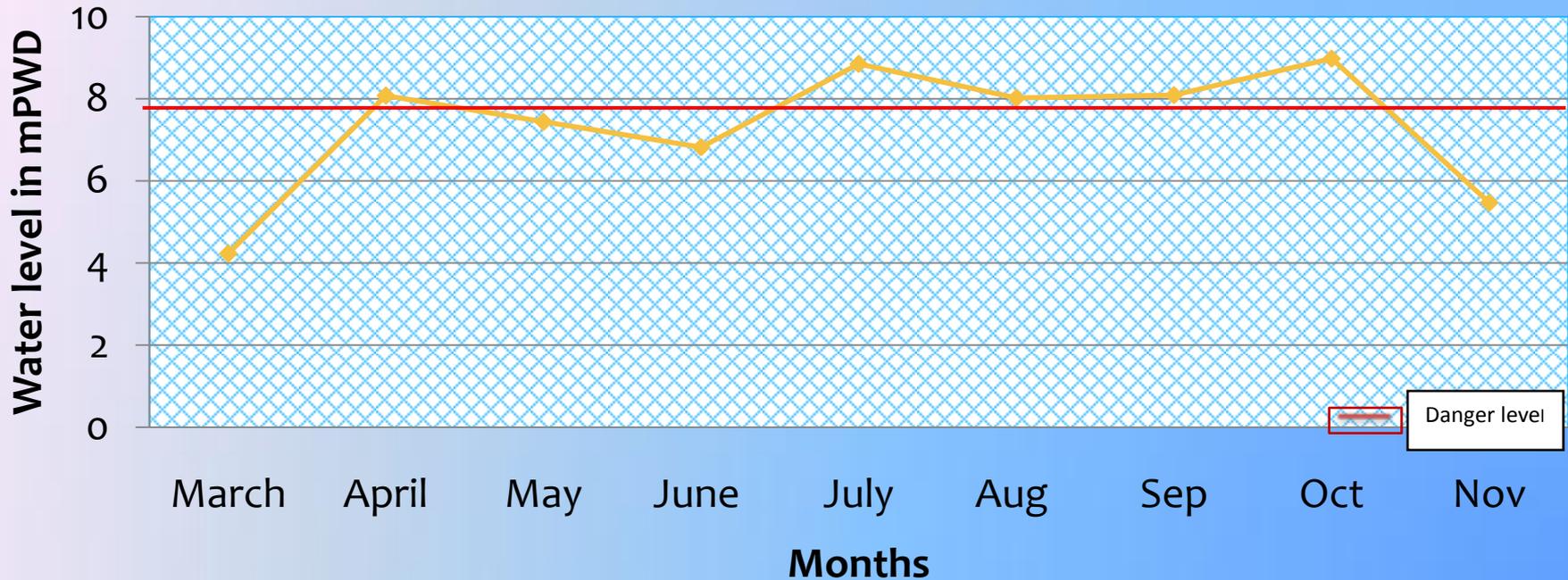
# Livelihoods of Wetland-community



Occupational distribution of Haor community people (Source: Khan, 2012)

# Flooding Disasters and the Wetland-community

## Flood in 2004



Source: (Choudhury, 2015)

Floods in April (pre-monsoon): Crop loss

Floods in July and October (monsoon): Property and homestead loss

# Distribution of membership in CBOs

Area	Total member	Non-fisherman	Fisherman	Fishing HHs in the vicinity
Sunamgang	51	51	0	261
Hakaluki	101	89	12	376

Means-testing criteria?

Government Discourse

- Exclusion and inclusion errors shape adaptation practices
- Inclusion positively shapes adaptation with flood loss
- Exclusion negatively shapes adaptation with flood loss

# Adaptation or Maladaptation?

## Case Study 1

Samir Mia (47, Pseudonym)

-started fishing while was 15  
(HK)

-He does not understand what is  
CBO.

