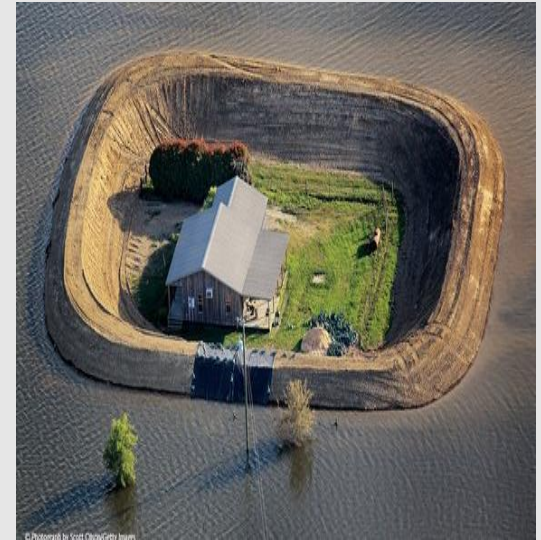




WHAT ARE THE MAJOR FACTORS/TRENDS?

Environmental Trends





EXTREME WEATHER TRENDS

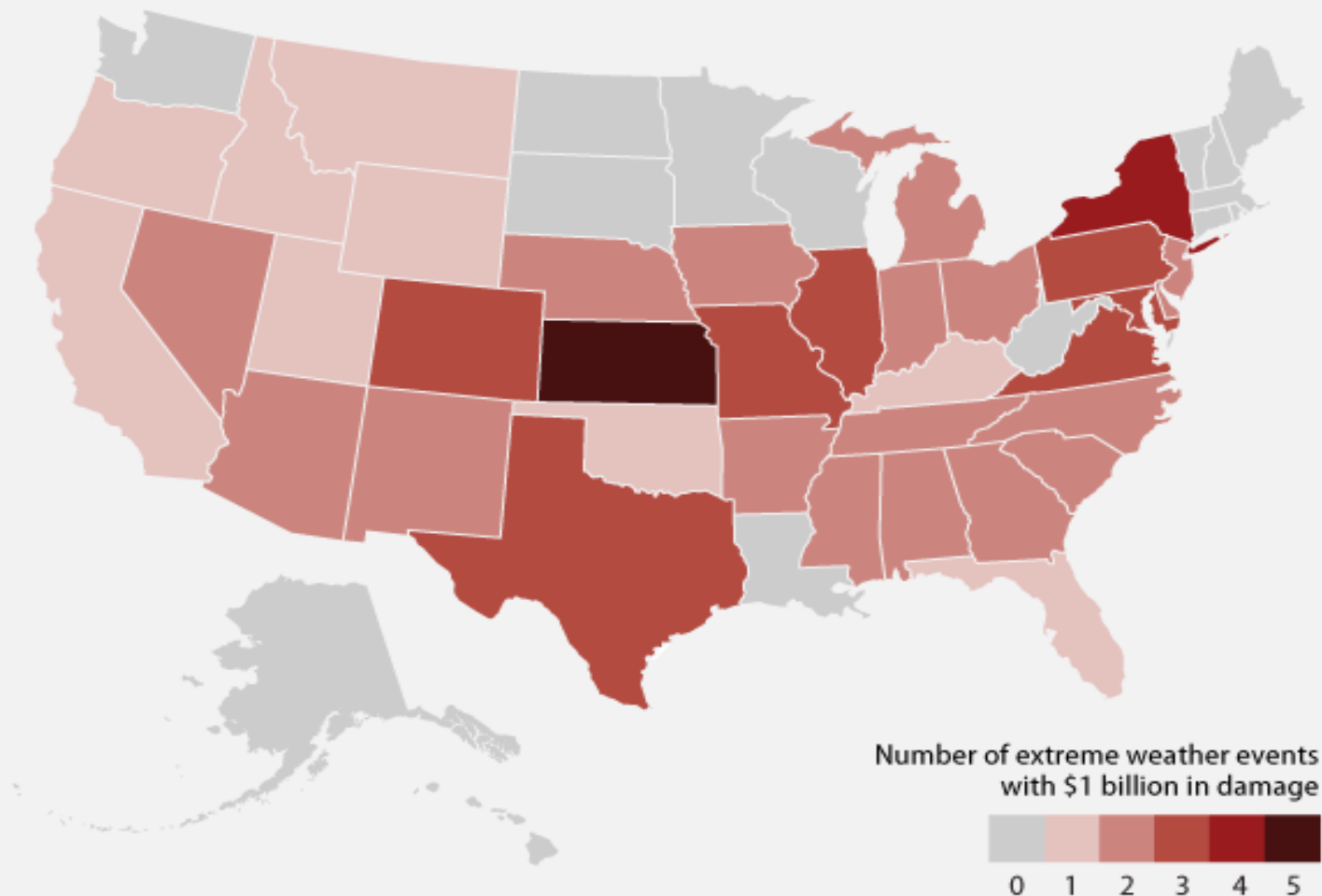
Concerns for the next 50 to 100 years:

