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## **Asia Water Forum 2022**

8–11 August 2022 • Online

Focus Area: Water as a sustainable resource \_\_\_\_\_

**Session Title:** Nature-based solutions and integrated perspectives

Schedule: [Date | Time] 11 August 2022 (Thu), 9:00 a.m. - 10:30 a.m. (GMT+08)



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# Guide to structure and format of slides

- No more than 10 slides excluding title slide that can be delivered in a 10-minute presentation
- Minimize text
- Use Calibri (body) black font
- Use Calibri (body) 20 point for all headings and Calibri (body) 18 point for bullets
- Photos, videos, and/or short demonstrations to enhance presentation are encouraged



# You can not clap with one hand

Tidal River Water Custodian:  
Adding livelihood considerations to decision making

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August 11, 2022



Foreign, Commonwealth  
& Development Office



The Tidal River Water Custodian is funded by the CARE  
Climate Innovation Challenge program





## Introduction

- Most often the international donor funded water development programs imagine development based on generic ideas of ‘growth and modernity’.
- The ideas promote ‘common solutions for all’ for achieving progress and improvement.
- Based on infrastructural interventions, changing the physical landscape, resulting in growth and improvement for all



## A case on the polderization in the southwestern Bangladesh: The unsustainable polder promise

- To protect the Bangladesh delta from flooding and to improve agricultural production.
- The immediate impacts were seemingly positive: from crop cultivation during monsoon to attract people to settle.
- In the long run, this resulted in:
  - incomplete protection for destructive floods
  - dead or dying up of rivers and canals
  - deeper, longer lasting *jolaboddho* (waterlogging) floods
  - inhibiting cultivation, damaging crops

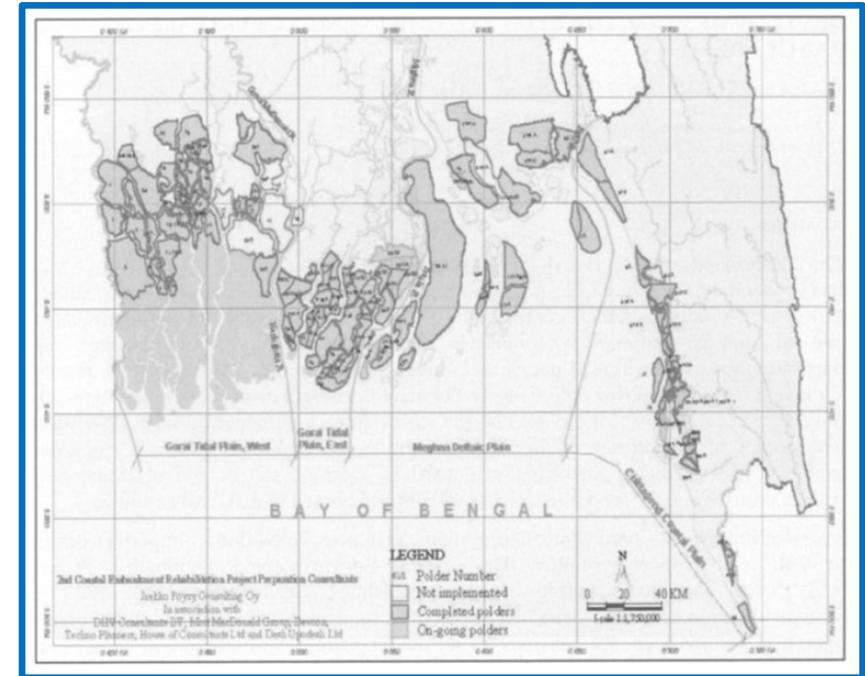


Fig: Coastal polders in the Bay of Bengal  
(Source: Saari and Rahman, 2003)



