



Presidential Climate Action Project

Climate Action Brief: Climate Change Hits Home July 18, 2008

Record flooding in the Midwest, wildfires in the West and heat waves on both coasts this summer may be evidence that the effects of climate change are bearing down on the United States. If that's the case, then federal officials must begin modifying disaster-prevention and response programs to reflect the anticipated impacts of global warming.

While scientists are reluctant to attribute any single weather event to global warming, more experts are connecting this year's onslaught of extreme weather events with climate change. "Global warming is happening now," said Amanda Staudt, a climate scientist with the National Wildlife Federation.

That judgment seems to be seconded by a new report from the National Oceanic and Atmospheric Administration (NOAA). It also suggests a link between recent natural disasters and climate change, and forecasts more extreme weather events to come.¹ "Many (weather) extremes and their associated impacts are now changing," the report concludes. "Heavy downpours have become more frequent and intense... The increase in heavy precipitation events is associated with an increase in water vapor and the latter has been attributed to human-induced warming."

Recent extreme weather in the U.S. appears to be part of an emerging global pattern. According to a report from the United Nations², more than 7,000 major natural disasters have occurred worldwide since 1970, causing \$2 trillion in economic losses and costing an estimated 2.5 million lives. On average, the world experienced 351 major natural disasters annually from 2000 to 2006, compared to 78 annually from 1970 to 1999.

The U.S. tornado season started unusually early this year, with more than 130 reported tornadoes in the Upper Midwest. By June 13, 837 confirmed tornadoes had been recorded, with 118 fatalities.

¹ <http://climatescience.gov/Library/sap/sap3-3/final-report/default.htm>

² <http://www.un.org/esa/policy/wess/wess2008files/wess08/wess2008.pdf>

Then came the floods. Through the month of June, excessive rainfall produced river levels that breached or broke levees all along the Mississippi River watershed. By June 15, nine rivers in Iowa were at or above historic flood levels and the governor had declared a state of emergency in 83 of the state's 99 counties.

In Cedar Rapids, the Cedar River crested at 32 feet, 12 feet higher than the previous record set in 1929. The flood caused an estimated \$730 million in property damage and forced 24,000 people to abandon their homes and businesses. If historic patterns hold true, many of the smaller businesses never will reopen.

NOAA's new report predicts:

- Heat waves and abnormally hot days and nights are very likely to become more common.
- Heavy downpours that occur once every 20 years are projected to occur every eight years by the end of this century.
- Droughts are likely to become more frequent and severe in the southwestern U.S.
- Hurricane wind speeds, rainfall intensity and storm surge levels are likely to increase.³

The debate over what this means for national policy will begin when Congress considers reauthorizing the National Flood Insurance Program, which expires in September. The program's exposure tripled to \$1 trillion between 1980 and 2005.

The National Wildlife Federation is urging Congress to overhaul the government's methods for forecasting floods to take into account the effects of climate change. The Federation says building standards are inadequate, flood control techniques are outdated and floodplain models fail to acknowledge the impacts of climate change.

Larry Larson, executive director of the Association of State Floodplain Managers, says flood insurance should be based on true risk rather than subsidized by taxpayers; that floodplain maps should be based on anticipated rather than historic floods; and that flood control structures like dams and levees should be used only as a last resort.

At a time when localities need better information about natural hazards, some members of Congress are proposing that the federal government slow its process of delivering updated flood maps to endangered communities. One proposal would prohibit the release of new maps until all maps within a Corps of Engineers District have been updated. Corps' districts sometimes span several states. One bill (HR 6413) proposes a national moratorium on the release of flood maps until the Federal Emergency Management Agency has developed a plan to brief all affected communities.

Extreme weather may affect other federal policies, too. This year's heat waves demonstrate the importance of continuing the Weatherization Assistance Program, which improves the

³ http://www.noanews.noaa.gov/stories2008/20080619_climatereport.html

comfort and energy efficiency of homes for low-income Americans. President Bush has recommended that funding for the program be eliminated.

In addition, the weather and the NOAA report both give weight to the argument that the federal Climate Change Science Program needs more resources to better evaluate the regional and local impacts of climate change, and to provide the critical information necessary to anticipate and deal with crises.

This brief was prepared by the nonpartisan Presidential Climate Action Project at the University of Colorado Denver. PCAP, which is developing a 100-day climate action plan for the next President of the United States, issues briefs from time to time for the use of the presidential candidates as they consider policies to deal with climate change. Details are available at www.climateactionproject.com. Additional briefs can be found at http://www.climateactionproject.com/climate_briefs.php.