- Sea Level Rise (virtually certain, 99% probability)
- Rise in Arctic temperatures (virtually certain, 99%)
- More very hot days with concomitant heat waves and fewer cold days (very likely, 90%)
- Changes in precipitation levels and frequency (very likely, 90%)
- Increase in the intensity of strong hurricanes (likely, 67% probability)

Extreme Weather

FIGURE 1

Most destructive extreme weather events in 2014



Sources: National Climatic Data Center, "Billion-Dollar Weather and Climate Disasters: Table of Events," available at <http://www.ncdc.noaa.gov/billions/events> (last accessed March 2015); 2014 Impact Forecasting documents at Aon Benfield, "Thought Leadership," available at <http://thoughtleadership.aonbenfield.com/Pages/Home.aspx?reportcategory=Impact%20Forecasting> (last accessed March 2015); National Drought Mitigation Center, "U.S. Drought Monitor Map Archive," available at <http://droughtmonitor.unl.edu/MapsAndData/MapArchive.aspx> (last accessed March 2015).

Extreme Weather Impact on Infrastructure

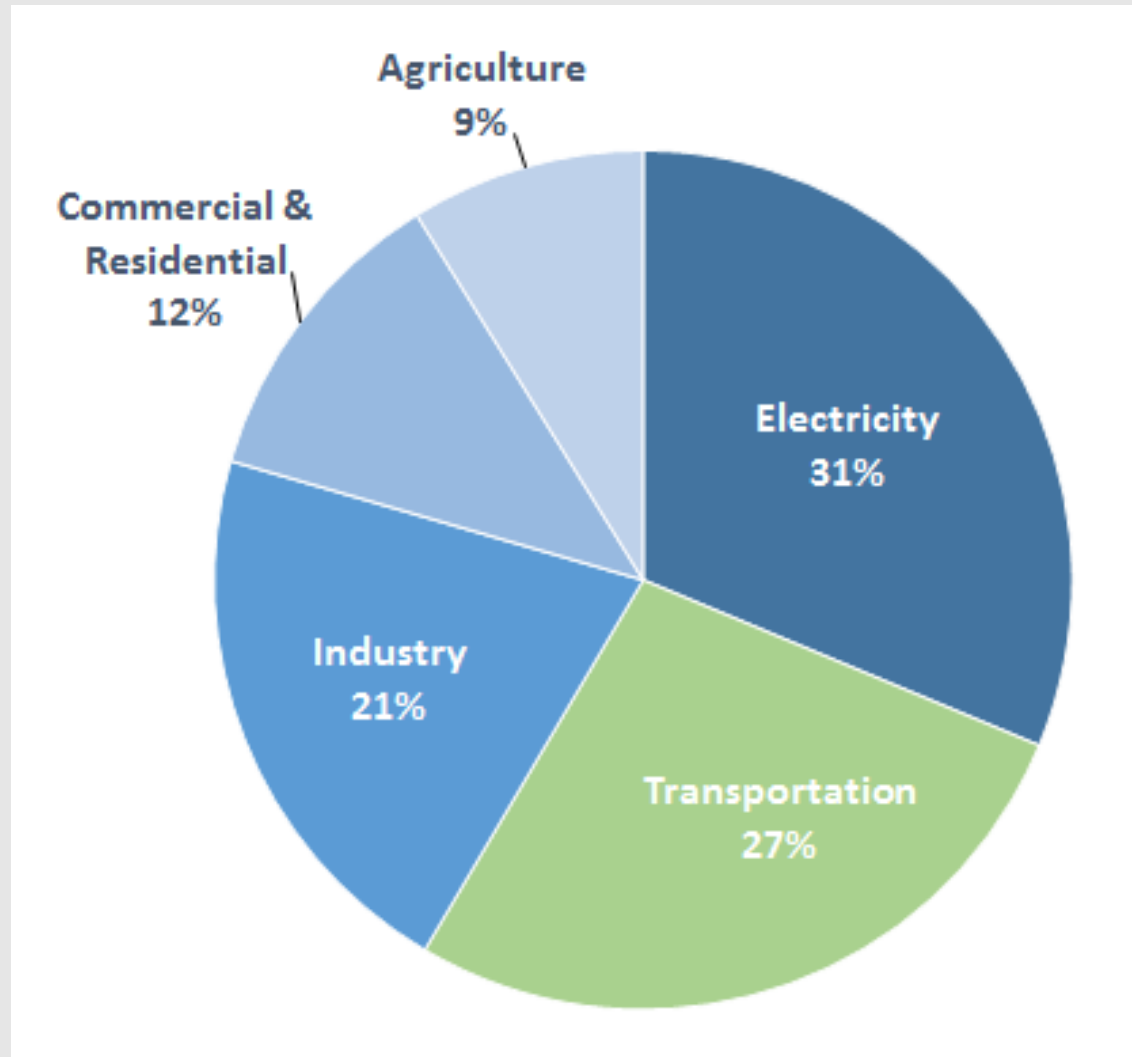


- Extreme weather events present challenges for freight transportation infrastructure
 - High sea levels destroy or displace ports, coastal highways, and railways
