

Economic loss versus economic cost of responding to climate change:

15th Global Conference on Environmental Taxation

Copenhagen, Denmark

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Economic Loss / winter 2013/2014

1. In the United States alone:

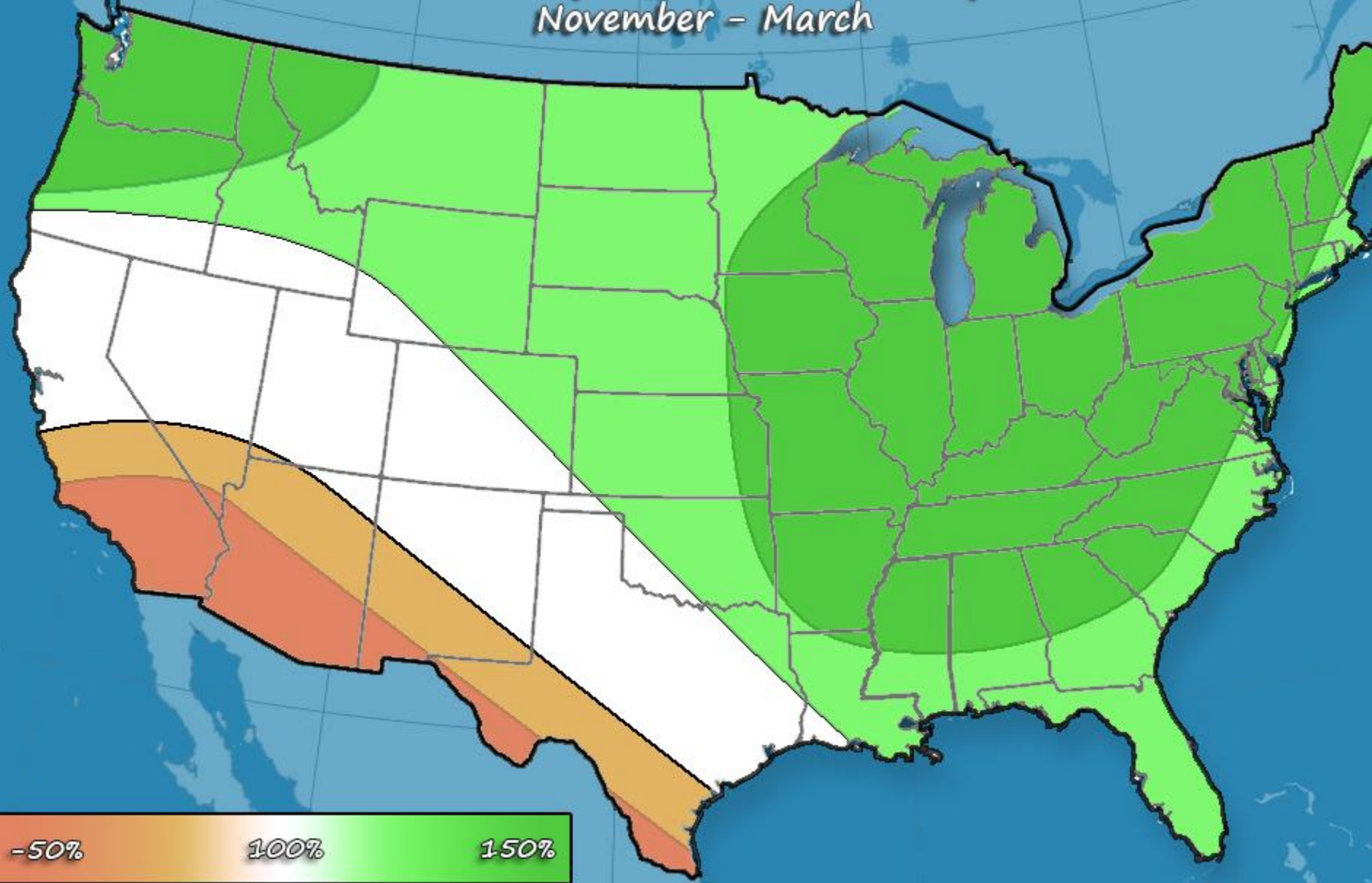
- Airlines grounded more than 78,000 flights, brings \$4.4 billion
- Droughts in California caused the driest year on record since 1877
- Sustained cold weather increased demand for gas and heating fuel
- The Consumer Price Index increased by 1.5 percent
- The rising temperature in the west cut yields of crops by 18 percent.
- Insured losses for the winter 2013/2014 reached \$20 billion
- December 2013- March 2014: U.S. Economic Losses: \$85 billion

