

LSU researchers challenge analyses on sustainability of Gulf fisheries

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Louisiana's coastal fisheries produce approximately 25 percent of the total catch by weight in the lower 48 states (www.americaswetland.com). With such a substantial portion of the nation's economy dependant on the state of these waters – particularly the Gulf of Mexico region – it comes as no surprise that these fisheries are heavily monitored and scrutinized by researchers across the globe. While some recent studies claim that the ecosystem is near collapse, researchers from LSU and the University of Washington say that fish populations in this area have actually fluctuated very little in the past 50 years.

James Cowan, professor in LSU's Department of Oceanography and Coastal Sciences, along with first author Kim DeMutsert, an LSU graduate student in Cowan's research group, recently published a study in the Proceedings of the National Academy of Sciences of the United States of America, or PNAS, taking issue with these articles. Their research was funded by the Louisiana Department of Wildlife and Fisheries with Sport Fish Restoration dollars provided through the U.S. Fish and Wildlife Federal Assistance Program.

“There is concern among the fisheries science community that some high profile papers in top-tier journals are promoting advocacy at the expense of defensible science,” said Cowan. “More importantly, there is risk that continually ‘crying wolf’ will eventually numb people to real threats against sustainable use of important natural resources such as wild fisheries. ”

Because of the potential impact such a collapse would have on the country, it inevitably made big news when not one but two high-publicity articles were published in recent years claiming that the fisheries ecosystem in the Gulf of Mexico were on the brink of disaster.

The first article, by Maria Palomares and Daniel Pauly, implies that food webs and fisheries ecosystems in the Gulf of Mexico and Atlantic south of Chesapeake Bay are badly degraded due to over exploitation and face almost certain collapse. The other, a piece by Boris Worm and 13 other authors, concludes that all of the worlds capture fisheries will be depleted by the year 2048.

DeMutsert, Cowan and their coauthors contend that these findings are misleading because they were calculated without considering the context within which these data were collected. The Gulf of Mexico's ecosystem is heavily influenced by the Mississippi River and its huge outflow there, which makes it a unique and highly productive environment supporting the fifth largest fishery by value and second largest by weight in the entire country.

“These researchers simply didn’t look at the nature of the Gulf of Mexico ecosystem and the populations of fish found there,” said Cowan. He and DeMutsert looked at more than 40 years worth of landings and monitoring data, taking into context the particulars of the Gulf environment, and saw little to no change in the health or organization of its food web.

Source: Louisiana State University

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