 - Temperature and precipitation extremes cause premature deterioration of infrastructure



REGULATORY RESPONSE

Total US Greenhouse Gas Emissions by Economic Sector in 2013



Environmental Protection Agency

Regulatory Responses

- Fuel Economy Standards
- Carbon Taxes
- EPA's SmartWay Transport Partnership







CONSUMER RESPONSE



WHY BUY LOCAL?

With current market conditions, it has become increasingly cheaper to buy distantly produced goods, despite the increased costs of packaging, transport, inspection, and associated expenses. However, along with lower prices comes the added cost of repercussions on the environment and impacts on the economic wellbeing of your community.

Aircraft transport has **greater fuel consumption** and greenhouse-gas emissions per mile than **any other mode of transport**.



Transportation by shipping produces **emissions of 1 billion** metric tons of CO² and uses **11 billion gallons of fuel** per year internationally.

2007



The U.S. imports **\$2.2 TRILLION** worth of products yearly from over **150 COUNTRIES**.

Imports by Mode of Transportation

2007



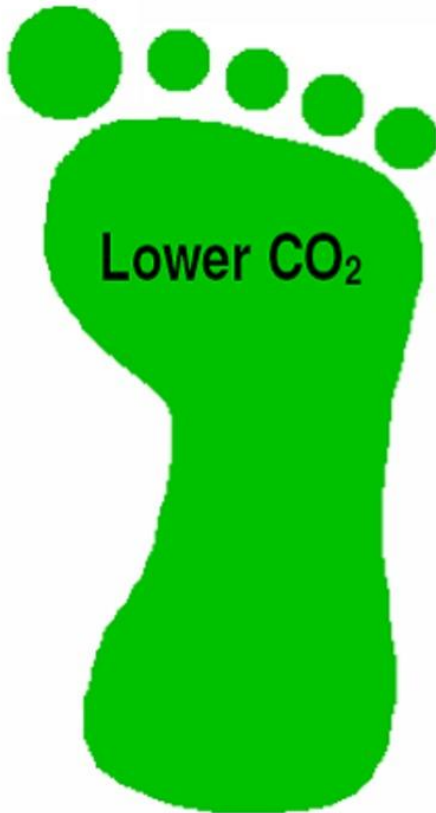
The amount of sulphur oxide pollution that comes from **THE 15 LARGEST SHIPS** equals the combined amount coming from all the **CARS IN THE WORLD**.