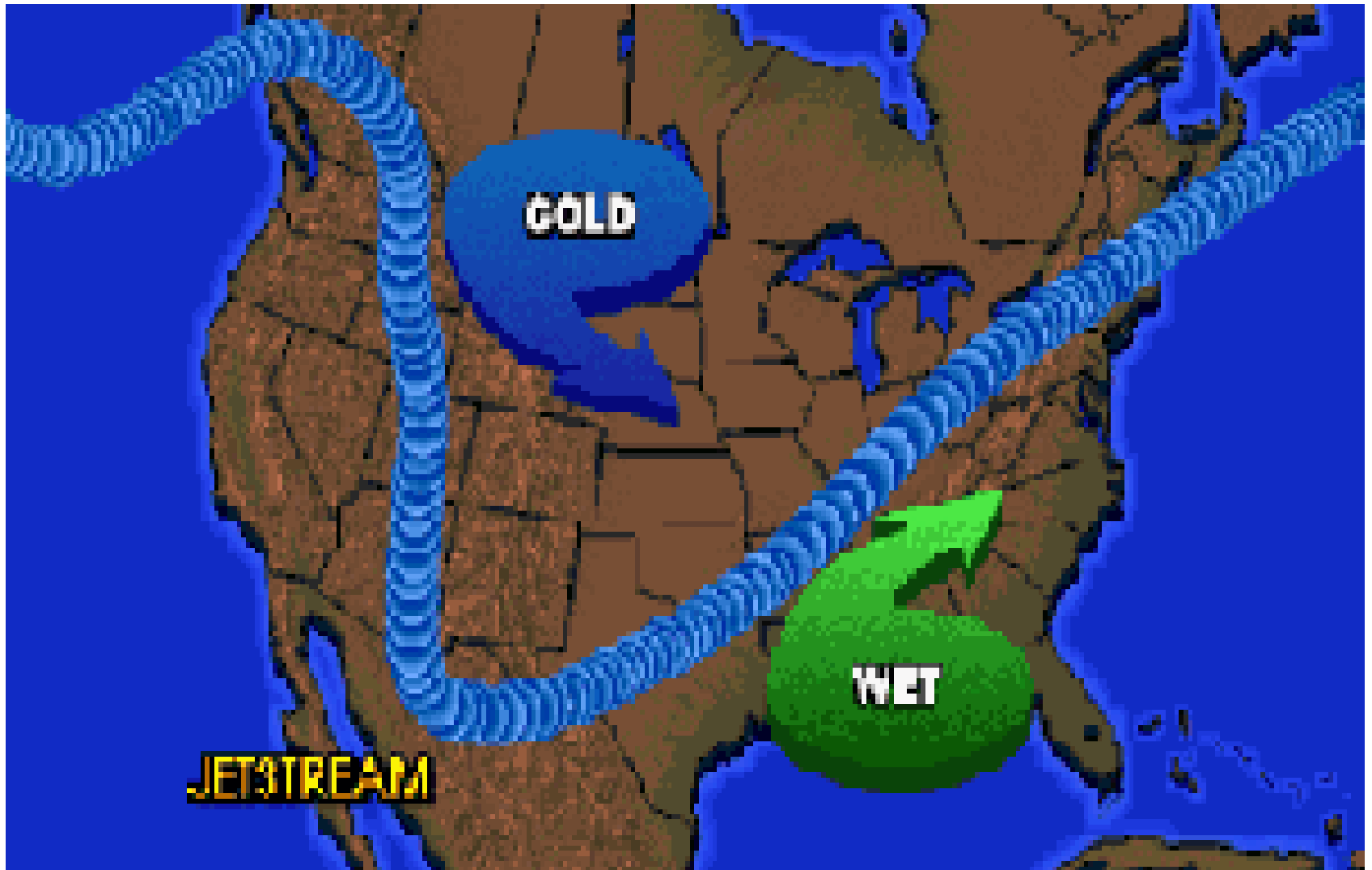
2. Global Economic Loss:

