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Asia Water Forum 2022

8-11 August 2022 • Online

Focus Area: Water as a sustainable resource

Session: 1E: Nature-based solutions and integrated perspectives

Building with Nature Indonesia paves the way for scaling up Nature based Solutions in wider Asia

Keizrul Abdullah, Wetlands International Malaysia



11 August 2022 (Thu), 9:00 a.m. - 10:30 a.m. (GMT+08)







Expanding the success of 12 years of Building with Nature:

Integrating Nature-based Solutions in coastal engineering















Building with Nature Indonesia

Restoring an eroding mangrove coast in Demak





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



2 awards Vernufteling, 2016, Netherlands International Flood & Coasts Excellence, 2021





Enablers of Building with NatureUpscaling multi-benefit green infrastructures

















Lessons learnt Building with Nature Indonesia



- A mix of technical and socio-economic measures to address the root causes (requires multi-disciplinary collaboration)
- Continuous monitoring and research has increased our technology and system understanding
- Early and pro-active community engagement from design to implementation & maintenance
- Bio-rights system provided means for communities to shift from traditional aquaculture to sustainable





- **Continuous maintenance** is required, for which community ownership and adaptive management practice are essential
- Political willingness and alignment with government programmes brought BwN to scale
 - NbS require a legal and governance framework that is conducive to **long-term integrated** planning and management.

TS0



Additional efforts needed to **bring cobenefits into revenue streams**

 New CBA methods may be required to quantify all social costs and benefits including the long term



Capacity building



- Local: Coastal Field Schools
- (Sub)national: collaboration with local universities and government agencies



Not sure the difference between these points is clear. Can we turn it into one point maybe? Tol, Susanna, 2022-06-20T12:45:06.220 TS0





Assessing the conditions of the barriers and enablers in each country

Enablers	Aspects considered for scoring
leatitutional embedding	 Are laws/programs/schemes (incl. budgets) for nature conservation and/or restoration in place? And to what extent do they lead to actions of the government and regulation? Is there a clear decision-making process in such a way that decisions are likely to be implemented? Or are decisions often reversed? (e.g. different priorities between institutions or change in priority related to political cycles)? How well do (govt) departments cooperate to enable such multi-disciplinary projects?
Capacity building	 To what extent are governments and local communities aware of the Building with Nature philosophy and opportunities (eg. due to previous capacity building activities)? How open are communities to learn / receive / share information and build local capacity?
Technology and system knowledge	 Is there sufficient technology and system knowledge regarding natural and man-made systems relevant for BwN? To what extent do people have experience with valuation or design or engineering? To what extent is (monitoring) data available?
and maintenance	 To what extent is long-term monitoring and maintenance (before problems occur) already customary in projects? How prepared is the community to undertake such tasks for long-term monitoring, management and maintenance?
Multi-stakeholder approach	 Are all relevant stakeholders involved? To what degree are stakeholders involved? (informed / consulted / decision-making)
Business Case	 To what extent are budgets from government schemes, IFIs, CSR and other programs available for nature conservation and/or restoration? To what extent are there examples of successful business cases related to BwN in the country? How well developed are valuations for ecosystem services and how well understood are the benefits of nature?





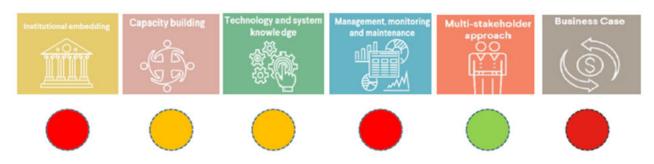


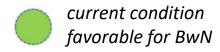


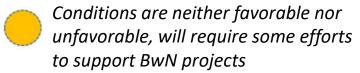


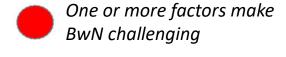
Methodological framework

- Cases were inventorised and analysed from 6 countries: Indonesia, Malaysia, the Phillippines, India, China and Vietnam
- Assessed the barriers and enablers in each country









Identify the critical aspect and entry point(s) to stimulate BwN adoption in each country











Flowchart for successful adoption of BwN

Feasibility study: Identify site of interest, describe project concept and do an ESGE systems assessment considering BwN Principles Problem Definition: What environmental and associated socioeconomic issues are there? Which would you like to solve?

Valuation of the ecosystem services to support the avoided future damage sustainability impact of

Do a technical review. Is your project concept complete? Run through the cycle again before piloting.

Finance: private (CSR) / public funding, IFIs, investors.

Fechnical: Capacity building, leverage

local knowledge (as necessary)

Community Involvement:

who will maintain the project once

implemented? Is it future proof?

What would happen to the site in 5-10-20+ years if the project isn't realised?

What happens if it is? Share

Work with institutional systems: Identify and leverage programs that will enable your project. Contact local and central authorities to Tailor to fit within their broader ambitions

> How culturally sensitive / appropriate is your plan? For all stakeholders? Adjust before moving to implementation.

Implement at pilot scale, monitor, adaptive Learning by doing and

upscaling.

Performance review and maintenance



Did you solve the problem defined in the first step?



