

Panel Discussion: Guidance & Standards - Considerations for Natural Infrastructure

Presented by:

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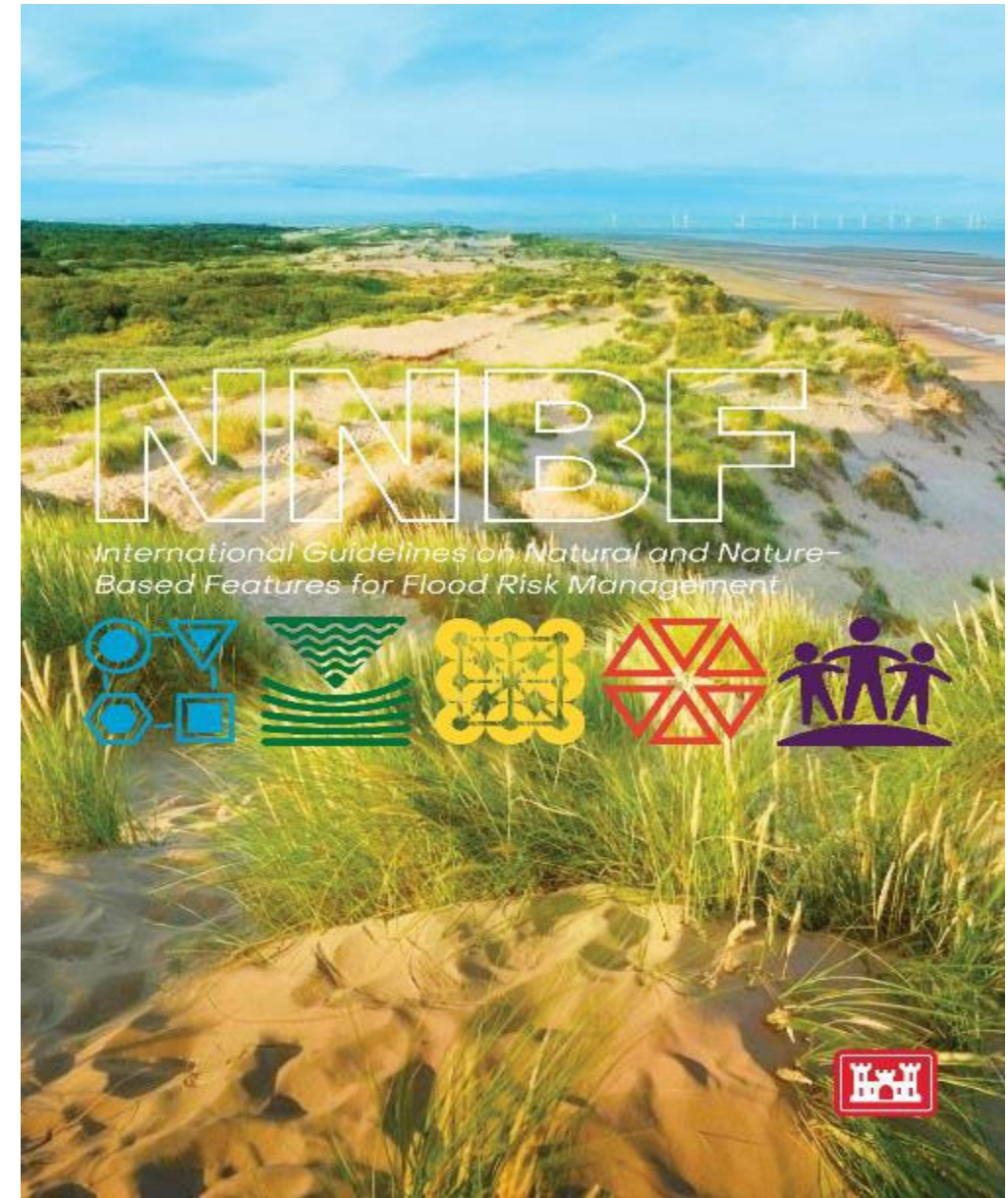


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What we heard about NBI, so far -

- We have been (informally) practicing NBS/NBI for ages
 - *Nature heals best*
- Consider evolving challenges
 - Coastal dynamics, climate change (SLR), etc.
- There are many opportunities for NBS/NBI in our coastal and fluvial systems
 - Several case studies – examination of failures and cost data perhaps lacking
- NBS/NBI projects must be flexible
 - Build in “*Adaptive Management*”
- No uniform guidance or standards exist, except for:
 - *NNBF Guidelines* (recently published)



To standardize NBI or not?

