



PRESS-REGISTER

Expert says clearer water would revitalize Mobile Bay's grass beds

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The dramatic decline of Mobile Bay's underwater grass beds during the last 50 years is a symptom of a worldwide problem, but one that a local scientist says has a simple fix.

Seagrass meadows under the Earth's oceans are disappearing at a rate of 7 percent per year, according to a new study co-authored by Ken Heck, a senior scientist from the University of South Alabama's Dauphin Island Sea Lab.

Locally, "the reason most of the grass has disappeared is water clarity," Heck said. "That can be fixed. We're not trying to cure cancer here."

Undersea meadows are the nurseries that harbor young shrimp, crabs and fish, and they provide an important line of defense against various kinds of pollution.

"If we could have our grass beds back, more vegetation means more shrimp, more speckled trout, more of all the things people love," Heck said.

Working with an international group of marine biologists, Heck analyzed the state of grass beds globally and came away both worried and optimistic.

The worry comes from the rapid loss of grass beds in the developing world, he said. The optimism begins in his feelings about the state of grass beds along the Gulf of Mexico.

"The estimates are that at least half of the seagrass that used to be present around Alabama is gone. So we fit right in there with what's happening globally," Heck said. "But I don't think things are really getting worse here. If anything, we've stabilized. Conditions are getting better. Most of the grasses we've lost disappeared 30 to 50 years ago."

Heck said findings are similar for much of the Gulf Coast, where rapid development in the era before modern construction practices and environmental laws were in place decimated grass beds from Florida to Texas.

"Within Mobile Bay, I think the major thing that affects seagrasses is the loss of water quality," Heck said. "We've got to control the erosion going on."

As an example, Heck cited ongoing problems seen in Daphne's D'Olive Creek, which spills mud and clay into Mobile Bay every time it rains. He noted that a prominent sediment plume flowing from the creek into the bay is routinely visible on satellite and aerial photos.

Seagrasses are flowering plants and need light just like plants on land. The turbid, murky water frequently seen in Mobile Bay simply won't support plants. Studies have shown that seagrasses can die in a matter of weeks if the water remains too cloudy.

Heck said the area does have some healthy grass beds, such as the large meadows around Robinson Island near Orange Beach and in Grand Bay along the Mississippi line. Both are well out of the influence of the sediment plumes plaguing Mobile Bay.

In the bay, sediment flowing in from agricultural sources and construction sites is the dominant problem. Loose silt sits on the bottom in much of the bay. Even light winds can stir the material into the water column, where it sometimes remains suspended for days.

Existing environmental laws in Alabama are designed to control sediment from construction sites. The problem, according to state environmental officials, is a lack of money to pay for enough inspectors to keep tabs on all the projects under way at any one time.

While replanting seagrasses is expensive, labor intensive and not particularly effective, Heck said the dominant grasses in Alabama waters are adept at re-colonizing areas where they have been lost.

"Our main grasses put out a lot of seeds. They will come back quickly if conditions improve," Heck said. "All they need is a little clear water."

The new study, "Accelerating loss of seagrasses across the globe threatens coastal ecosystems," will be available on the Proceedings of the National Academy of Sciences Web site at www.pnas.org.

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