- January/June, Drought in Brazil, \$8.3 billion
- January/June, Drought in China, \$4.2 billion
- March, Severe winter weather brings \$1.8bn economic loss to Europe
- April, Earthquake in China, 14 billion
- May/June, Flooding Central Europe, 22 billion

Winter Precipitation Departures

November - March

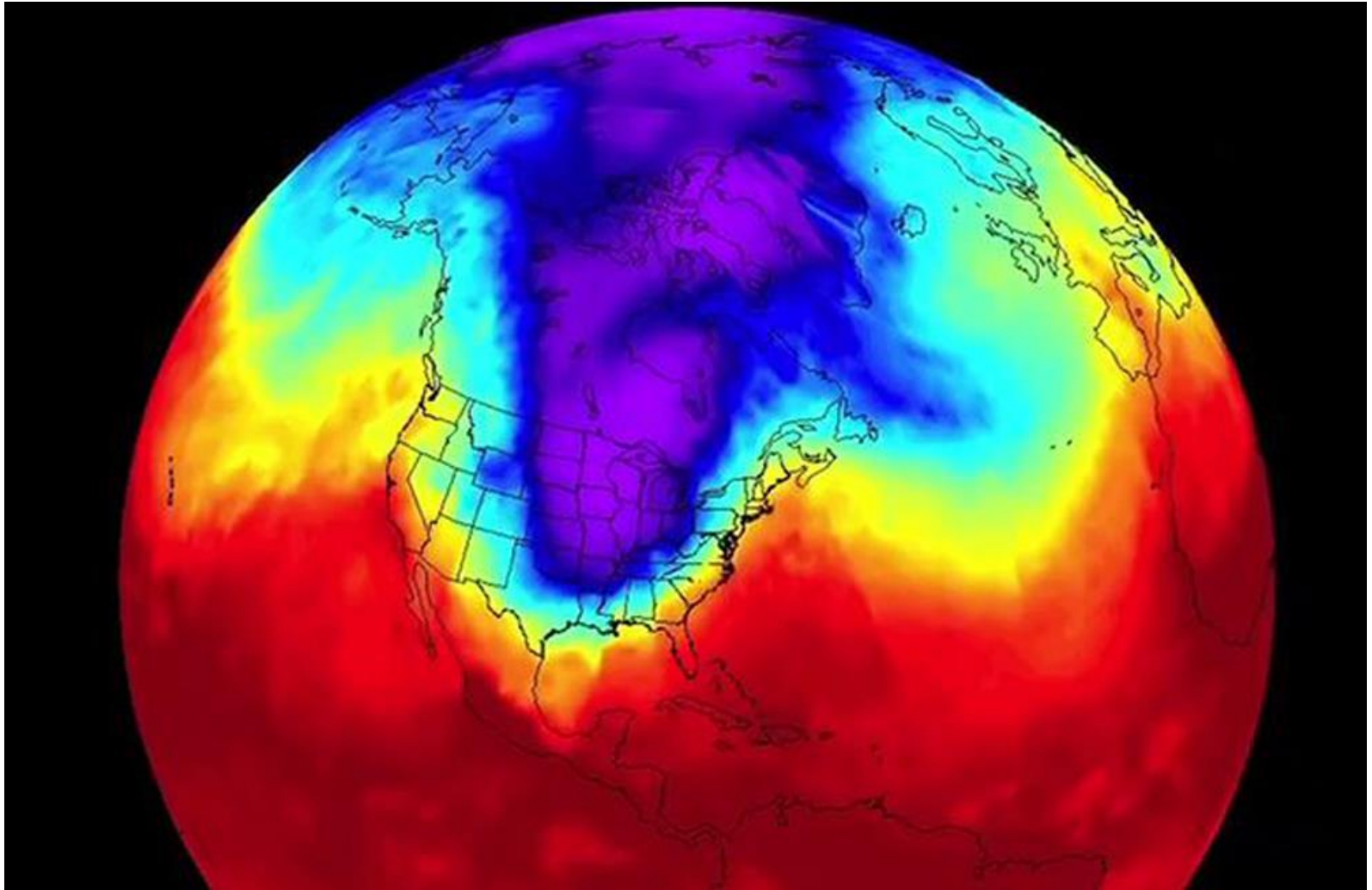




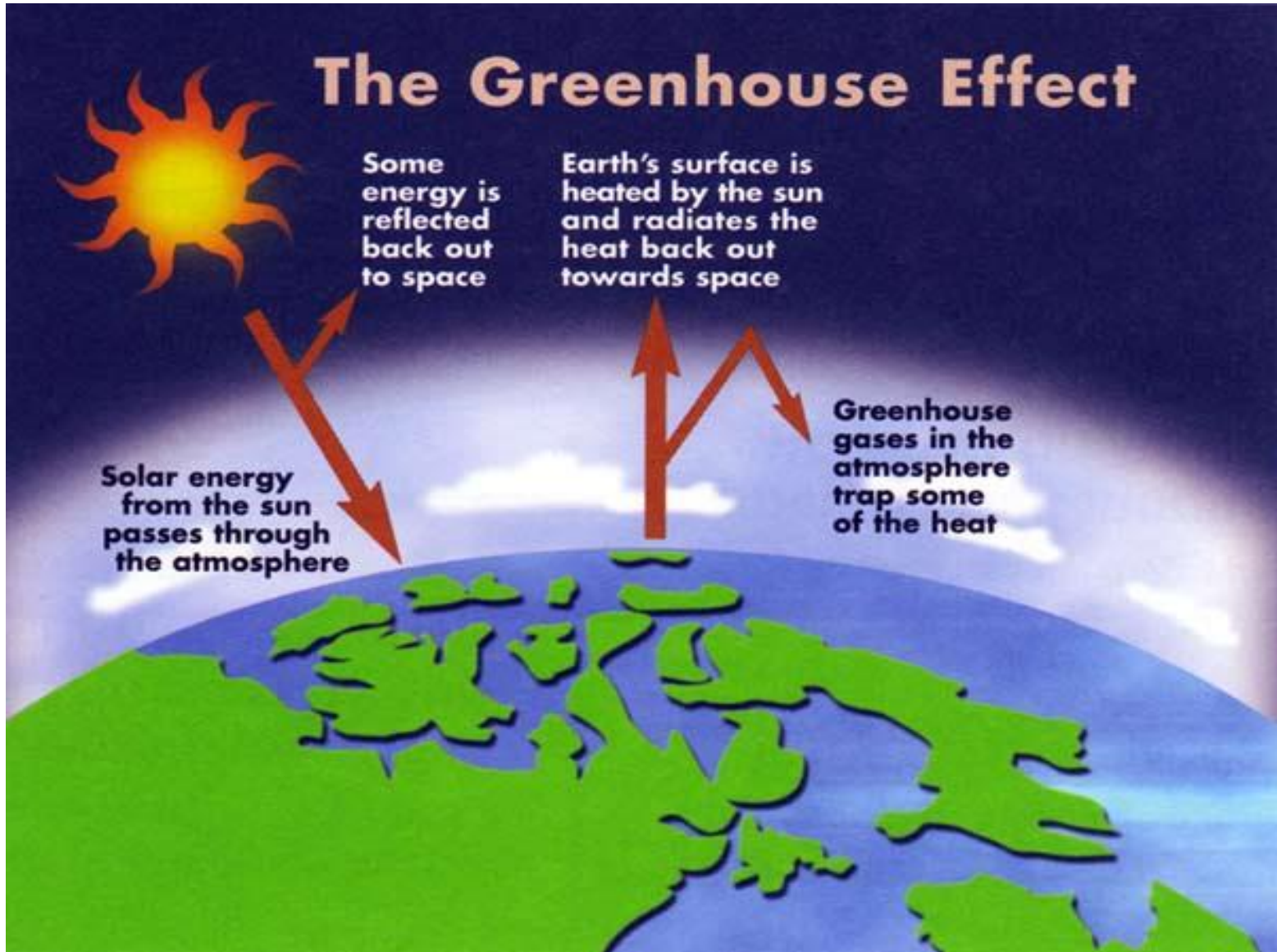
A temperature map showing the polar vortex slipping down to mid latitudes

