

Rising sea temperatures weaken reefs

More than half of world's coral appears at risk

By Mat Probasco
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CHARLOTTE AMALIE, U.S. Virgin Islands - Researchers fear more than half the world's coral reefs could die in less than 25 years and say global warming may at least partly be to blame.



Sea temperatures are rising, weakening the reefs' resistance to increased pollutants, such as runoff from construction sites and toxins from boat paints. The fragile reefs are hosts to countless marine plants and animals. ,p> "Think of it as a high school chemistry class," said Billy Causey, the Caribbean and Gulf Mexico director of the National Oceanic and Atmospheric Administration. ,p> "You mix some chemicals together and nothing happens. You crank up the Bunsen burner and all of a sudden things start bubbling around. That's what's happening. That global Bunsen burner is cranking up."

Causey was one of about 200 private and government researchers from the Caribbean, Florida and U.S. Pacific islands who gathered in St. Thomas for a meeting of the NOAA's U.S. Coral Reef Task Force.

Last year's coral loss in the Caribbean waters supports predictions that 60 percent of the world's coral could die within a quarter century, said Tyler Smith of the University of the Virgin Islands.

"Given current rates of degradation of reef habitats, this is a plausible prediction," Smith said. ,p> Up to 30 percent of the world's coral reefs have died in the past 50 years, and another 30 percent are severely damaged, said Smith, who studies coral health in the U.S. Virgin Islands and collaborates with researchers globally.

Richard Dodge, dean of Nova Southeastern University's Oceanographic Center, who is attending the conference, said Biscayne National Park in Miami-Dade County sustained extensive damage last year from coral bleaching, due to rising ocean temperatures.

"Biscayne had bleaching of up to 50 percent," he said. "And either directly from bleaching or from associated disease, it killed half the coral in selected reefs."

The reefs off Broward and Palm Beach counties have experienced some damage, but not as bad, Dodge said.

The biggest threat to Broward's reefs is the grounding of ships from the anchorage just outside Port Everglades. Florida's reefs also face threats from the increased atmospheric concentration of carbon dioxide, the most widespread greenhouse gas, which interferes with coral's ability to form calcium skeletons.

More than 47 percent of the coral in underwater study sites covering 31 acres around the U.S. Virgin Islands died after sea temperatures exceeded the norm for three months in 2005, said Jeff Miller, a scientist with the Virgin Islands National Park.

The unusual warm water can stress coral, causing it to lose its pigment and making it more vulnerable to disease.

This year, Caribbean coral narrowly avoided another widespread episode of bleaching when sea temperatures briefly surpassed levels considered healthy for reefs.

The researchers said global warming was a potential cause of the abnormally high sea temperatures but was not the only suspect in the reefs' demise.

What causes disease in coral can be hard to pinpoint and could be a combination of things. Other threats include silt

runoff from construction sites, which prevents the coral from getting enough sunlight, and a record increase in fleshy, green algae, which competes with coral for sunlight.

"Climate change is an important factor that is influencing coral reefs worldwide," said Mark Eakin, director of NOAA's Coral Reef Watch. "It adds to the other problems that we are having."
