

Climate change connections to extreme weather events in the media 2021

Context

We want to know how often connections are being made to climate change whenever an extreme weather event happens. To do this, we picked 3 events that happened in 2021 as a pilot for our study:

1. Marshall Wildfire in Boulder/Denver, CO (Dec 30, 2021)
2. Heat Wave in Oregon/Washington (June 28, 2021)
3. Hurricane Ida & remnants:
 - hurricane in Louisiana (August 29, 2021)
 - flash flooding in New York/New Jersey (Sept 1, 2021)
 - tornadoes in Maryland, Connecticut, Pennsylvania (Sept 1, 2021)

Methodology

First, we gather news articles to answer basic questions surrounding the 3 extreme weather events (what areas were impacted/how, when were the events, how much did the event cost us - lives/financially, etc) to gather information on the events. After this, we read articles comparing climate change and the media to get a sense of what others thought so we had an idea of how to run our analysis.

Marshall Wildfire analysis: This wildfire was first reported around 11am on Dec 30th so for an initial sample we gathered local news data that was broadcasted between 5-7pm for the DMAs that were not impacted (all DMAs but Denver and Louisville for ABC) and mentioned **fire**.

We grabbed 137 segments - it is important to note that information regarding the anything related to fire can be found here (ex: fire spreading, gun fire, teacher fired, etc.)

First run of data: I was curious to see what words were coming up as an initial view of the data: word cloud & word frequency

1. Data was pulled into a text file.
2. Used python/pandas/jupyter notebook to clean data
 - remove punctuations
 - removing stopwords (the, city, tonight, etc)
3. Came up with a list of words that felt related to climate change (https://en.wikipedia.org/wiki/Glossary_of_climate_change)

List:

- adaptation
- all-time
- arctic shrinkage
- carbon

- carbon dioxide
- carbon footprint
- carbon offset
- carbon tax
- celsius
- climate
- climate change
- climate crisis
- climate justice
- crisis
- degree
- ecosystem
- energy
- environmental
- extreme weather event
- fossil fuel
- glacial
- global
- global climate
- global cooling
- global warming
- global warming controversy
- global warming denial
- greenhouse
- greenhouse debt
- greenhouse effect
- greenhouse gas
- greenland ice sheet
- historic
- historical temperature record
- history
- ice sheet
- megadrought
- meteorologist
- meteorology
- mitigation
- natural
- nitrous oxide
- ozone
- planet
- policies
- policy
- pollution
- record
- record-breaking
- renewable resource

- report
- reversable
- reverse
- science
- scientist
- sea ice
- sea level
- sea-level
- sea-level rise
- solar
- warm
- warming

4. Ran percents of how often those words came up if at all

- Found that of the words selected for the climate change related words they appear 2.5% of the time.
Found that 17 words made up the 2.5%:

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severe  
historic  
report  
record-setting  
life-threatening  
meteorologist  
record  
climate  
all-time  
scientist  
crisis  
policy  
global  
warm  
hottest  
unprecedented  
degree
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