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Warmer Atlantic fuels hurricanes, UK study finds

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Ian Sample, science correspondent

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Warmer waters in the north Atlantic have made hurricanes stronger and more frequent in the past decade, according to a study by British scientists.

The finding has raised fears that global warming could unleash more devastating storms in the region, if sea temperatures continue to increase.

A rise in surface water temperatures of 0.27C between 1996 and 2005 was responsible for 40% of the increase in Atlantic hurricane activity, researchers at University College London's Hazard Research Centre found.

"This is the first time we've been able to quantify how much the increase in hurricane activity is due to warmer sea temperatures," said Professor Mark Saunders, who led the study.

The power and number of hurricanes vary enormously from year to year, but since the mid-1980s there has been an overall rise in both. In 1996, weather forecasters recorded 13 storms in the Atlantic hurricane season. In 2005 there were 28, its most devastating season in history.

Saunders and Adam Lea used computer models to study hurricane formation in the tropical north Atlantic, the Caribbean Sea and the Gulf of Mexico. They found every 0.5C rise in surface water temperature caused overall hurricane activity to rise by 36%, and instances of the most powerful hurricanes to increase by 45%.

Hurricanes form when evaporating seawater is sucked up into storms. The warmer the sea surface, the more energy is pumped into the hurricane.

Saunders said the study, published in Nature, could not discern how much the rise in sea temperatures was due to greenhouse gas emissions. But in 2006, scientists at the Lawrence Livermore National Laboratory in California concluded that emissions from fossil fuel burning contributed to a 0.67C rise in surface temperatures in the Atlantic and Pacific tropics between 1906 and 2005.

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