Section 1. North Carolina’s Barrier Islands

EXPLORING EARTH SURFACE CHANGES ALONG NORTH CAROLINA'S COAST
What is a Barrier Island?

A. Ocean
B. Barrier Island
C. Sound or Lagoon
D. Mainland
E. Inlet
Where are the Outer Banks?
Where are the Outer Banks?
Hatteras Island

After Hurricane Isabel
Problems for the Outer Banks

- The impact of storms on infrastructure
- Limited space on the islands
- High cost trying to stop natural processes
- Infrastructure impact on nature
“Windy People, Dynamic Landscapes”

[https://www.dropbox.com/s/d8lqctur7c329e6/Windy%20People.mov](https://www.dropbox.com/s/d8lqctur7c329e6/Windy%20People.mov)
“Windy People, Dynamic Landscapes”

Discussioon Questions

- What is the major cause of change on the Outer Banks?
- Why is this a much bigger problem today than in the past?
Environments of the Island
The Island Profile

- Ocean
- Beach
- Dune
- Maritime Forest
- Salt Marsh
- Lagoon
Beach

- **Winds** and **waves** are the dominant processes in this environment.
Dunes

- Grasses and shrubs help to stabilize dunes
- Dunes built by wind
- Eroded by waves
Maritime Forest

- Trees, grasses, and shrubs can be quite dense
- Sandy organic soil forms as plant material dies and decays
- Wind is main physical process; storm surge may reach forest during large hurricanes
Backbarrier Salt Marsh

- Grasses dominate
- Tides and waves build or erode marsh
  - Overwash can cover marsh during storms
End of Section Quiz

- Draw an island cross-section and label each of the major environments.
- For each environment, describe the physical processes at work and distinguishing features.