

Shrimp farming as adaptation to salt intrusion in coastal Bangladesh

Saskia Werners, assistant professor adaptive water management

Session: SC 2.3 Food production systems, 12 May 13.45-15.30, New York Room

Main lesson: Explore with people whether adaptation to an alternative livelihood is equitable and sustainable under climate change.



Today

- ☞ Introduce myself & case study
- ☞ Research questions: adaptation of agricultural system under salt intrusion
- ☞ Main concept: adaptation pathways
- ☞ Results & Conclusions for adaptation

Making Acquaintance:

Wageningen University and Research Centre

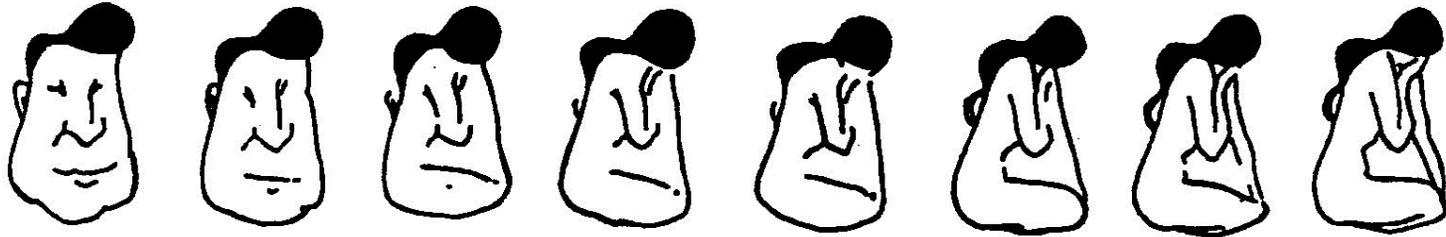
Teaching, research + consulting for governments