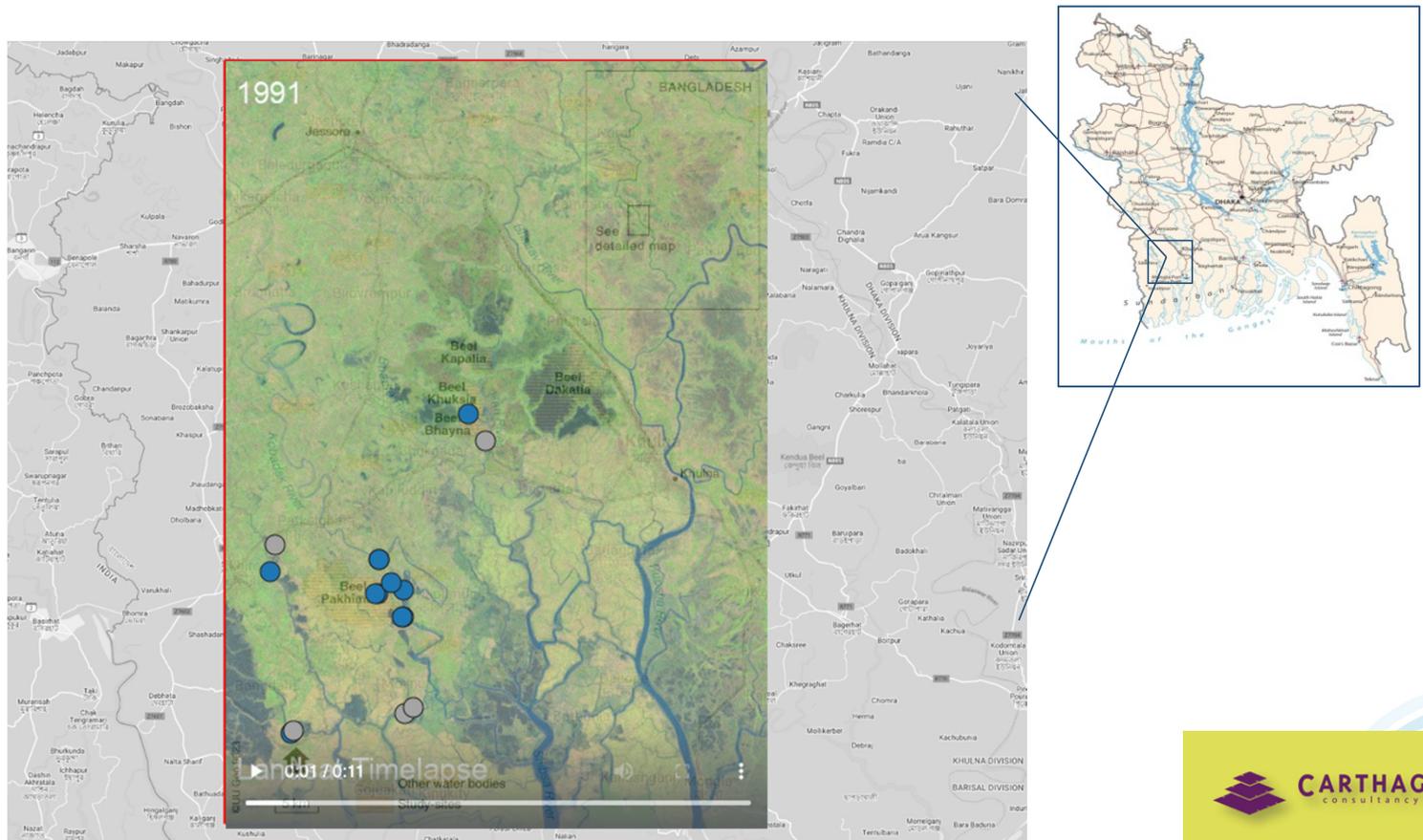
## The unsustainable polder promise



Proposed Nature Based Solution: **Tidal River Management** to revitalize rivers and bring sediments  
**Physical processes** are fairly well understood  
Unbalanced loss and gain of **livelihoods** make implementation very challenging