Winter 2014

Credit: NASA

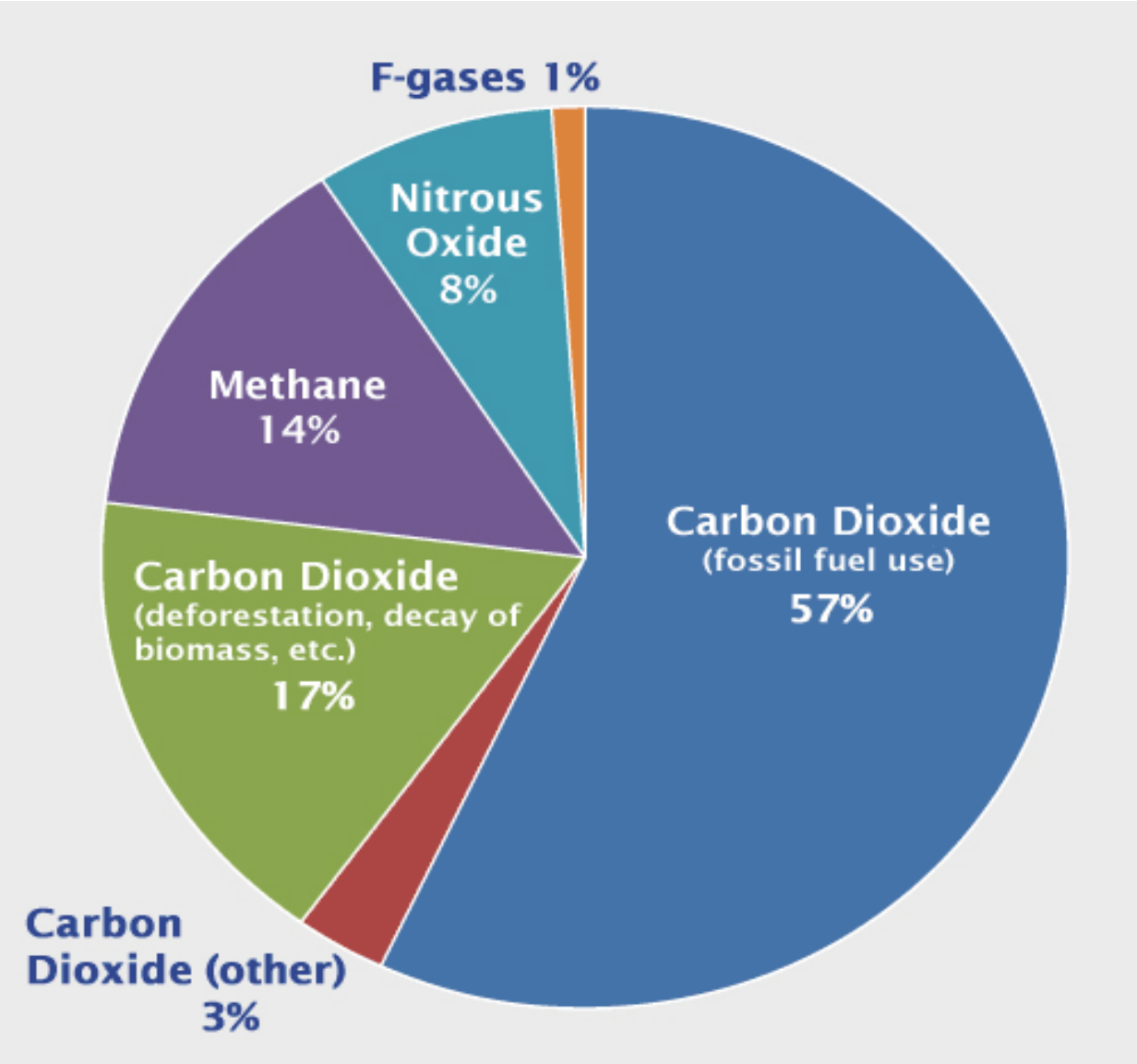


The Greenhouse Effect

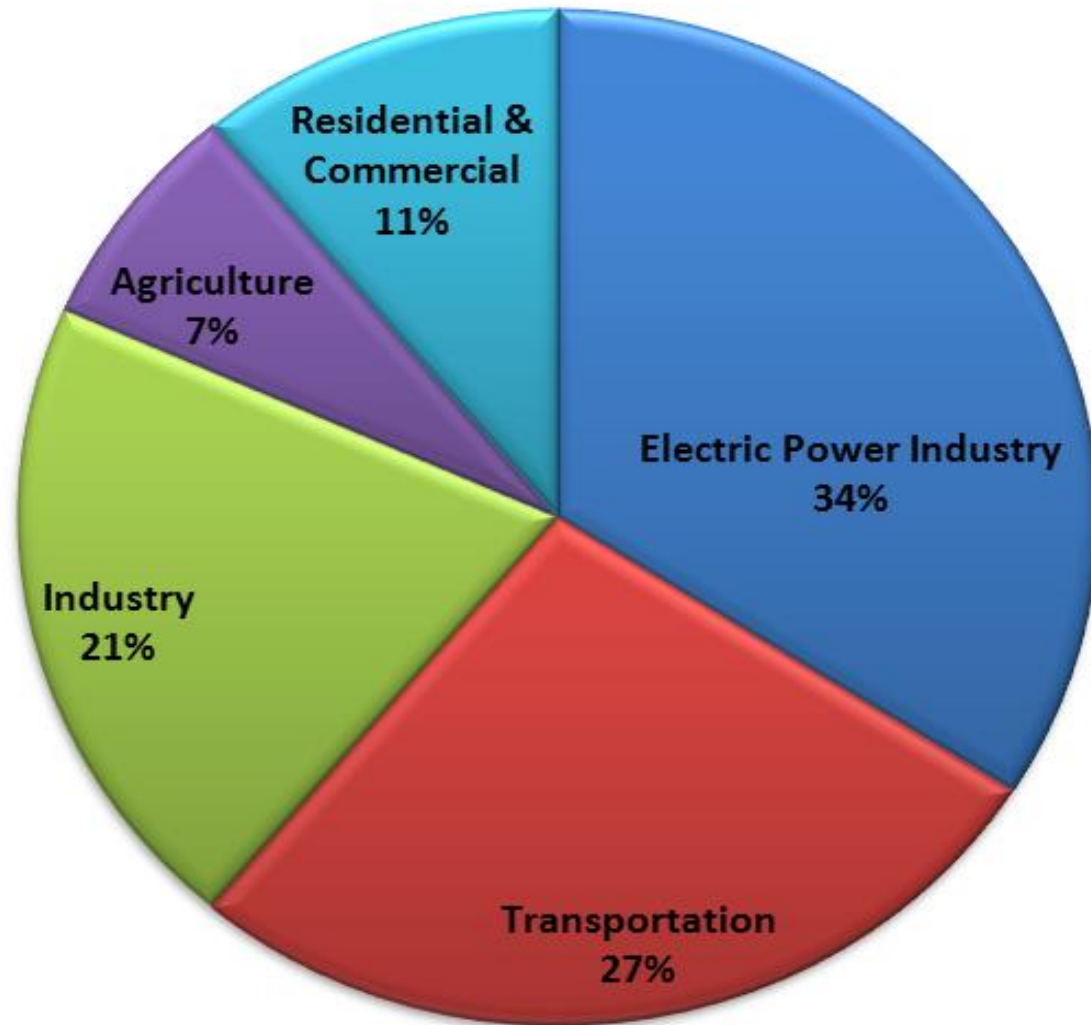


Global greenhouse Gas Emissions

www.epa.gov

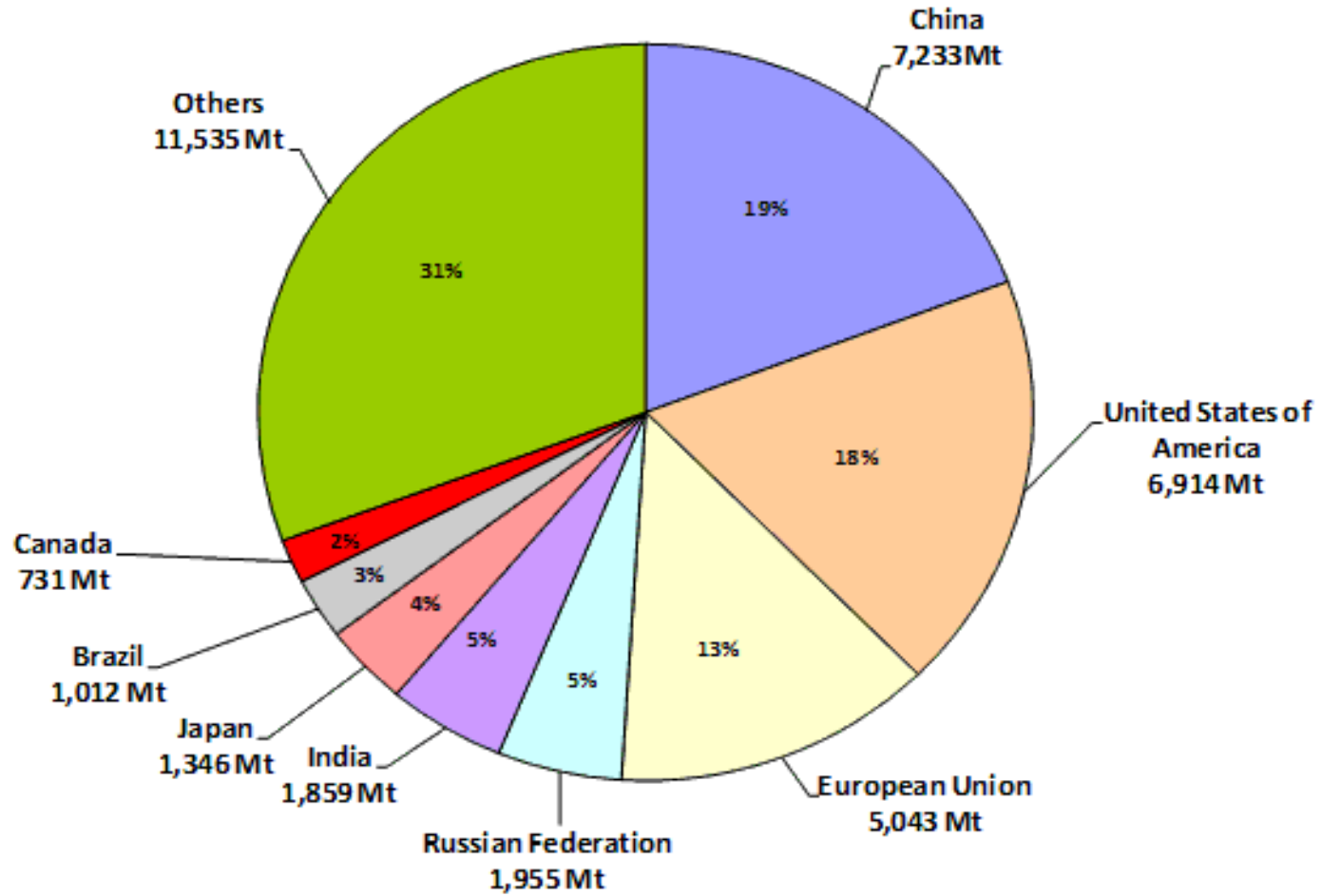


U.S. Greenhouse Gas Emissions by Sector 2010



Global Greenhouse Gas Emissions by Country

www.ec.gc.ca



Social Cost of CO₂, 2015-2050 ^a (in 2011 Dollars)

^a The SCC values are dollar-year and emissions-year specific

<http://www.epa.gov/climatechange/EPAactivities/economics/scc.html>

Discount Rate and Statistic

Year	5% Average	3% Average	2.5% Average	95 th percentile at 3%
2015	\$12	\$39	\$61	\$116
2020	\$13	\$46	\$68	\$137
2025	\$15	\$50	\$74	\$153
2030	\$17	\$55	\$80	\$170
2035	\$20	\$60	\$85	\$187
2040	\$22	\$65	\$92	\$204
2045	\$26	\$70	\$98	\$220
2050	\$28	\$76	\$104	\$235



www.nacce.org

Climate Change or Global warming