Interest: how to adapt to climate change in water management



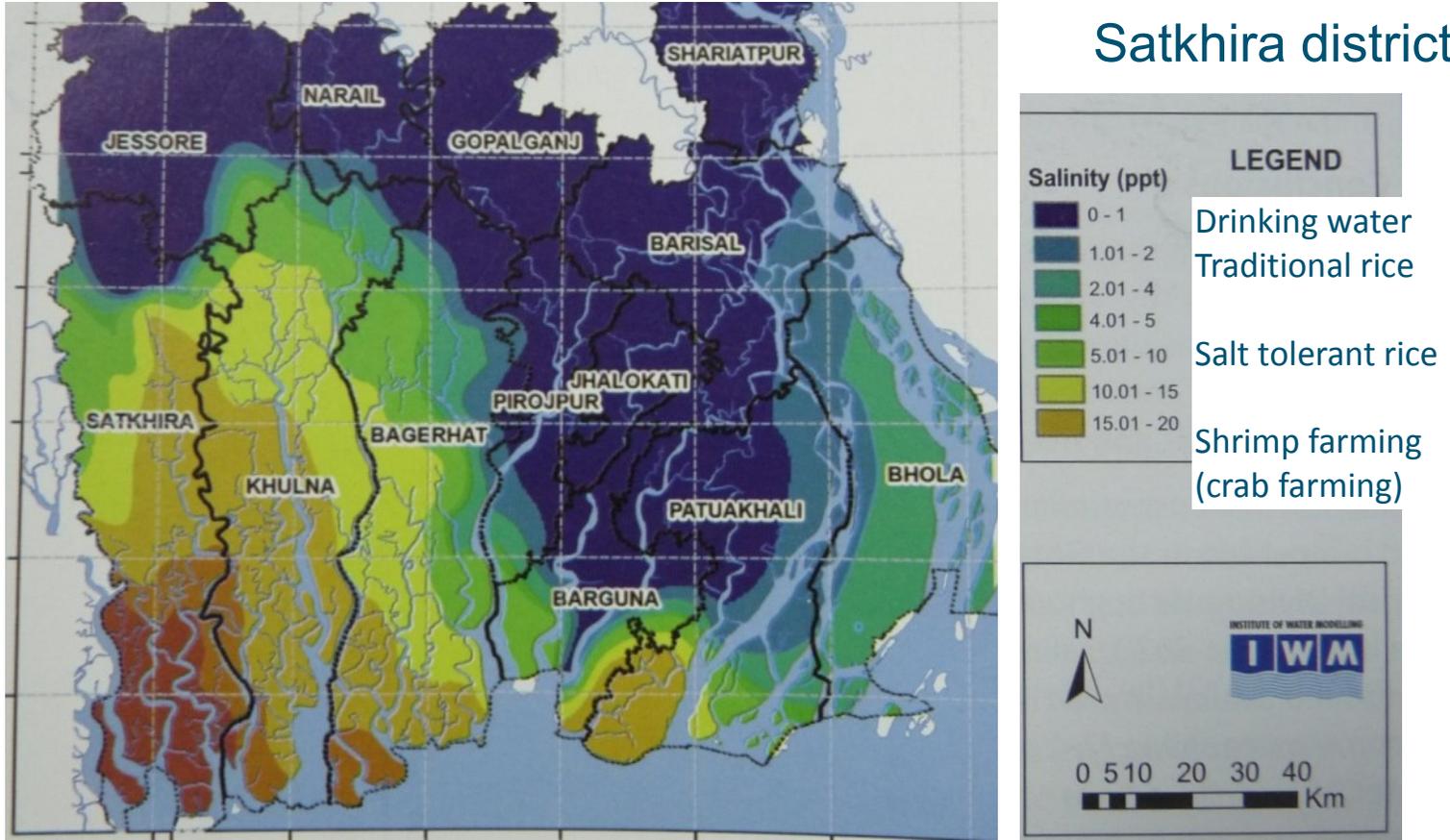
Experiment



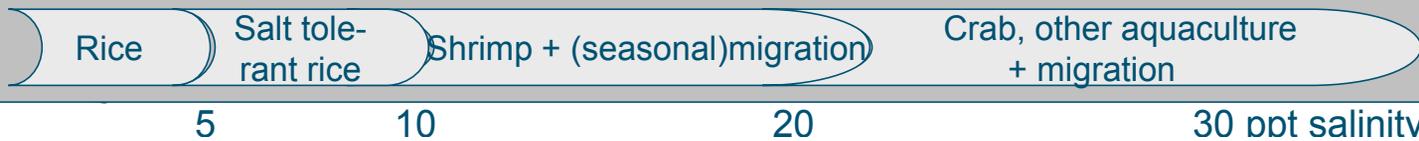




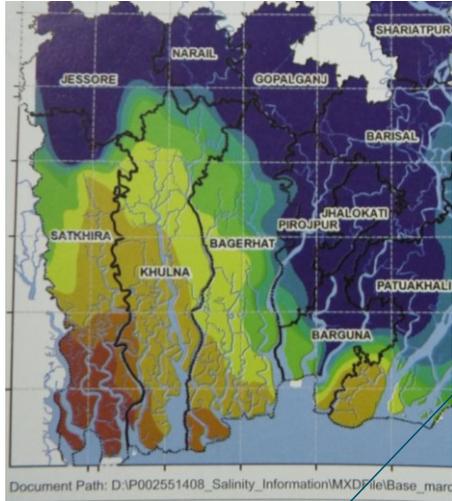
Coastal Bangladesh Satkhira district



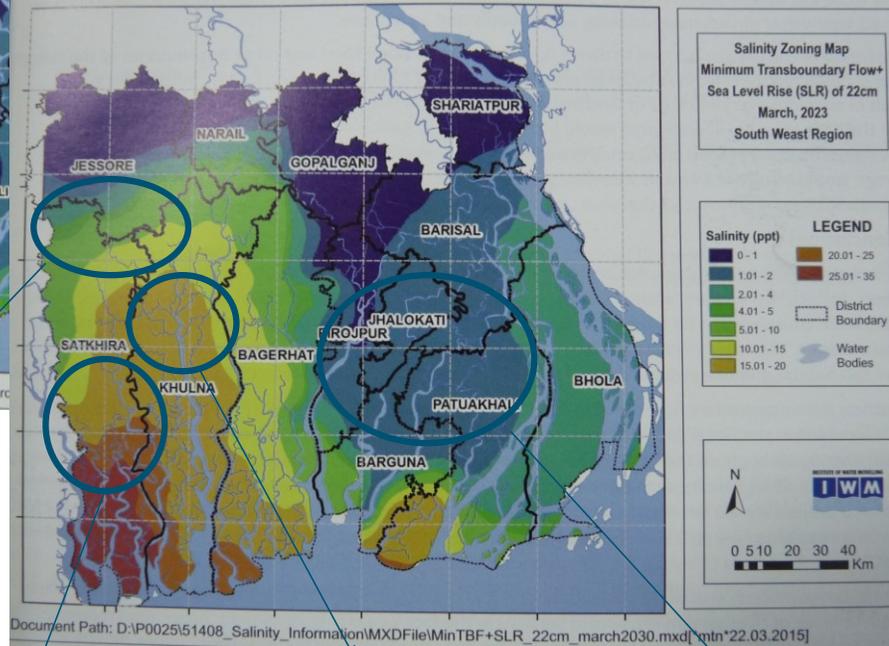
Autonomous / unplanned development of land use under salinisation



Coastal Bangladesh / South West



2012



2030:
Sea level rise 22cm

Tipping point rice production

Beyond tipping point rice and sundarban biodiversity

Tipping point shrimp

Tipping point freshwater



Research Question

- What are the main challenges for the (future of) coast