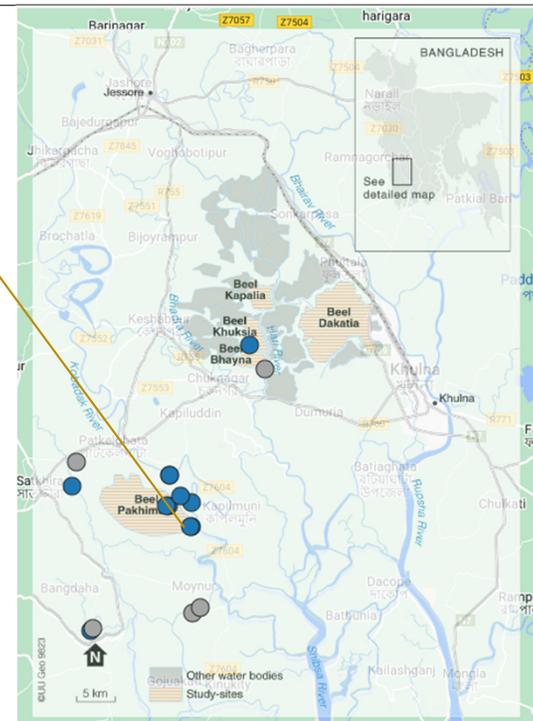
# The transforming landscape and its people





***Abdul – educated and humble. He is the Union leader of the local Ansar team.***

***Abdul said he went as far as the Indian border to find out why the Kobadak river had been losing it's prowess. He is strongly in favour of the Tidal River Management.***



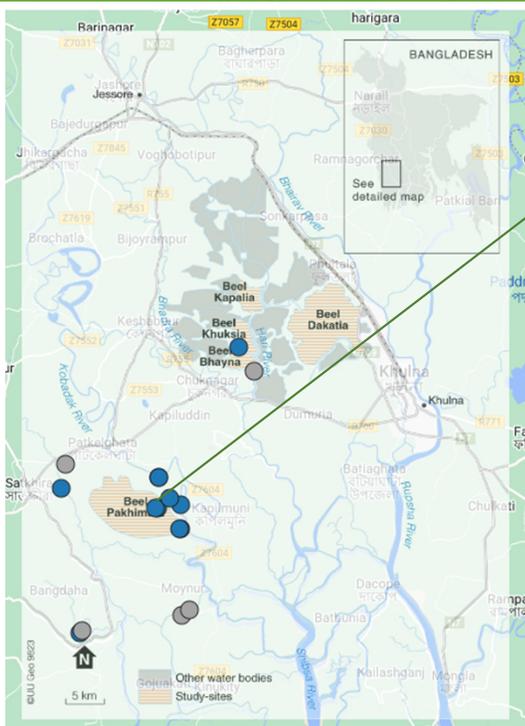


**Mr. Khorshed is a carpenter and farmer.**

**He has been forced to change his profession due to the changes in the nearby river system and the effects these changes have in the local farming practices.**

