

# Nature Based Solutions for Coastal Adaptation

Coastal Conversations:  
Session 3



# WHAT ARE NATURE-BASED SOLUTIONS (NBS)?

- NbS use natural features or processes to manage erosion, flooding, and climate impacts.
- Examples: dunes, wetlands, living shorelines, offshore reefs.
- Aim to work with nature—not against it—to enhance resilience.



# What Are Nature-Based Solutions (NbS)?

- Absorb wave energy and slow rates of erosion (e.g., dunes, reefs).
- Trap sediment to build shoreline elevation (e.g., saltmarshes).
- Buffer against storm surge and high tides.
- Restore hydrological processes disrupted by development.

# BENEFITS OF NATURE-BASED SOLUTIONS

- Long-term, cost-effective coastal protection.
- Restore habitat and biodiversity.
- Visually appealing; enhance tourism and recreation.
- Reduce maintenance compared to hard structures, once established.

# LIMITATIONS AND CHALLENGES

- Slower to establish and less immediately “secure” than armoring.
- May not be suitable for all environments (e.g., high-energy cliffs).
- Require space and public support.
- Can fail if vegetation is disturbed or not maintained.



# EXAMPLES OF NBS IN PEI

- PEI National Park: dune restoration using marram grass, sand fencing and buried revetments.
- Souris Causeway: intertidal artificial reefs that baffle waves and trap sand.
- West Point (Cedar Dunes): tertidal artificial reefs that baffle waves and trap sand.
- Crowbush Golf Course: hybrid approach using sand fencing and buried revetments