- How do actor propose to overcome these challenges?
- (with a focus on livelihoods. For the case study area: how do actors propose to adapt to increasing salinity?)

Research Concept: Adaptation Pathways

Different approaches for adaptation

Options
What to do now?



OR



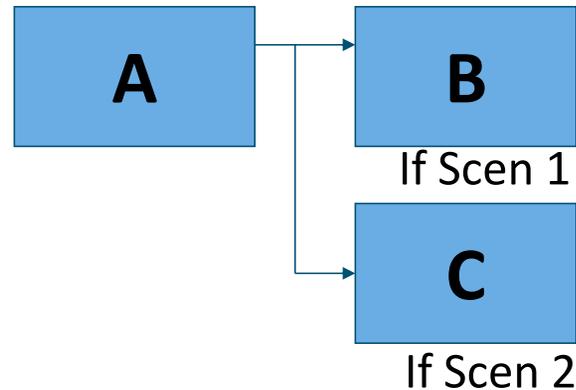
OR



now

Classical decision making

What to
do *when*?

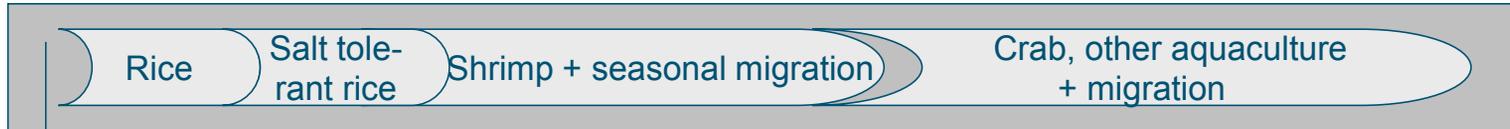


Adaptive Planning /
Adaptation Pathways



Research Method: Survey, interview, focus group



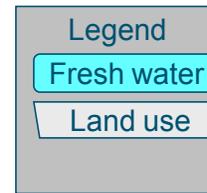
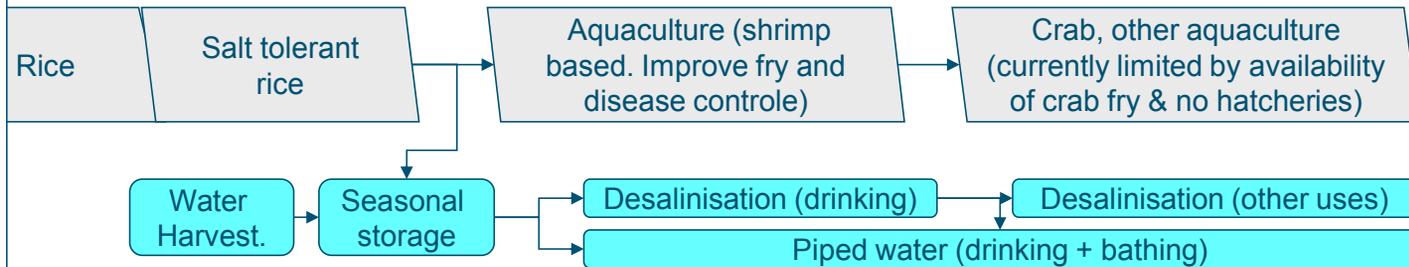


