

Kutubdia Island Oyster Breakwater Reefs — Eco-Engineered Coastal Defence Against Erosion (Bangladesh)

PES & Nature-Based Solutions · Good practice · Bangladesh

Quality score: 40/100

Evidence strength: Quasi-experimental

Summary

Three low-cost oyster breakwater reefs built on an eroding Bangladesh mudflat cut wave energy by up to 100% and erosion by 54% versus unprotected sites, while triggering salt-marsh growth — prompting government plans to scale the method to protect coastal embankments.

Key dimensions

Dimension	Score
Carbon — sequestration / storage, evidenced	0/3
Biodiversity — conservation / improvement, evidenced	2/3
Water & soil — retention, infiltration, erosion control	3/3
Fire resilience — risk reduction, evidenced	0/3
Governance, certification & transferability	1/3

Evaluated by C-NAPSE

Data sources

[C-NAPSE web research](#) — accessed 2026-09-09

[Wageningen University & Research \(ECOBAS Project\)](#) — accessed 2026-09-09

[Scientific Reports \(Nature\) - peer-reviewed study](#) — accessed 2026-09-09

[PMC full text](#) — accessed 2026-09-09

[Haskoning project page](#) — accessed 2026-09-09

[The Business Standard coverage](#) — accessed 2026-09-09

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