

Building with Nature: harnessing the power of ecosystems to meet engineering goals



Wetlands
INTERNATIONAL

By Pieter van Eijk
Programme Head Deltas and Coasts
Wetlands International

The challenge

- Sustainable development and climate resilience requires a major investment in water infrastructure.
- Hard (grey) infrastructure has large unintended social and environmental impacts.
- The loss of nature affects livelihoods, the economy, and climate resilience.
- We need combined green and grey water infrastructure solutions that are sustainable, flexible, cost-effective, and inclusive.



Leveraging our opportunity



From Building against Nature



To Building with Nature

Building on successful pilots in various landscape

Select examples from around the globe



**Mangrove Restoration
in Muddy Coasts**



**Restoring Seagrass
Meadows
in Sandy Coast**



**Developing Inland
Buffer Zones (Polder)**




**Sandy Foreshore for
Flood Protection
Lowland Lakes**



**Salt marsh development
by reusing sediment
Ports & Cities**



**Restoring Rivers and
Estuarine ecosystems**

An aerial photograph showing a wide river or estuary on the left, flowing through a landscape of agricultural fields. A small town with red-roofed buildings is situated on the right bank. The foreground shows a mix of green and brown fields, with a small peninsula or island in the water. The overall scene depicts a coastal area where nature and human development intersect.

Expanding the success of Building with Nature

Select examples from around the globe

Building with Nature Indonesia

Restoring an eroding mangrove coast in North Java



20 km

coastline under restoration



119 ha

mangrove restoration



23 km

Semi-permeable structures replicated by the government.



10,000

people will benefit



3 x increase

farmers' aquaculture income



3 awards

2016: Vernufteling, Netherlands,
2021: Intl Flood & Coasts Excellence, UK
2022: World Flagship UN Decade on
Ecosystem Restoration

Multi-disciplinary collaboration



260
Community members



5
Research organisations



3
Non-profit organisations



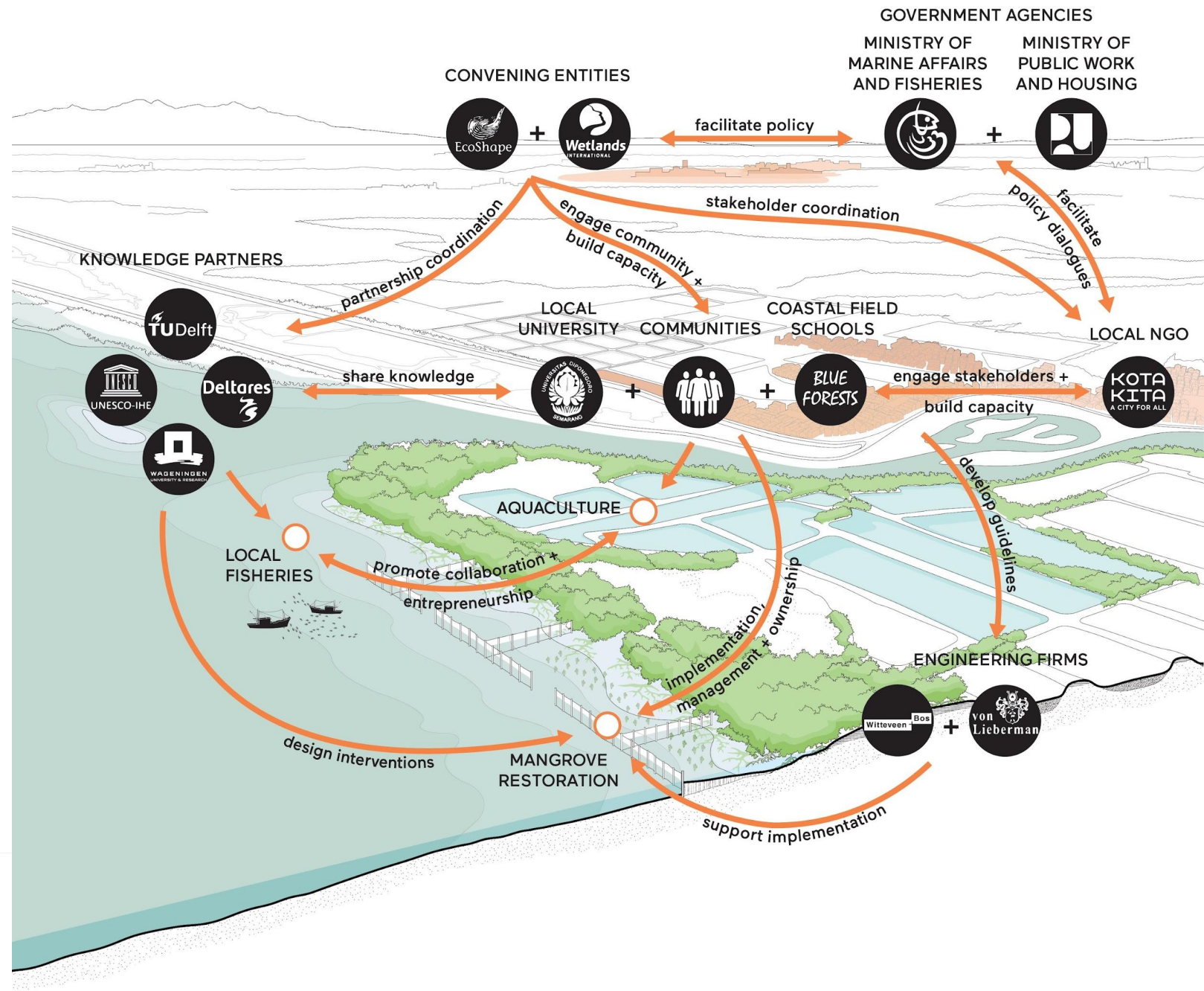
3
Private sector partners



2
Government partners



1
Innovation network



BWN OPPORTUNITIES



Developed through a participative process, leading to high level project definitions

- 1 COASTAL WETLAND RESERVE
- 2 VEGETATED FORESHORE
- 3 BUILDING ALONG DIKE
- 4 MULTI FUNCTIONAL DIKE
- 5 INLAND BUFFER ZONE
- 6 COMBINATION OF MANGROVE, AQUA AND SALINE AGRICULTURE
- 7 FILTRATION WETLANDS
- 8 WATER-NUETRAL AREAS

Thank You!



one architecture



Further reading



QUESTIONS?

Pieter van Eijk

Programme Head Deltas & Coasts

pieter.vaneijk@wetlands.org

Thomas Westhoff

Technical Officer Nature Based
Solutions

thomas.westhoff@wetlands.org