Concern: Reduced income from shrimp farming

Pathway of larger farmers & land owners



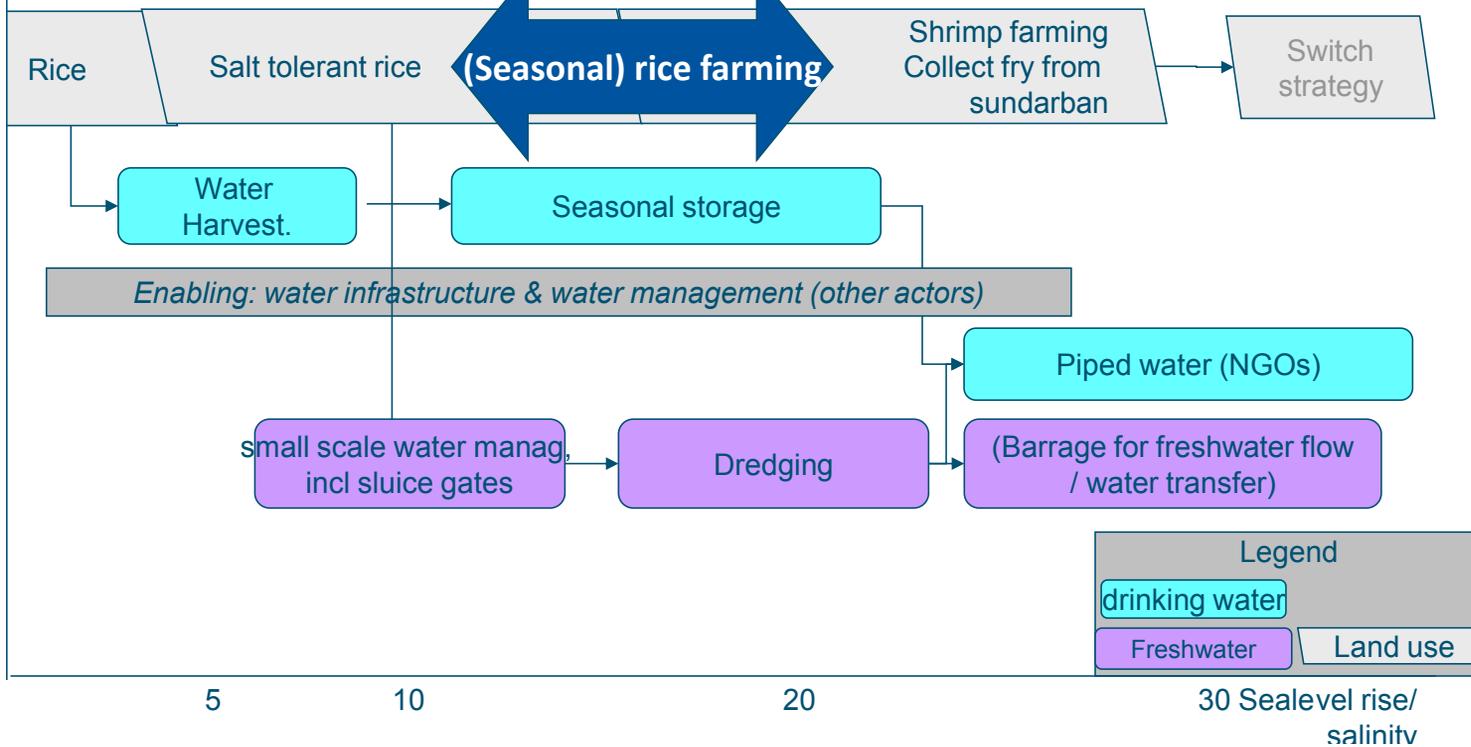
Pathway: Continue salt water agriculture