On Wednesday September 16, 2014, Dr. John P. Holdren, the White House top Science Advisor testified before the Committee on Science of the U.S. Congress about the Obama administration's plan to fight climate change

<http://thinkprogress.org/climate/2014/09/18/3568720/john-holdren-science-house-climate>. Posted by Emily Atkins on Friday September, 18, 2014.

Rep. Steve Stockman (R-TX): He spoke about a recent trip to Maryland, where he apparently asked a NASA scientist what ended the last ice age. The scientist, Stockman said, credited “global wobbling,” or slight changes in the earth’s tilt and orbit that happen over tens of thousands of years.

Stockman: Why isn’t “global wobbling” included in climate modeling?

Holdren: “Global wobbling happens so slowly – on timescales of 22,000 years, 44,000 years, and 100,000 years– that it doesn’t impact the comparatively fast impacts of climate change. Because of previous wobbling, we should be in a cooling period as we speak. But the warming inflicted by human activities has overwhelmed the effect of global wobbling.”

Stockman: “How long it would take for the sea level to rise two feet. Think about it, if your ice cube melts in your glass, it doesn’t overflow. It’s displacement. This is some of the things that they’re talking about that mathematically and scientifically don’t make sense.”

Holden wasn’t given a chance to answer this question, but the answer is pretty simple. Not all melting ice is already in the sea. Melting land ice, glaciers, ice sheets, ice caps, and permafrost– are the major contributors to global sea-level rise as their water flows into the ocean.

Rep. Dana Rohrabacher: “At what level does carbon dioxide concentration become harmful to human health?”

Holdren: “ We are not interested in carbon dioxide concentrations because of their direct effect on human health, we are interested in them because of their effect on the world’s climate, and climate change has effects on human health.”

Rep. Larry Bucshon (R-IN): “ I won’t believe scientific literature on climate change because the scientists who write it need global warming to exist in order to get paid.”

Holdren explains as much. “the limitation of carbon emissions in the United States is a very important first step for us to take on a longer trajectory to meet the President’s goals of a 17 percent reduction from 2005 by 2020, and ultimately an 80 percent reduction by 2050. If the United States does not take that sort of action, it is unlikely that other major emitters in the world – China, India, Russia, Europe, Japan– will do so either. And the effect is, all of us need to reduce our carbon emissions if we are to avoid unmanageable degrees of climate change.”