

Hot Topic #2

Hurricanes

Is there a connection to global warming?

2005 was a brutal and record-setting hurricane season.

There were **27** named storms in the Atlantic, surpassing the record of 21 set in 1933. The normal seasonal average is **10** named storms.

An unprecedented **four** of the hurricanes reached Category 5 status. Hurricanes are rated from 1 (minimal) to **5** (catastrophic). Prior to 2005, **two** was the most Category 5 hurricanes ever seen in a season.

KATRINA
HURRICANE

a 2005 Category 5 hurricane, was one of the most devastating hurricanes in the last 100 years.

2005 also produced the most powerful hurricane ever recorded

WILMA
HURRICANE

2005 was the warmest year ever recorded!

Is global warming causing more and stronger hurricanes?

The jury is out. Climate scientists are divided on whether or not global warming is affecting hurricane activity. There is evidence that supports global warming as a strong influence in hurricane formation and strength. However, many argue that the number of hurricanes in recent years merely reflects variations in ocean conditions and weather systems.

What do we know?

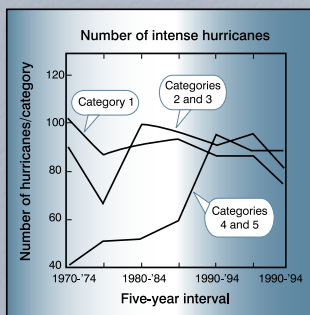
- Several key factors are required in the development of hurricanes, including warm ocean temperatures (>26°C) and appropriate wind patterns and pressure conditions.
- If any one of these factors is not present, a hurricane will not develop or will weaken.
- As greenhouse gas concentrations increase in the atmosphere, ocean temperatures will increase (and have increased).
- Warmer ocean temperatures provide fuel for hurricanes.
- Since 1995, we have seen record-breaking hurricane activity and record-breaking global temperatures.

Frequency

Although the number of hurricanes has been increasing since 1995, the frequency of hurricanes has not increased on average over the long term. Records show periods of high hurricane activity that last for several decades followed by decades of low activity. We are presently in a decade of high activity that is not predicted to change for several years.

Intensity

Warmer weather generates more violent storms. Hurricanes suck energy from warm waters to drive their winds. So, as oceans become warmer, the storms absorb more energy and the intensity of the hurricanes increases. Records show there has been a dramatic increase in the number of category 4 and 5 storms, nearly doubling in number between 1970 and 2005. Hurricanes are predicted to become more intense as the climate warms.



After: Kerr, R. 2005.

Location

Cool waters restrict hurricanes. As ocean temperatures rise, the area of water suitable for hurricane genesis will increase. As a result, hurricanes will have the opportunity to migrate, threatening communities that are rarely exposed to such weather events. In 2003, a severe hurricane thrashed the coast of Canada and in March of 2004 the South Atlantic recorded its first ever hurricane.

References:

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