

Inland fisheries agro-ecological knowledge in the coastal areas of the Sundarbans (India and Bangladesh)

ISE
Congress
2024

Session #Theme4 - Landscapes and seascapes,
Thursday 16th of May 2024,
12:15-12:55 in the Biocultural Forum,
Cadi Ayyad University, Marrakech, Morocco

Marrakech



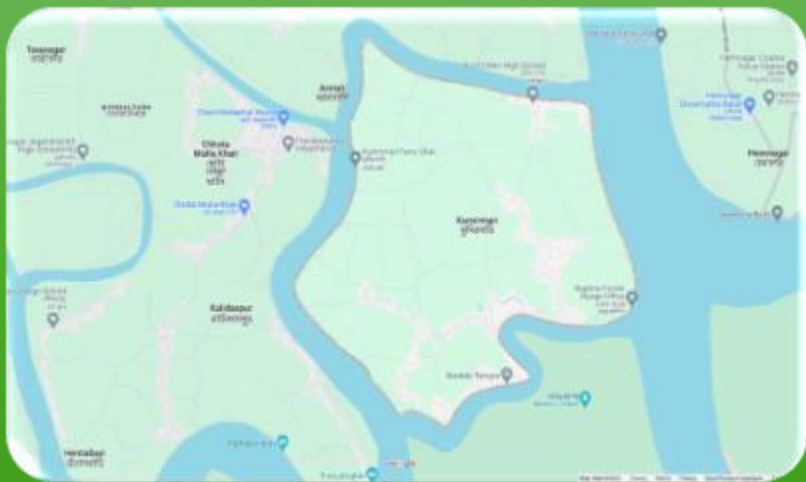
Small-scale fishing practices, including forest and inland fishing, are found to be one of the dominant livelihood practices in Sundarbans. These practices are exposed to various socio-ecological and political challenges in the context of rapidly increasing climate change-induced risks and hazards.

Introduction



- Fishing in the protected mangrove forest entails risks of encountering tigers, forest guards, bandits, etc.
- Fishing in the main tidal river provides a lot of fish but involves high costs for boats and fuel.
- Alternatively, coastal fishing communities adopt inland fishing to secure their harvest and livelihoods
- However, current inland fishing practices are found to be suboptimal as they fail to tap the local natural-ecological, socio-economic, and cultural knowledge base, technical know-how, and supportive interventions.

Research question



Which fishing practices are the most sustainable for the communities of the Sundarbans coastal area?

Methods



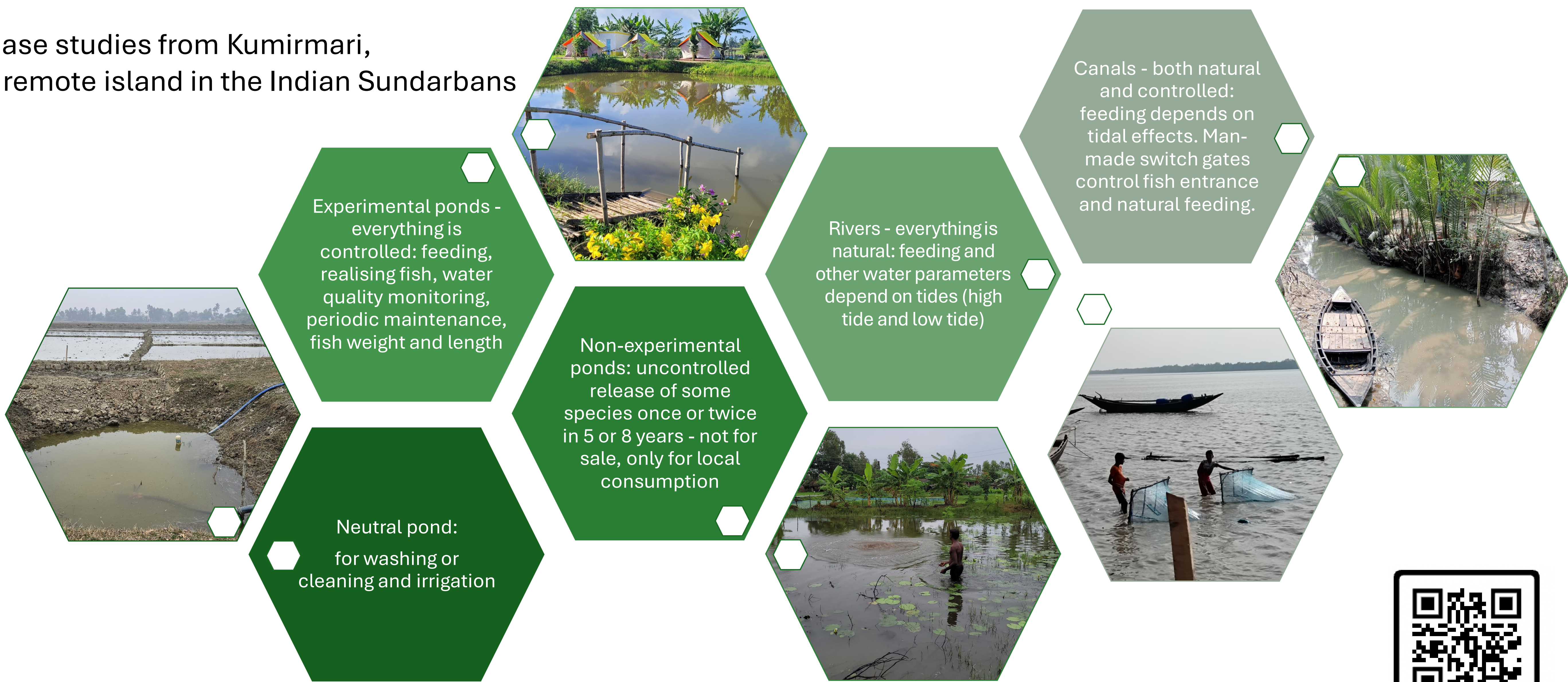
- Knowledge co-production for co-development of solutions to address vulnerabilities
- Practice-based inland fishing design/ bottom-up agro-ecological knowledge
- Transdisciplinary engagement of different stakeholders for place-based experiments
- Action-oriented inland fishing design to overcome challenges and create new opportunities

Results

Type of water body	Resources	Income	Tools	Sustainability			Comments
				Ecological	Economical	Social	
Tidal rivers (brackish water)	Fish, crab, shrimp, Post Larvae (PL)	\$\$\$\$	Net, boat, angler, hook	+++	++	++	Tidal rivers host a large diversity of fish but they are hard to catch.
Aquaculture ponds/ <i>Gher</i> (brackish water) used for intensive farming	No wild species: only target shrimp and white fish	\$\$\$\$\$\$	Net		++	+	Ponds are more productive, easy to harvest and give higher incomes but employ fewer people, with high input costs and a low biodiversity.
Ponds (fresh water) used for extensive farming	Some culture fish / fry from adjacent canals when inundated	\$\$\$\$	Cast net	++	+	++	Fresh water ponds can host a large biodiversity and provide good harvest for households.
Canal within locality (brackish)	Small fish from nearest rivers, fry and fingerlings	\$	Cast net, fine mesh net	++	+	+	Canals are connected to main rivers, used to drain water, and harvest some fish or Postlarvae, but the quantity is limited due to poor ecological conditions.

Conclusion

Case studies from Kumirmari, a remote island in the Indian Sundarbans



 **ENGAGE4 Sundarbans**

Visit our webpage:
engage4sundarbans.org

