Building with Nature in deltas

Coastal adaptation through nature-based solutions

22nd May 2017, Wageningen, Prof. Tom Ysebaert (Wageningen Marine Research)
Deltas at risk

- Coastal populations and infrastructure increasingly threatened due to
  - Overpopulation, climate change
Coastal ecosystems offer nature-based solutions that are sustainable, cost-effective, multi-purpose and flexible alternatives for various objectives.
Multiple benefits

- Ecosystem services:
  - **Provisioning**: food, aquaculture products, raw materials
  - **Regulating**: erosion control, flood control, carbon burial
  - **Habitat**: biodiversity, habitats for species
  - **Cultural**: tourism, education
Securing eroding delta coasts

Problem: Swamped and sinking

Current work: a successful pilot!
Increased sedimentation combined with natural recruitment!

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Polders with a future in Bangladesh

- Polders are drowning, rice cultivation under pressure, shrimp farming
- Nature-based solution: towards a mangrove based economy
Coastal habitat facilitation in Bangladesh

- Ecosystem-based coastal defense integrated with sustainable aquatic food production
Paradigm shift: nature-based solutions promising alternatives

Offers multiple ecosystem services (blue-green infrastructure) and adaptation strategies to climate change

Requires thorough understanding of ecosystem functioning

BUT: difficult to implement at full scale

Socio-economical issues: institutional, local capacity building, securing land-ownership, connection to global markets, etc.