-`but due to this CBO, I cannot  
harvest fishes from Haor'

-Now buy from district town and  
sell it to sub-district.

-His anxious comment, 'CBO has  
turned non-fishers' as

fishers'



# Adaptation or Maladaptation?

## Case Study 2

### \* INCLUSION ERROR

\* “Most of us are farmers (not fisherman). Once we were included into the CBO by local elected member (political leader) to manage the *Beel*. We are investing all of our time here now. We are earning much better from the *Beel*.”

### \* Successful Adaptation (One Group)

\* SANCTUARY [40/45 verities]

\* Income level: 14000 (BDT) in 2013: 30000 (BDT) in 2014



# Adaptation or Maladaptation?

## Case study 3

- \* **EXCLUSION ERROR**

- \* We are sixty families in the vicinity of the one bank of Haor. The member cannot tolerate us due to this **categorical difference (Maimal)**. I went to him several times for the inclusion into the CBO, especially when it was identified my husband is suffering from cancer. He suggested me moving from here to my father's house.

- \* **Tingling**

- \* **Now I do street selling (Maladaptation)**



# The Fuzzy Technique

**I follow**

**We determine the following matrix**

$$P(M) = \sum_{x \in X}^n M(x)P(x) \quad \dots \dots \dots (1.1)$$

$$r(M) = \max_{x \in X} [\min(M(x), r(x))] \dots \dots \dots (1.2)$$

$$r_1(x) = \min [r_0^a(x), M(x)] \dots \dots \dots (1.3)$$

$$s(M, r) = \max_{x \in X} [\min(M(x), r(x))] \dots \dots \dots (1.4)$$

$$M(x) = M^s(x) \quad \dots \dots \dots (1.5)$$

$$r_1(x) = \min[r_0^{1-s}(x), M'(x)] \dots \dots \dots (1.6)$$

$$\begin{pmatrix} 0.9 & 0.0 & 0.2 & 0.0 & 0.0 & 1.0 \\ 0.0 & 0.9 & 0.1 & 0.2 & 1.0 & 0.0 \\ 0.1 & 0.9 & 0.2 & 0.9 & 1.0 & 0.3 \\ 0.0 & 0.5 & 0.0 & 0.6 & 0.7 & 0.0 \\ 0.1 & 0.0 & 0.9 & 0.0 & 0.0 & 0.5 \\ 0.0 & 0.3 & 0.2 & 0.3 & 0.4 & 0.0 \\ 0.9 & 0.0 & 0.9 & 0.3 & 0.0 & 1.0 \end{pmatrix}$$

$$A(y) = \max_{x \in X} [\min(R(y, x), M(x))] \dots \dots \dots (1.7)$$

Using 1.7, we find that

$$\begin{aligned} A &= R^0 M'_2 = 0.0/y_1 + 0.9/y_2 + 0.9/y_3 + 0.7/y_4 + 0.0/y_5 + 0.4/y_6 + 0.0/y_7 \\ &= 0.9/y_2 + 0.9/y_3 + 0.7/y_4 + 0.4/y_6 \end{aligned}$$

# Findings from Fuzzy Analysis

It explains that

1. Elitism determines inclusion and exclusion ( $Y_2$ )
2. Flood triggers circular migration for non-member due to uneven income ( $Y_3$ ).
3. Only flood resists attending school for 4/6 months ( $Y_4$ ).
4. Flood compels them for using open latrine ( $Y_6$ ).

# Discussion, Conclusion and Policy Implication

## Ecological Corner:

Through CBOs, sanctuaries are developed,  
Productivity is increased

## Community Adaptation:

New groups are benefitted → inclusion **error** [Adaptation]  
Marginalization and Maladaptation to other → exclusion  
**error** [political economy; constraints]

## Policy recommendation and concern:

Considering local social ambiance, successful adaptation requires  
inclusionary practices (state, market and civil society).

# Thanks!

Questions?

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