Supplementary materials

Participants were shown one of the five following experimental message frames.

Control:

Red tide is an algal bloom that gets out of control. Red tide gets the name because of the color it displays, though these blooms can also appear green or brown.

Red tide has occurred for centuries, but the blooms have become more frequent in recent years. Warmer waters, runoff from farming, factories, sewage treatment and other nutrient-rich sources can make red tide blooms more frequent and intense.

Health framing:

Red tide threatens local health

ASSOCIATED PRESS

The Florida Department of Health is reminding residents and visitors to use caution when on the beach or in waters with high concentrations of red tide.

Exposure can cause eye and throat irritation, headaches, and congestion. More severe reactions include neurological issues, trouble breathing, and neurotoxic shellfish poisoning. Past red tide blooms have resulted in spikes in hospitalizations.

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Local man is tended to after a severe respiratory reaction to a red tide bloom in the area.

Photo: GHETTY IMAGES

Charismatic megafauna framing:

Red tide threatens Florida's wildlife

ASSOCIATED PRESS

Red tide blooms threaten precious Florida wildife and endangered species. Blooms can cause "dead zones" - areas with red tide toxins and no oxygen — stretching for miles.

Wildlife inhale toxins while swimming through a bloom. They can also be sickened after consuming toxin that build up on or in their food. In some years, red tide was the leading cause of death of the endangered manatee. It has also killed hundreds of sea turtles and dolphin..

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Wildlife killed during red tide blooms have washed up on Florida beaches including bottlenose dolphins.

Photo: COLLEEN GILL
Inset: GHETTY IMAGES

Economic framing:

Red tide threatens Florida's economy

ASSOCIATED PRESS

A new study confirms the disastrous economic impacts of red tide for Florida. More than $317 million in sales revenues and more than 2,900 jobs were lost due to the sustained red tide blooms of 2018, according to a study released this week.

Tourism and related business suffered more than $184 million in losses. The study also determined a ripple effect of a 15% loss felt in Florida's overall economy resulting from red tide.

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Beaches and businesses have closed for months during red tide blooms.

Photo: GHETTY IMAGES

Environmental framing:

Red tide threatens marine ecosystems

ASSOCIATED PRESS

Scientists studying red tides, have connected these events with low- or no-oxygen conditions, called hypoxia.

Red tide blooms produce toxins that are harmful to marine life. Since oxygen is vital for marine life, these combined red tide-hypoxia events can be devastating to marine ecosystems by causing mass die offs of marine life.

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Massive fish kills are a visible impact of red tide events

Photo: GHETTY IMAGES