Pathway Small (lease) farmer

Concern: Food security & drinking water

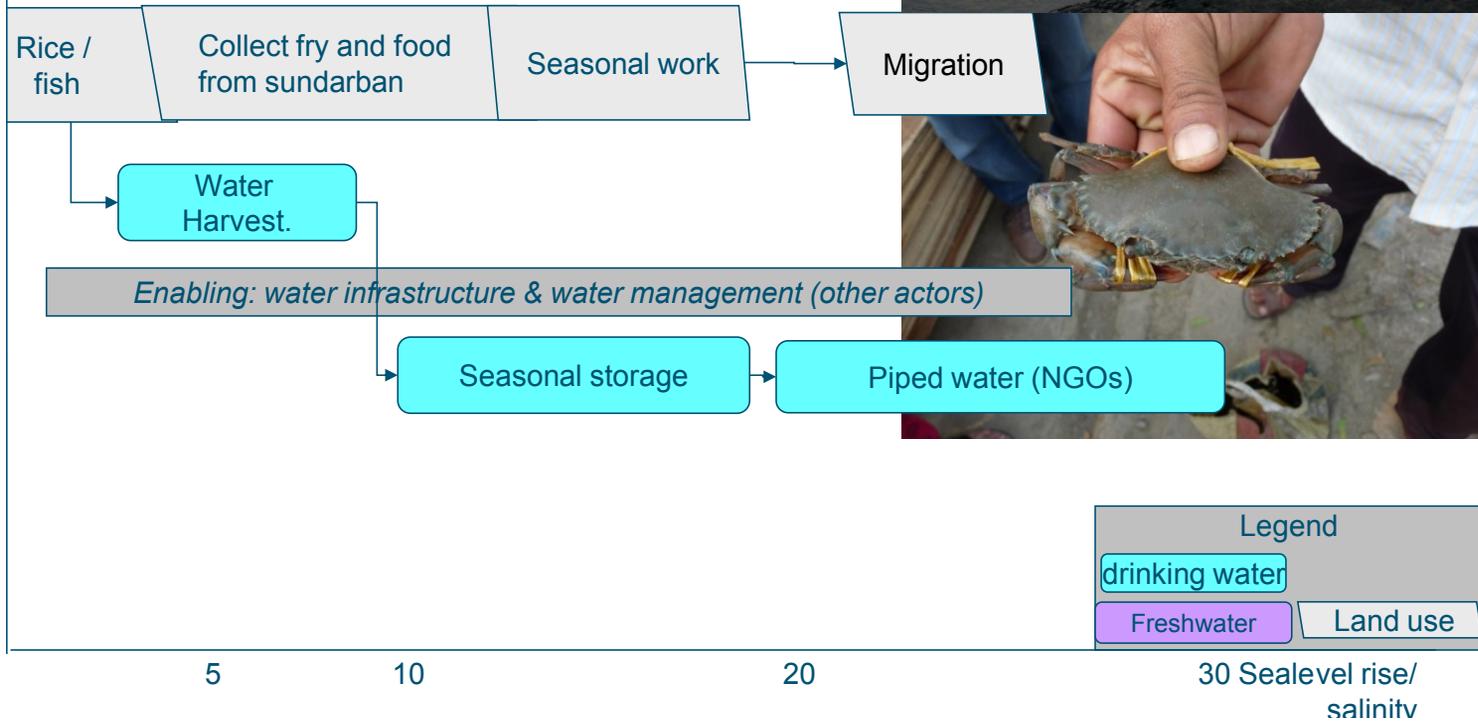
Pathway: Combat salt intrusion strategy



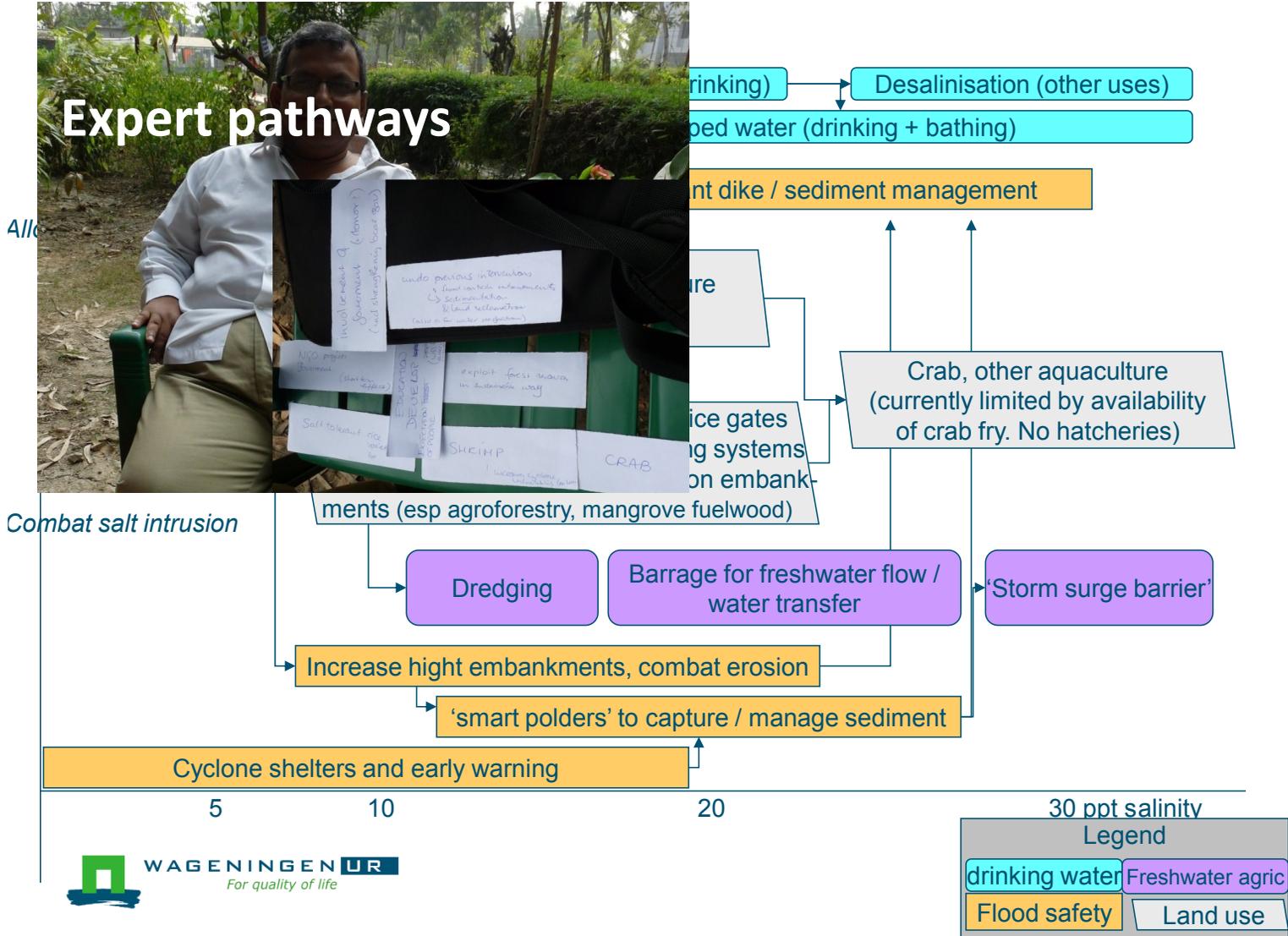
Pathway landless

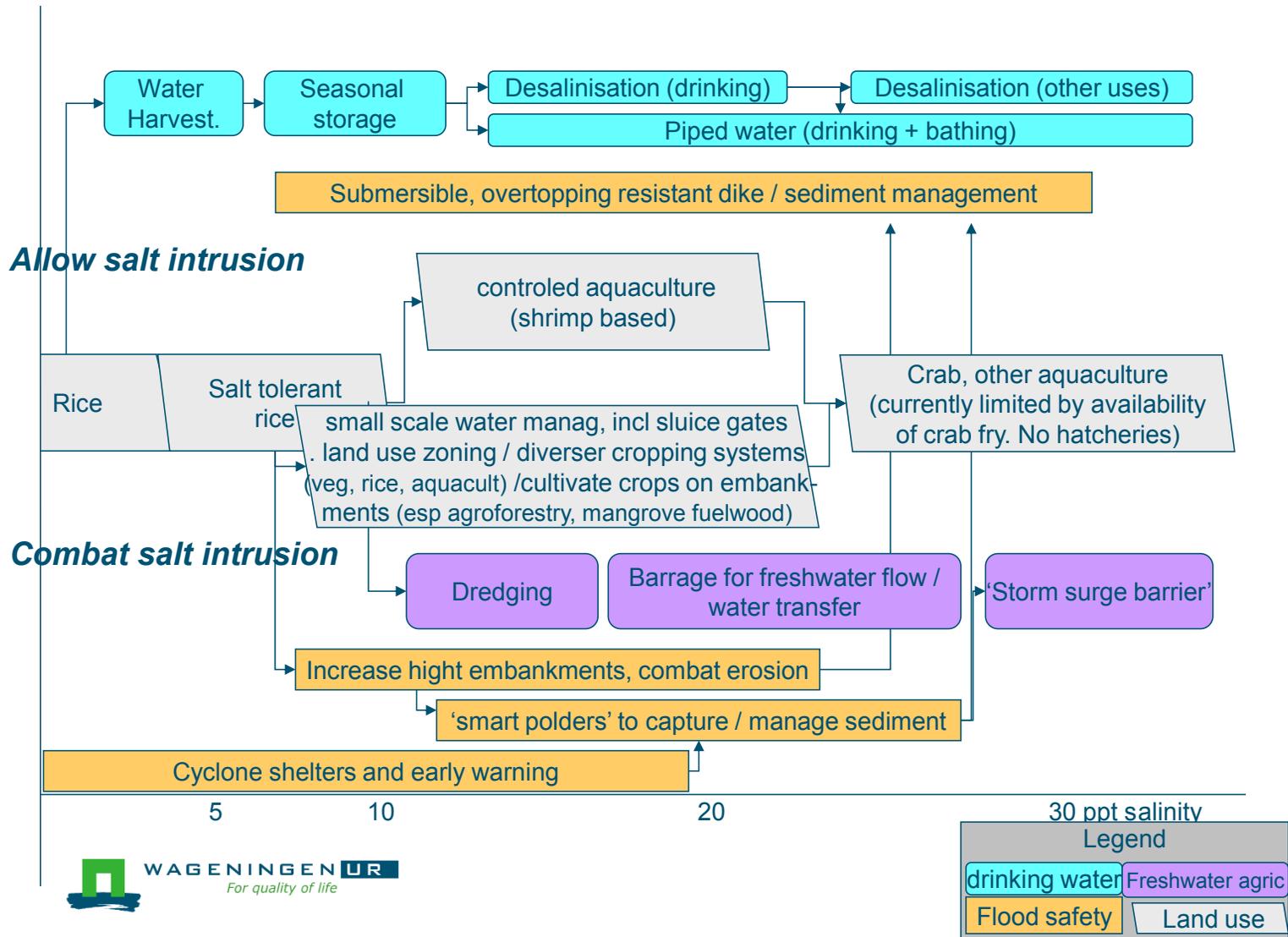
Concern: Food security & drinking water

Pathway: Migration



Expert pathways





Conclusion / Experience

Methodological

- Adaptation pathways as a concept for mapping the perspective of different actors (communities)
- Time aspect is needed in adaptation. Pathways help to discuss short, medium, long term adaptation

Adaptation in food systems:

- Be aware of lock-in when planning adaptation to alternative food systems ('social tipping point')
- Consider who are beneficiaries of adaptation (both autonomous and planned)

Thank you!

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- Contact: Saskia.werners@wur.nl
- Discussion / questions / feed-back?