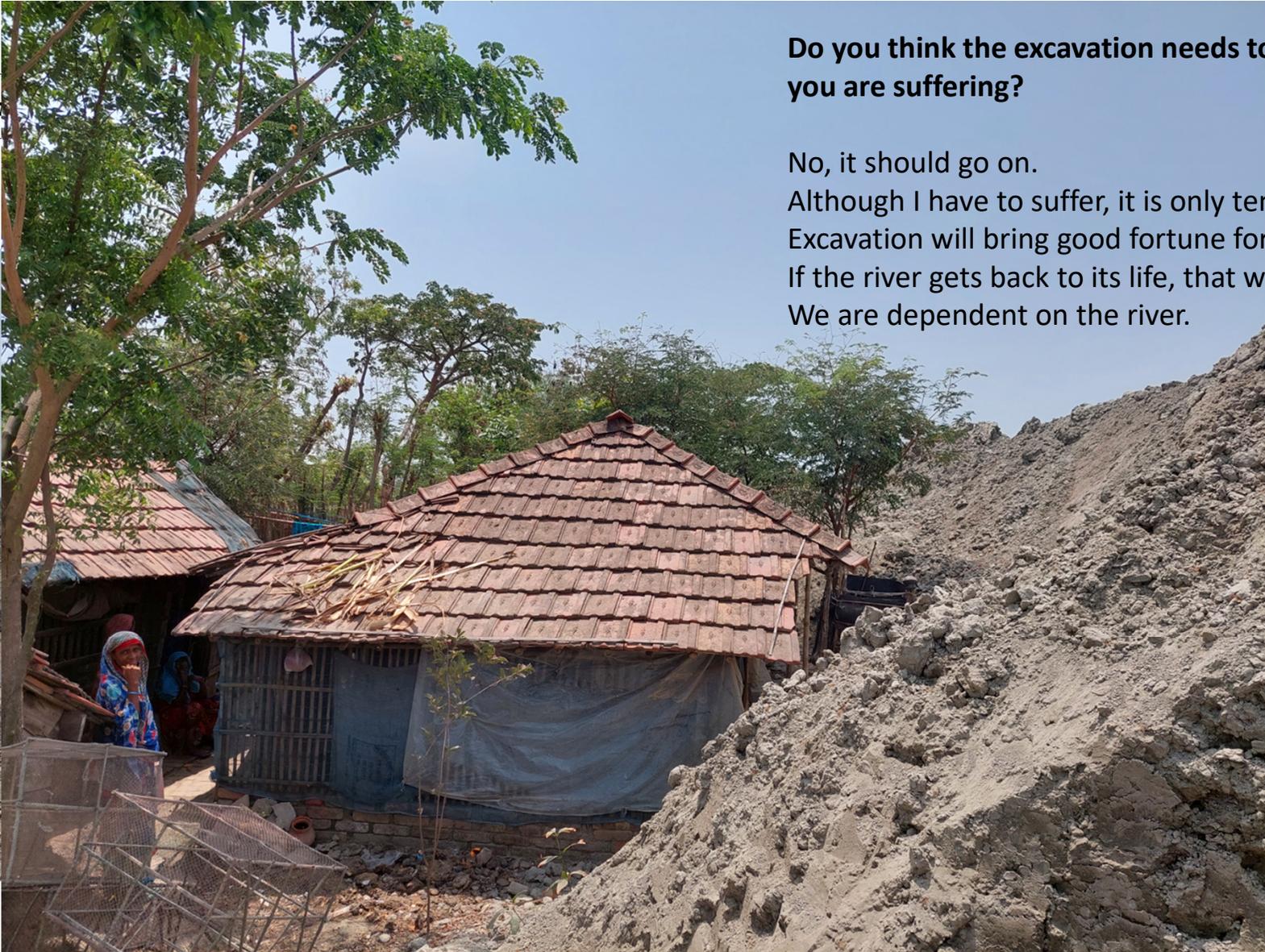
**He doesn't own any farmland anymore.**

**He is in favour of river dredging instead of the TRM.**





Meet Mah



**Do you think the excavation needs to be halted as you are suffering?**

No, it should go on.

Although I have to suffer, it is only temporary.

Excavation will bring good fortune for everyone.

If the river gets back to its life, that will benefit us.

We are dependent on the river.

