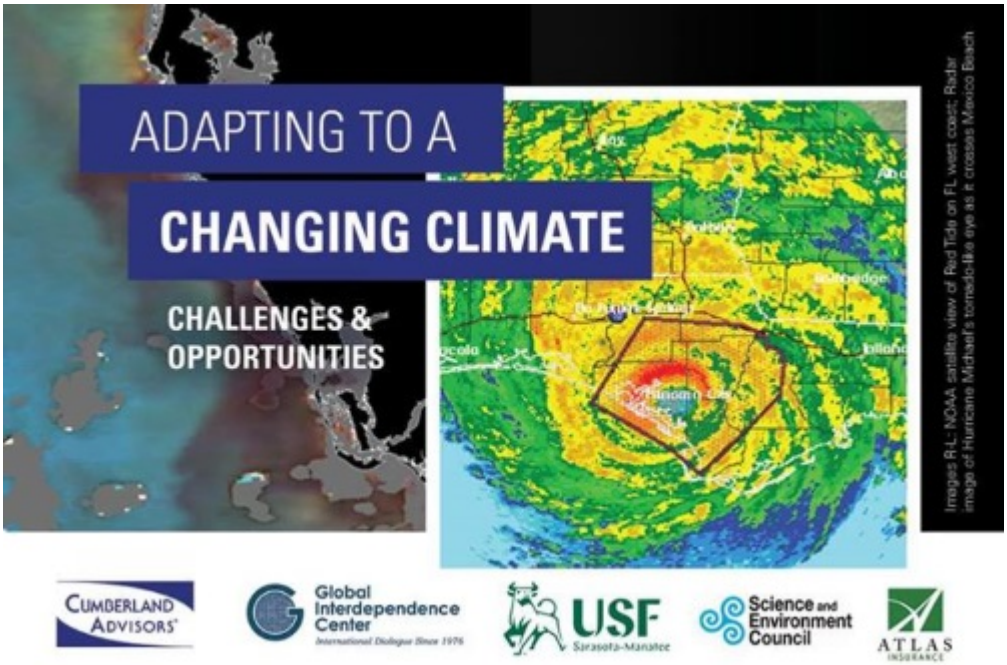
Red Tide, January 25th Sarasota Conference on Climate Change

The January 25th GIC-USFSM conference, Adapting to a Changing Climate: Challenges & Opportunities, to be held at the University of South Florida Sarasota-Manatee, is open to the public. The sponsors, including Cumberland, helped so as to allow the cost of registration to be held to $50, a registration fee that covers the lunch.



Climate-change believers and deniers are welcome. The purpose of the event is to put facts and details in the public domain for discussion.

Red tide and the toxins it carries are among the issues we will take up. Ask any Sarasota restauranteur or hotel manager what has happened to business these last few months, and the economic impact on Florida becomes clear. All political personalities interested in mitigating the effects of red tide on their jurisdictions are welcome to attend or send staff.

Let me get to a specific health issue related to red tide. I will start with a quoted email from a national personality whom I know personally. He contracted an illness believed to be a result of breathing red tide toxin or the related algae bloom toxin.

He wrote:

"I've easily found articles with various analyses of probable causality between bodily responses to Brevetoxins and auto-immune system responses generally associated with organizing pneumonia.

"The experts I have want to identify similar episodic correlations in order to study specific trends and narrow the range of potential causality.

"Has your group associated among any Florida pulmonologists that have seen similar cases?

"One of the fundamental issues may be that the primary group at risk of serious chronic illness is visitors that have no prior immunities from low doses of Brevetoxin exposure. They suffer the effects of a red tide bloom of Karenia brevis algae and then leave Florida before any of the major chronic illness symptoms appear.

"They know they are sick but have no contact with medical professionals that understand normal red tide irritations. That now seems to be the primary missing link.

"Research is so much fun (if only I didn't have to concurrently live the experience)."

My friend also sent this report:

"David,

"Initial biopsy result on the biggest spot in my lung found 'organizing pneumonia' and no malignancy – good news.

