

# Climate effects on coastal wetlands



**Researchers** : Dr. Thomas C. Michot.

**Project Type** : Staff Research

**Funding sources** : USGS

**Status** : Completed.

## Summary

- Mangrove Abundance in Coastal Louisiana

Dr. Michot has collaborated with scientists from USGS – National Wetlands Research Center to document the distribution and abundance of mangroves along the Gulf of Mexico coast, and to study the effects of temperature fluctuations and other environmental factors on that distribution over time. Preliminary studies indicate that distribution and abundance of mangroves has increased in Louisiana in recent years, possibly due to climate change. Dr. Michot is also conducting experimental tests in the laboratory and greenhouse to determine the effects of low temperature and freeze duration on mangrove survivability.



- Saltmarsh dieback in coastal Louisiana

A massive dieback of primarily salt marsh occurred in coastal Louisiana in 2000 to 2002. Dr. Michot was part of a team of scientists from UL, USGS, LSU, and other institutions that set out to document the extent and the causes for this dieback. Dr. Michot quantified that more than 100,000 acres of coastal marsh were impacted by the dieback of 2000 – 2002. The team has continued to study subsequent diebacks that have occurred since then in an effort to nail down the cause, which has thus far been elusive.

Dr. Michot's team has maintained four paired sites in coastal Terrebonne Parish where they collect data on a seasonal basis to evaluate the effects of climate, hydrology, and soils on sudden marsh dieback.

