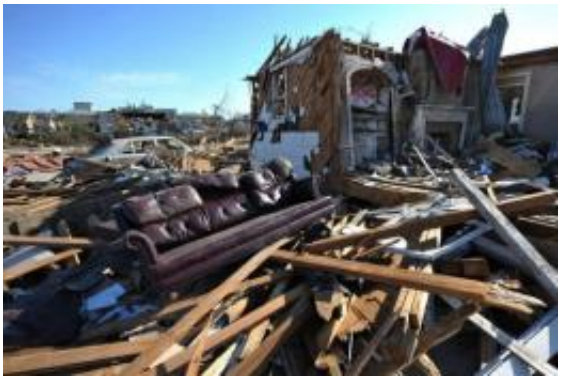
No link between tornadoes and climate change: US

May 23 2011, by Kerry Sheridan



A sofa is seen next to a collapsed house in a tornado stricken neighbourhood in April 2011 in Tuscaloosa, Alabama. The United States is experiencing the deadliest year for tornadoes in nearly six decades, but a top US weather expert said there is no link between the violent twisters and climate change.

The United States is experiencing the deadliest year for tornadoes in nearly six decades, but a top US weather expert said Monday there is no link between the violent twisters and climate change.

Instead, the reasons for the spiking death tolls are more likely due to the rise in the number of mobile homes and the chance paths taken by a series of tornadoes that have happened to target populated areas.

"This year is an extraordinary outlier," said Harold Brooks, research meteorologist at the National Oceanic and Atmospheric Administration's

(NOAA) National Severe Storms Laboratory in Norman, Oklahoma.

"This is the deadliest year for tornadoes in the US since 1953," he said, referring to June of that year when a tornado killed 90 people in Worcester, Massachusetts.

A massive tornado tore though the Missouri town of Joplin over the weekend, killing at least 89 people, less than a month a spate of the storms struck across seven states and killed 354 people.

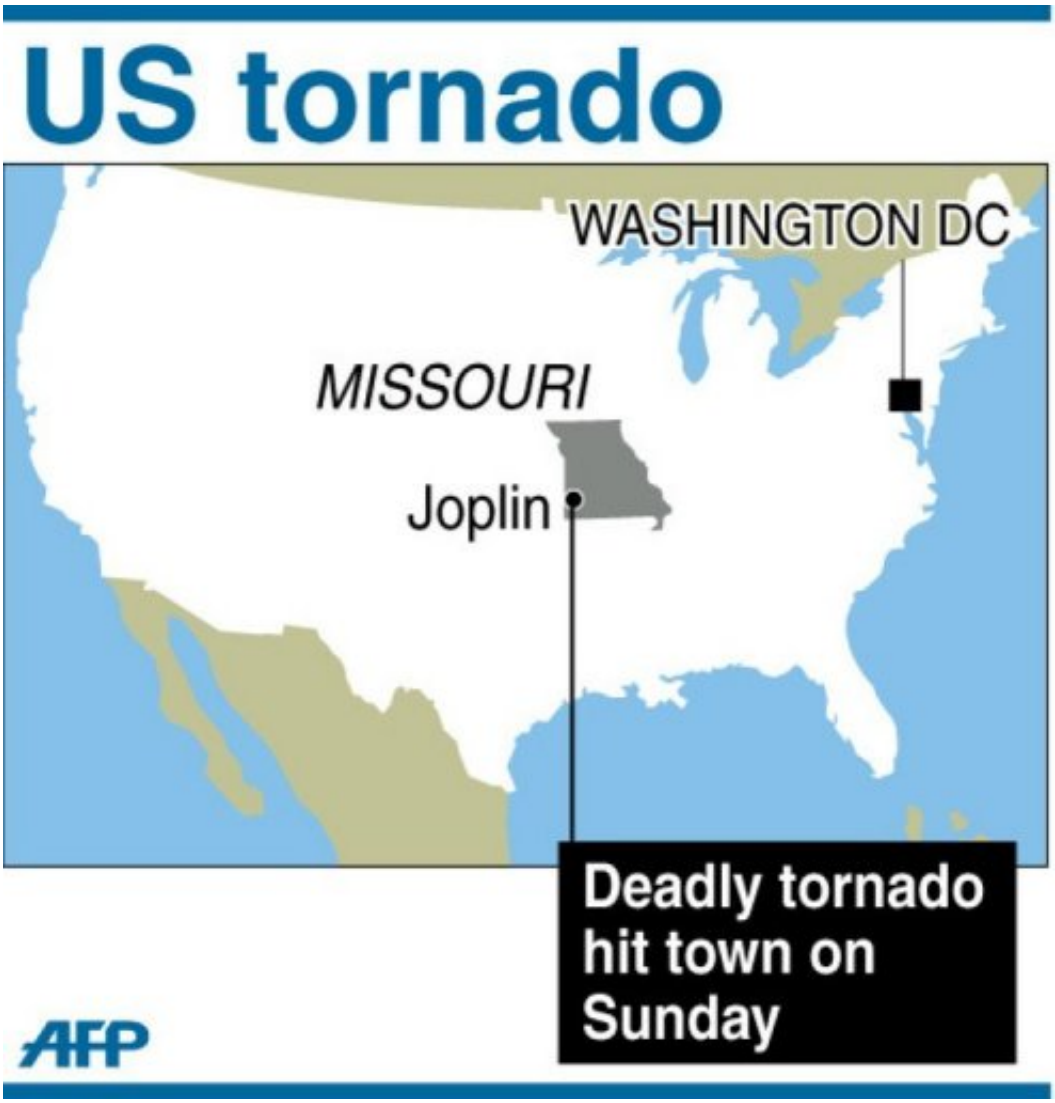
Brooks said the contemporary US tornado record, which dates back to 1950, "can be a difficult thing to work with."

