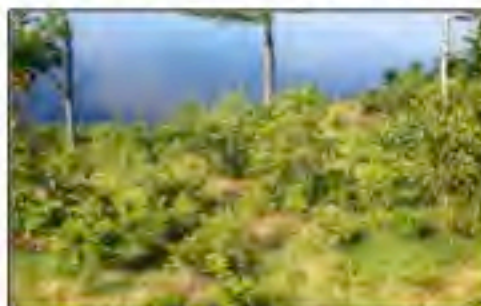


Working on the Edge: Using 'Living Shoreline' concepts to manage coastal erosion in Nova Scotia, Canada

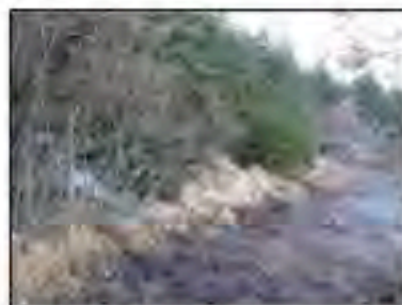
What is a Living Shoreline?

- Vegetated area from the high water line to the first man-made infrastructure
- Allowing biomass to accumulate and feed the coastal ecosystem
- Habitat diversity for coastal birds, animals, and insects
- Stable soil structure with healthy soil biology
- Usually viewed as a soft engineering alternative to rock walls



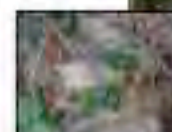
Results of this work:

- Protection and creation of habitat for animals, plants, and people
- Greater slope stability
- Increased local biodiversity
- Reintroduction of native species
- Increased public awareness
- People feel more connected to the land they live on



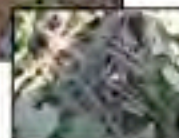
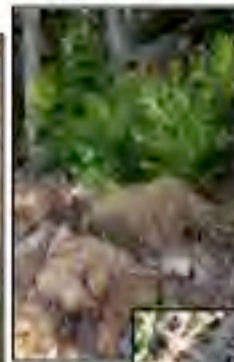
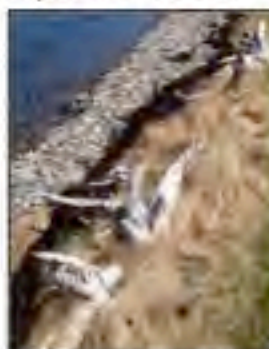
Applying the concepts to erosion management:

- Slow erosion rates by covering open soil
- Slope stabilization through root system density and diversity
- Building soil at the toe reduces slope grade and erosion potential
- Abundant vegetation buffers the coastline from erosive environmental forces and increases resilience
- Ecologically conscious beach access reduces compaction and erosion



Living Shoreline Concepts:

- Increase coastal ecosystem functioning and resilience
- Sustainable use of and access to coastal lands
- Reduce surface area of exposed soil
- Increase vegetation density and diversity
- Reduce slope grade



Methods:

- Buffer zones
- Addition of biomass to achieve angle of repose
- Brush walls and hardwood mats
- Planting native species into the slope
- Building soil ecology

Future:

- Scientific investigation of our biomass based erosion management techniques
- More stable coastal ecosystems
- Greater public awareness of environmental processes