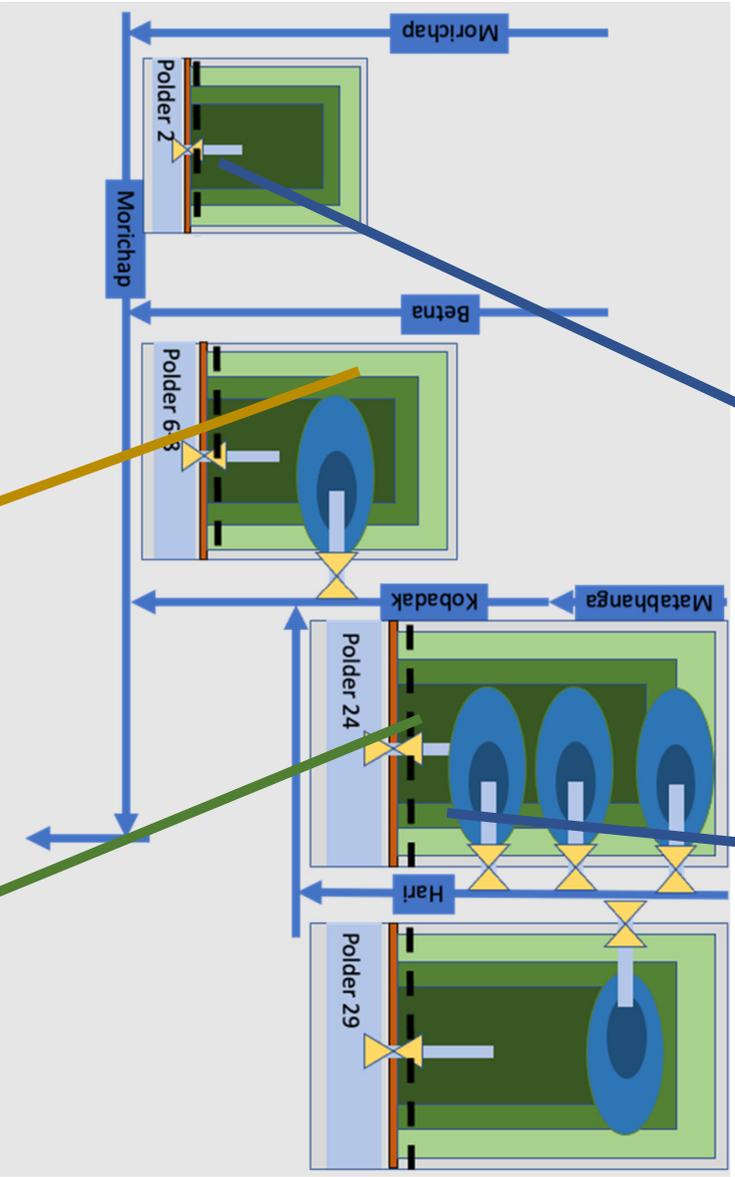




- Does this way of development for the coastal areas in the Global South improves situation for all?
- Can we apply this 'one size fits all'-approach to a very diverse physical, social, economic, cultural, political landscape?
- Can we use the value patterns of the water engineer as a template for all?
- Can we start including diverse livelihoods into decision making processes?



# Management simulations: Building Mental Models through Serious Gaming





# A Decision Support Process to link Mental Models to physical interventions

Base constants			Case 1					Case 2				
High tide	m	1.7	Daharmoshihati	Kedaria	Dakatia	Khukhsia	Bhaina	Daharmoshihati	Kedaria	Dakatia	Khukhsia	Bhaina
Low tide	m	1.3	no	yes	yes	no	no	yes	yes	no	no	no
Upstream fre	m <sup>3</sup> /sec	10	1	4	1	3	1	1	1	3	1	1
			7	4	5	8	4	10	8	9	10	10

### Local people



## Acknowledgements

- This presentation is based on the Innovation Project titled *Tidal River Water Custodian* led by Carthago Consultancy.
- The team of the Tidal River Water Custodian is:
  - Willem van Deursen, Carthago Consultancy
  - Myisha Ahmad, BRAC, Carthago Consultancy
  - Shahnour Hasan, IMACON Water
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## Take home question

Our research shows

that in just one river basin, 100 x 60 km

we find an enormous diversity in livelihoods

- people who are dependent on agriculture

- people who are dependent on fish

- people who are dependent on paid labor on other farms

- people who are dependent on other forms of making a living

- people who are in favor of dredging

- people who favor traditional methods such as TRM

*Can we use just one global perspective on how we look at these very localized challenges?*

*Or do we need to include many more perspectives in our decision making processes?*