

Crossroads marks 30 years; environmental change cited

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MOREHEAD CITY — A lot has changed in the county during the 30 years Carteret County Crossroads has existed as a citizens' environmental group.

Sea grasses and salt marshes have declined; sea level has risen and more and more shellfish waters are closed to harvesting.

And much of that change can be attributed to coastal development and stormwater runoff.



Dr. Don Field shows an image of sea grass beds on the North Carolina coast. (Dylan Ray photo)

Crossroads held its 30th annual meeting at Carteret Community College Thursday evening, offering a chance for members to take assessment on coastal issues.

Guest speakers this year were Dr. Pete Peterson of the UNC Institute of Marine Sciences and Dr. Don Field of the National Oceanic and Atmospheric Administration (NOAA) lab on Pivers Island. They shared observations on changes that have occurred in the county's environment.

Saying the scope of his presentation was broad, Dr. Peterson looked at several aspects of the environment and gave his opinion on how they'd changed over the years. One of the biggest issues he touched on was the degradation of shellfishing waters.

Coastal development during the last 30 years has been the major cause of shellfish water loss. Dr. Peterson said nutrients in the water, carried there by stormwater runoff from coastal development and wastewater being hastily disposed of, have led to excessive algae and other problems requiring the state Shellfish Sanitation Section to close more and more coastal waters to shellfishing.

"Eighty percent of the waters in Carteret County are open (to shellfishing)," said Dr. Peterson. "But the bulk of the waters are in Pamlico Sound, where there are no shellfish. The areas up the creeks, where they are, have degraded."

Over the last 30 years, many inland areas have been closed to shellfishing, placed under conditional closed status (they can't open unless opened temporarily by proclamation) or are placed under conditional open status (remaining open unless closed temporarily by proclamation). Among closed areas are sections of Goose Creek and Newport River.

Dr. Peterson said many people who have lived in the county for the last 30 years remember when they didn't have to look for signs to tell them whether or not they were allowed to harvest shellfishing.

"We all know the major enemy is us," he said, meaning new development along the coast is the major cause of the loss of shellfish waters. "The question is how can we allow development in a way that's environmentally sensitive?"

Another major issue causing the loss of habitats is sea level rise. Dr. Peterson said current sea level rise projections are very conservative because they don't take into account climate change and the melting of polar ice caps.

"We've seen sea level rise of 2.57 millimeters per 10 years in Beaufort," he said. While this rate of sea level rise may seem slow, it's actually worse than it looks. Dr. Peterson said with current rates, he projects the sea level could rise in Carteret County a foot and a half by 2100, and the rate of the rise is increasing. He said with the increasing rates, the county could see as much as 3 feet of sea level rise by the same year.

The increasing sea level rise not only puts a lot of property along the coast at risk, but also habitats surrounding it. Bulkheads are often used to stop effects of shoreline erosion and rising sea levels, but Dr. Peterson said this is harmful to salt marshes on the coast.

"With the ability to put a bulkhead behind a salt marsh, we put the marsh between the devil and the deep blue sea, with no way to retreat as the sea level rises," he said.

Current laws try to protect salt marshes. Dr. Peterson said the laws require developers to avoid building on salt marshes when they can. If they can't, they're required to minimize the impact and mitigate what impact they have by restoration efforts. However, those efforts don't take sea level rise into account.

"With bulkheads, we're left with a ringed bathtub for an estuary," he said.

The loss of salt marshes causes many negative effects, he continued. It impacts many different species that rely on the marshes for habitat, including 25 vertebrate species. It can also impact fish populations, which can harm both commercial and recreational fishing. Bulkheads also give a false sense of security in the event of large coastal storms.

Dr. Peterson proposes measures to get rid of the need for bulkheads such as rolling easements and long, narrow property lots. These would allow people to retreat from sea level rise without building a bulkhead.

Salt marshes aren't the only habitat that's in trouble along the Carteret County coast. Dr. Field, who works

in remote sensory and geographic mapping at the NOAA lab, has been studying submerged aquatic vegetation in Carteret County. He said as of 2006 there was 28,559 acres of sea grass in the county, with 80 percent of that in Core Sound.

“If you look at the Outer Banks alone, there’s 86,103 acres of sea grass from Cape Lookout to Cape Hatteras,” he said. “It’s one of the most valuable sea grass resources on the coast.”

Sea grass used to be even more prolific in Carteret County, but shoreline erosion, coastal development and environmental problems caused by stormwater runoff have been killing the grass. In Middle Marsh, there’s been a loss of 29 meters of sea grass from 1992 to 2006. There have also been losses of dense sea grass in Bogue Sound in the same time, breaking and thinning grass beds.

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