But when scientists examine the most complete records available and adjust for changes in how tornadoes were reported over time, "we see no correlation between global or US national temperature and tornado occurrence," Brooks said.

Nor are the storms themselves getting larger than they used to be, even though it may seem so after learning of massive twisters like the one in Missouri that tore apart a six-mile (10 kilometer) long, half-mile deep stretch of land.

"Tornado deaths require two things. You have to have the tornado and you have to have people in the right or the wrong place," Brooks said.

"The biggest single demographic change that probably affects things is that the fraction of mobile homes in the United States has increased over the years," he said.



Map of US locating Joplin in the state of Missouri, where a tornado killed at least 24 people on Sunday.

Anything that can be tossed into the air, like cars and mobile homes, can prove deadly in a tornado and people are urged to take shelter underground if possible.

Twisters are formed when atmospheric conditions come together in a certain way. At low levels, the atmosphere is warm and moist, coupled

with cold dry air above.

Winds must be increasing in speed from the Earth's surface up to elevations of about 20,000 feet, with directional changes, known as wind shear, so that the southerly wind blows near the surface and gains speed at higher altitude.

"In April, essentially we were stuck in a pattern where that was the way things were for a couple of weeks, and that pattern didn't move so we had repeated episodes that were favorable for producing significant tornadoes," Brooks explained.

The weather phenomenon known as La Nina, which produces cooler than normal temperatures in the equatorial Pacific Ocean, may have had a "relatively small impact" on producing that pattern, but that is not the full picture, he said.

"It's an area of research to try to identify why the pattern was so favorable and why it was favorable for so long."

The tornado record does not show a steadily increasing trend toward bigger deadlier storms, he said. For instance, "2009 was a really low year for tornadoes. Some recent years have been big, some recent years have been small," he said.

Since modern records on tornadoes began, the deadliest outbreak was on April 3, 1974. The "Super Outbreak" claimed 310 lives when 148 tornadoes over a 24-hour period swept across 13 states.

The single deadliest tornado in US history, described in early accounts, killed 695 people when a massive twister tore up parts of Missouri, southern Illinois and southwestern Indiana in 1925.

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