



## ECOSYSTEM-BASED ADAPTATION AT SCALE THROUGH BUILDING WITH NATURE - TOWARDS RESILIENT COASTS IN INDONESIA

As of: October 2021

Indonesia's coastlines are being destroyed by erosion, which is being driven by sea level rise, the clearing of mangrove forests for aquaculture and excessive groundwater extraction.

Countermeasures involving fixed structures like seawalls to protect tidal flats are ineffective, expensive and unable to adapt to climate change. Nor do these measures deliver the economic, ecological and social benefits offered by healthy ecosystems. Taking the approach of 'Building with Nature', ecosystem-based solutions such as mangrove restoration and semi-permeable dykes made from natural materials are being combined with engineering know-how. This produces secure coastlines with green infrastructure that can adapt to the rise in sea levels. These solutions simultaneously offer sustainable land use that will lead to greater prosperity. Ideally, this coastal management approach will be extended to climate change adaptation efforts throughout Indonesia, with a major pilot project being run in central Java.

### State of implementation/results

- The program Building with Nature (BwN) engages with ten community groups across nine villages along the northern coast of Demak
- Within the technical and socio-economical BwN approach, 2.6 km permeable dams to enhance sedimentation were built.
- Additionally, 1,16 km of rehabilitation measures had to be conducted as the permeable structures were damaged faster than anticipated.
- Nonetheless, the observed sedimentation rates are good and the mangroves are recovering.
- First steps to adjust and implement the biorights mechanism in the Demak setting were introduced.
- In Banten Bay a small-scale demonstration site was established, which thanks to its strategic location close to Jakarta, is receiving many visitors.

## PROJECT DATA

### Country/Countries:

Indonesien

### Implementing organisation:

Stichting Wetlands International (WI) -  
Netherlands

### Political partner(s):

- Ministry of Marine Affairs and Fisheries -  
Indonesia
- Ministry of Public Work (PU) - Indonesia

### Implementing partner(s):

- EcoShape, Building with Nature -  
Netherlands

### BMU grant:

€ 3,043,648.45

### Duration:

09/2015 till 06/2021

### Website(s):

<http://www.wetlands.org/casestudy/building-with-nature-indonesia/>





- Best aquaculture practices introduced through Coastal Field Schools on over 400 ha have been very successful and significantly increase aquaculture productivity and income.