- Need for step-wise guidance, or keep it flexible?
 - Caution about “standards”
- Should we have engineering criteria?
 - Design level of protection?
 - What is the P.E. stamping?
- Performance vs. Prescriptive specifications?
 - How to evaluate performance?
- How to equitably evaluate NBS benefits?
- Should NBS/NBI be the “base” option?
 - Example - mandatory BU evaluation in Mississippi



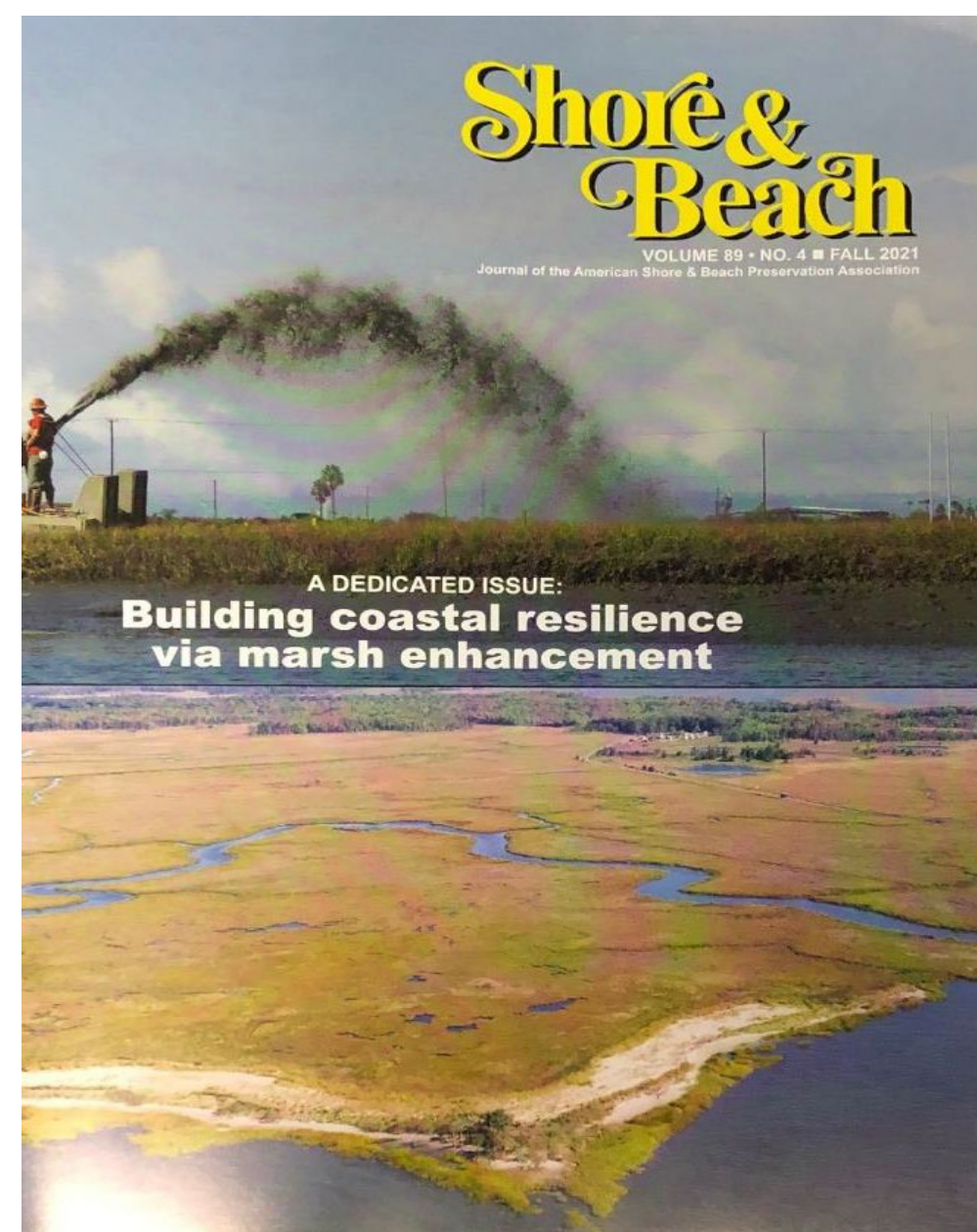
Where are the challenges?

- Consideration of “systems”
 - Can be complex
 - May need projects that (perhaps) span decades
- Technology accelerators
 - Fear of “risks”
 - How can we balance potential risks?
- Social and environmental justice aspects
 - Who pays, maintains (long-term)?
 - Challenges of dynamic adaptation
- Regulatory hurdles
 - “Fear” of dredged material as a resource!
 - Concerns over “value” of mudflat vs. wetlands



Where are the gaps?

- Drive innovative approaches
 - Idea “incubators”
 - “Demonstration” projects
- Need for knowledge-sharing
 - Cost data from past projects
 - Best management practices
 - “Failures” or under-performing projects, and corrective actions
- Where to store – at a “hub”?
 - Who maintains?
 - USACE IWR?
 - NGO?
 - Other?



The path forward....

- A set of standards that are flexible, and promotes innovation?
 - Basic “standard of care”
 - Controlling liability?
- Engineering manuals for the practitioner?
 - Toolbox, but not handcuffs
- Continued knowledge-sharing platforms?

Source: Anchor QEA & MS DMR



Source: Anchor QEA & Waterkeeper

Questions?



Source: US Fish and Wildlife Service