The socio-ecologic aspects of nature-based solutions for coastal flooding mitigation

*Inácio, M. [1], Karnauskaitė, D. [1], Bogdzevič, K. [1], Kalinauskas, M. [1], Gomes, E. [1] & Pereira P. [1]

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What are NBS for coastal flood mitigation?

Type 1

Low human intervention

*e.g., protected areas**

Type 2

Medium human intervention

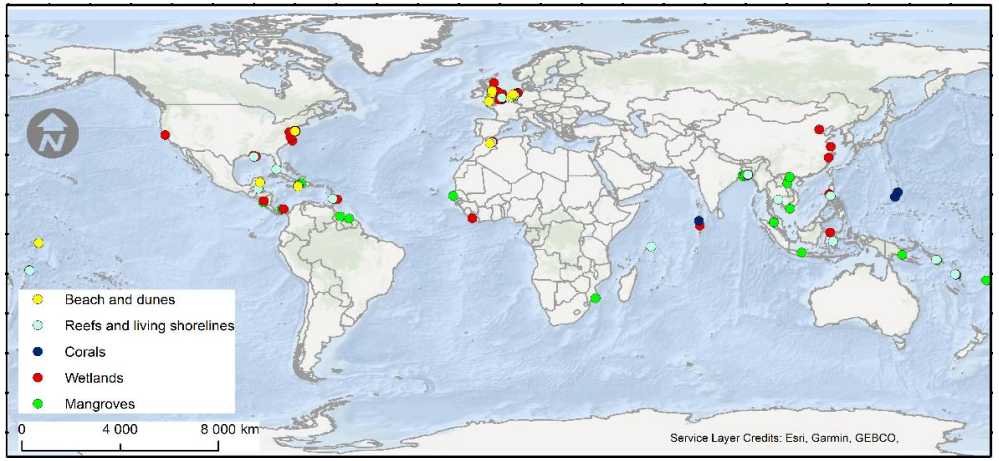
*e.g., oyster reef***

Type 3

Hybrid

*e.g., artificial reef****

NBS for coastal flood mitigation implementation efforts



Location of NBS implementation efforts worldwide. Adapted from Inácio et al. 2020

Besides coastal flooding mitigation, NBS also…

- increase **habitat availability** and **biodiversity**
- support local **socio-economic development**
- increase **carbon sequestration**
- provide multiple **ecosystem services**
- synergies with **tourism** and **fishery industries**
- **Cost-effective**, **resilient** and **adaptive**

… have other multiple socio-ecologic benefits and constrains

- still requires **continuous human interventions**
- uncertainties in **long-term sustainability**
- negative **environmental impacts** (e.g., alien species)
- **Socio-economic conflicts** (e.g., land occupation)

(based on Inácio et al. 2020)

Opportunities

framing NBS as contributors to..

SUSTAINABLE DEVELOPMENT GOALS

AICHI TARGETS

GREEN DEAL

UNITED NATIONS DECADE ON ECOSYSTEM RESTORATION 2021-2030

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References:

Inácio, M., et al. 2020. Nature-Based Solutions to Mitigate Coastal Floods and Associated Socioecological Impacts

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