“The point at which the coughing and respiratory irritation that resulted in this particular ‘pneumonia’ began, however, directly coincides with my exposure to red tide in April. My med records are very clear that there was no cough or other irritation symptoms before that exposure.

“If there would be any interest in this situation among you and your friends, let’s talk.

“I’m going to enjoy Thanksgiving with family and head to FL. If there’s interest, maybe we can gather and discuss a follow-up for the public health of FL, as Judy and I traverse the Tampa area after Thanksgiving.

“My AA pulmonologist and I will do more to follow up in Dec. I’ve got numerous other spots we need to analyze further before declaring ‘victory.’”

Dear reader: My point of this personal story is direct. This could be you or me. Research and discussion are needed. And what we’re dealing with here is a second-order effect of climate change, just like growing hurricane intensity and rising sea levels.

We are going to have a full auditorium on January 25, with thorough presentations and discussions of facts.

Below is a series of extracts and links on the red tide and toxin issues:

“Harmful Algal Bloom (HAB)-Associated Illness… Harmful algal blooms (HABs) are the rapid growth of algae that can cause harm to animals, people, or the local ecology. A HAB can look like foam, scum, or mats on the surface of water and can be different colors. HABs can produce toxins that have caused a variety of illnesses in people and animals. HABs can occur in warm fresh, marine, or brackish waters with abundant nutrients

and are becoming more frequent with climate change."
(Centers for Disease Control and Prevention, https://www.cdc.gov/habs/index.html)

"Exposure to harmful algal bloom toxins found in cyanobacteria (blue green algae) or Karenia brevis red tide can cause severe illness in pets, livestock, and wildlife when contaminated water is ingested or when animals lick their fur after swimming."
(Florida Dept. of Health, http://www.floridahealth.gov/environmental-health/aquatic-toxins/aquatic-toxins-program-animal-health.html)

"About Red Tide… Algae are vitally important to marine ecosystems, and most species of algae are not harmful. However, under certain environmental conditions, microscopic marine algae called Karenia brevis (K. brevis) grow quickly, creating blooms that can make the ocean appear red or brown. People often call these blooms 'red tide.'

"K. brevis produces powerful toxins called brevetoxins, which have killed millions of fish and other marine organisms. Red tides have damaged the fishing industry, shoreline quality, and local economies in states such as Texas and Florida. Because K. brevis blooms move based on winds and tides, pinpointing a red tide at any given moment is difficult.

"ASSESSING THE IMPACT ON PUBLIC HEALTH

"In addition to killing fish, brevetoxins can become concentrated in the tissues of shellfish that feed on K. brevis. People who eat these shellfish may suffer from neurotoxic shellfish poisoning, a food poisoning that can cause severe gastrointestinal and neurologic symptoms, such as tingling fingers or toes.

"The human health effects associated with eating brevetoxin-

tainted shellfish are well documented. However, scientists know little about how other types of environmental exposures to brevetoxin—such as breathing the air near red tides or swimming in red tides—may affect humans. Anecdotal evidence suggests that people who swim among brevetoxins or inhale brevetoxins dispersed in the air may experience irritation of the eyes, nose, and throat, as well as coughing, wheezing, and shortness of breath. Additional evidence suggests that people with existing respiratory illness, such as asthma, may experience these symptoms more severely."
(Centers for Disease Control and Prevention, https://www.cdc.gov/hab/redtide/pdfs/about.pdf)

Here are additional red tide resources:

"Harmful Algal Bloom (HAB)-Associated Illness… Publications, Data, & Statistics"
(Centers for Disease Control and Prevention, https://www.cdc.gov/habs/publications.html)

Here is the link to the latest US government report on climate change. We recommend perusal with an open mind and a willingness to alter views: Fourth National Climate Assessment, Volume II: Impacts, Risks, and Adaptation in the United States, https://nca2018.globalchange.gov/.

For more information on how to join us in this important conversation, please visit www.usfsm.edu/climate

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