

## US Set Extreme Weather Records in 2011

Difficulty:

**D**IFFICULT

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### *Discussion activities to be done after completing this EA lesson*

Today's report was about the extreme weather that was seen in the United States last year. What types of weather were seen? Why was it a remarkable year? What did it cost in economic and other losses? What were the causes? How does the United States intend to deal with such events in the future?

### *Extension discussion topics*

#### **A. Talking about and going over the specific topic / idea / issue in listening text**

*Introduction = What was so remarkable about the weather in the US in 2011? What were the causes? What were the effects? How will Americans deal with such events in the future?*

1. What types of extreme weather did we hear about in the report? What were the causes?
  - Tornadoes; Arctic Oscillation allowed cold air to flow into US.
  - Droughts; global warming?
  - Wildfires; global warming?
  - Floods; La Niña.
  - Snow storms; Arctic Oscillation allowed cold air to flow into US.
  - Heat waves; global warming?
  - La Niña generally altered storm patterns.
2. What was so remarkable about these weather events and what have been the effects?
  - Twelve events each caused \$1 billion of economic losses.
  - All of the events (snow storms, hurricanes, floods, droughts) ranked either in the top three or highest ever recorded.
  - Drought in southern plains states is the most costly of all the disasters having already caused \$6 to \$8 billion damage from agricultural and fire losses and is likely to continue.
  - At the same time there are tremendous floods and very wet weather patterns just to the north of those areas.

3. Why has the damage been so extensive and how do activists hope to reduce the damage in the future?
  - Extensive damage is due to a combination of expanding infrastructure, due to growing population and large cyclical weather patterns, as above.
  - To help, emissions should be reduced since that contributes to global warming which provides the energy and water in the atmosphere to produce intense droughts, heavier rainfall and stronger storms.
  - People have to prepare to manage such weather events by improving emergency management, i.e. providing better assistance following such events.
  - To do this a network of partners in both the public and private sectors will have to work together.

## **B. Expanding on (one of) the topics / ideas / issues in listening text**

*Topic = Weather-related disasters.*

1. Has your country recently seen any weather-related disasters? What were they? Do you know what caused them? Were you there? Were any members of your family there? What was it like? What was done by authorities at the time to help? What has been done since?
2. Worldwide, what notable other weather-related disasters took place recently that you know of? (2011 earthquakes in New Zealand, 2011 earthquakes and tsunamis in Japan, 2010 and 2011 Iceland volcanoes, 2010 Haiti earthquake, Hurricane Katrina and New Orleans floods in 2005, Indian Ocean tsunami of 2004, ...) Choose one of these disasters. Find out as much as you can about it and relate in your own words what you find out to your fellow students.
3. For each weather-related disaster that you now know about, make a list of the steps you would take personally to mitigate the effects of each, if you were given warning that it was coming to your area. Would you leave your home willingly? Why? Why not?
4. What do you think about people who return to their homes / towns / cities / countries after they were evacuated? Are they brave or foolish? Why? If it were you, would you return? Why / why not?

## **C. Extending discussion of (one of) the topics / ideas / issues in listening text**

*Topic = Climate change and global warming.*

1. There have been countless discussions on climate change and global warming for many many years. Governments cannot agree on what should be done to reduce carbon emissions or are often to actually implement and measures (e.g. Chinese airlines' refusal to pay EU carbon tax, George Bush's refusal to sign Kyoto Treaty...) Why do you think they cannot / will not agree?

2. The latest conference on climate change was in Durban in December 2011. It ended with a last-ditch deal whereby developed and developing countries will for the first time work on an agreement that should be legally binding on all parties, to be written by 2015 and to come into force after 2020. Why do you think it will take so long? Will it be too late?
3. Take a look at this interactive guide from the British Guardian newspaper and prepare a summary of the most interesting things you find out.  
<http://www.guardian.co.uk/environment/interactive/2011/aug/15/everything-know-climate-change>
4. From what you know or have experienced personally, has the weather in your country generally changed much from when you were child? In what way? Do you think global warming has been the cause of any changes or not? What makes you think that? There are people who do not agree that global warming is the cause of climate change, and that in some instances weather was more extreme in previous decades. What do **you** believe? To help you, take a look at the following websites:  
<http://www.wunderground.com/climate/extreme.asp>  
<http://www.c3headlines.com/are-droughts-floods-more-frequent/>  
If time permits, have a class debate on the topic "Global Warming is not Causing Climate Change".

### *Audioscript*

Extreme weather cut a path of destruction across the United States in 2011. For Bill Wing, it began 12 months ago, on New Year's Day, as he surveyed the damage from a tornado that touched down in Cincinnati, Arkansas.

"It sounded like everything you always hear. It sounded like a freight train coming. So, and we weren't in the direct path of it. So, it just had a lot of vacuum on the house and you could feel the wind was moving and a-shaking, more like an earthquake for us."

That tornado was among 1,600 that crisscrossed the nation in 2011. Twelve weather-related disasters accounted for \$1 billion or more each in economic losses, a new record, says Chris Vaccaro, spokesman for the National Weather Service.

"We've seen historic events of nearly every weather category. So in terms of snowstorms, and hurricanes and floods and droughts, all of these events this year ranked in the top three or even the highest ever recorded."

The most costly weather disaster of 2011, according to David Brown, of the National Oceanic and Atmospheric Administration, was the year-long drought that continues to grip southern plains states.

"We're looking at \$6 to \$8 billion in damage from agricultural losses, from fire losses, in places like Texas and New Mexico and Oklahoma and if the drought persists for the next several months, as we expect it will, those damages will only increase."

Chris Vaccaro says several factors may account for such wide-ranging damage. He says alongside a growing population and expanding infrastructure large-scale cyclical weather patterns came into play in 2011.

"First and foremost was La Nina in the eastern Pacific which altered our standard storm patterns. And we also had a pattern in the Arctic called the Arctic Oscillation. That was a big factor in the winter and spring months, allowing cold air to flow into the United States that helped spawn snowstorms and also support the tornado season."

Vaccaro says while there's no evidence to connect global warming with specific local weather events, this past year's weather extremes are consistent with what climate experts are projecting for the long-term.

"For example the extreme drought in the south. This is an historic drought that is impacting crops and wildlife tremendously. Meanwhile just to the north we are also seeing tremendous floods and very wet patterns."

Climate scientists say warming temperatures provide more energy and water in the atmosphere and consequently trigger more intense droughts, heavier rainfall and stronger storms.

Peter Altman is climate and clean air campaign director for the Natural Resources Defense Council. He expects the situation to get worse as global temperatures continue to rise. He advocates action both to reduce climate changing emissions and to mitigate their impact.

"We've got to better prepare ourselves to manage these kinds of weather events, whether they're droughts, wildfires, heatwaves, floods, and that means in terms of emergency management in providing people the kinds of health assistance that you need in the aftermath of those kinds of events."

The 2011 weather extremes could be the "new normal," says Chris Vaccaro at the National Weather Service. The agency is taking steps to build a weather-ready nation, that calls on a growing network of partners in the public and private sector to work together to prepare for future disasters.

Rosanne Skirble, VOA News, Washington.