- Changing consumer demand
 - Increase in awareness, campaigns for buying local
 - Demand for sustainably produced products
 - Concern about carbon footprint
 - Carbon labeling

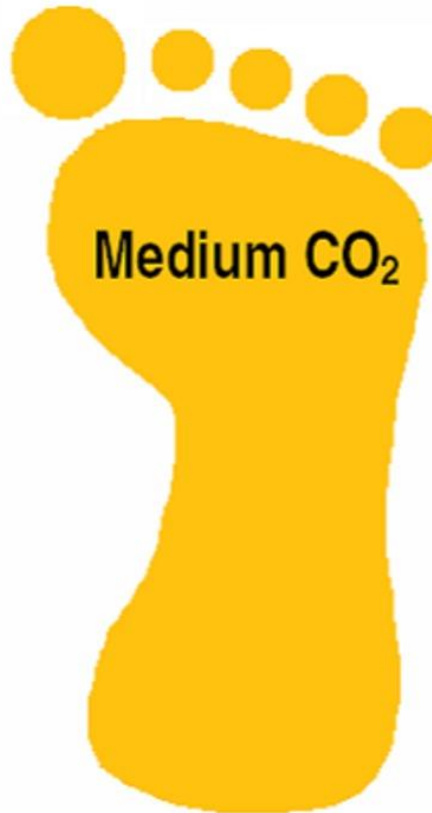
Consumer Response

Brand AAA 375g



Better for the environment

Brand BBB 375g



Brand CCC 375g



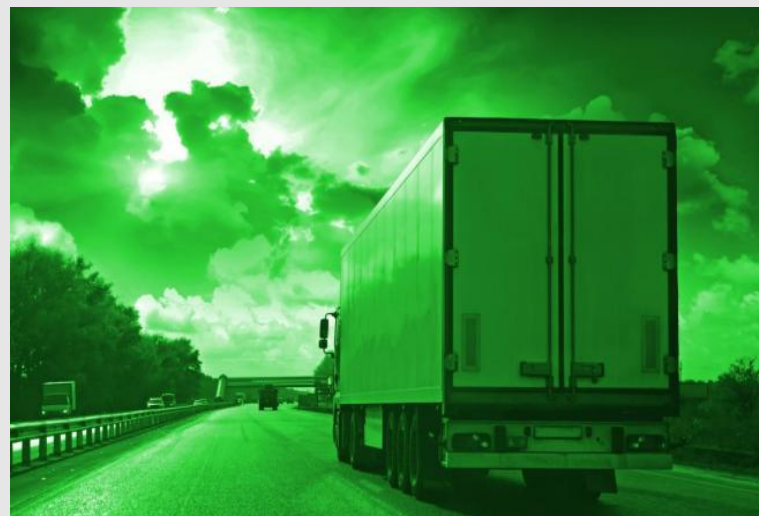
Worse for the environment

Consumer Response





INDUSTRY RESPONSE



Industry Response

- Green supply chains
 - Alternative fuels
 - Fuel efficient trucks
 - Sustainable Shipping Initiative



- Improving fuel efficiency
 - Fuel cell trucks
 - Improved vehicle utilization



- Improve efficiency/redundancy of supply chains:
 - Optimization of transportation routes
 - Consolidation of multiple orders
 - Reverse logistics
 - Modal diversity

Industry Response



- Extreme weather will impact infrastructure in the future
- Freight community is responding to climate change trends
 - Regulatory response
 - Consumer response
 - Industry response