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Comment on gc-2022-8

Anonymous Referee #1

Referee comment on "Is there a climate change reporting bias? A case study of English-language news articles, 2017–2022" by Chloe Brimicombe, Geosci. Commun. Discuss., https://doi.org/10.5194/gc-2022-8-RC1, 2022

GC-2022-8: Storming the news media…

Revisions

This is an interesting topic and deserves critical attention. Yet the present manuscript muddles several things together, which makes it difficult to discern if the research aims have been met, and what the overall take-home messages are. Below I have made some suggestions to improve the readability of the piece.

First, I think the title needs to be revised. Unless you have read the article it's unclear what the 'storming the news media' means, and even after reading the article I'm not sure this is the central finding. A title that is clearer (and more descriptive) would be preferable. For example, "Is there a climate change reporting bias? A case study of English language news articles, 2017-2022".

Second, the results section is very hard to read. I had to read many sentences several times to fully understand what was being communicated. My advice is to divide the results section into three parts: (1) have the number of weather hazards news article increased since 2017?; (2) which weather hazards receive the most attention in news articles?; and (3) how often is climate change discussed in these news articles in relation to weather hazards?. Each section could be discussed in 3 or 4 sentences, giving more space for the discussion.

Third, the conclusion should be rewritten. Rather than repeat the findings, tell the reader what the findings mean and why they matter. Why does it matter if this a bias in reporting extreme weather events? Is it because people may be left unprepared for one risk over another? Money may be invested in one problem compared to another? Or because invisible risks continue to persist until they reach a critical tipping point? Without this, does it matter if floods are reported more than heatwaves? And what should be done about this?

Lastly, there are some questionable calculations throughout the manuscript, where the aggregate findings are correlated with other data points. I'm mindful that, on face value, the calculations may be a little misleading, and worst, meaningless (see comments below). It's a pity that no information is provided on where the weather hazards occurred, or where the news articles focus their attention. Do they, for example, only report on storms in Europe? Overall, I think the paper is trying to do too much. My advice is to strip back much of the results and wider findings and concentrate on what was done, what is reliable, and what this tells us. Also, in trying an experimental analysis, what can other researchers learn from this experience?

Below are other points that need to be addressed:

- Delete line 7. It's unclear and adds little.

- Rephrase lines 8 and 9 to: "How weather hazards are communicated by the media is important. Which risks are understood, prioritised, and acted upon, can be influenced by the level of attention they receive. In this paper,…".
- Rephrase line 12 to: "hazards floods, heat waves, wildfires, storms and droughts from 2017-2022".
- Rephrase lines 12, 13 and 14 to: "Storms are more likely to be reported than any other climate risk. But wildfires generate more news articles per event. Bias in reporting needs to be addressed.
- Lines 30, 31, 32, 33, 34, and 35 change to "The IPCC's AR6 report… have increased in intensity and frequency (IPCC 2021). Since 2017, there have been a number of notable weather events: Pacific Typhoon season 2018, European floods in 2021, Mediterranean heatwave and wildfires in 2021".
- Line 39 and 40 change to: "to highlight the risk of extreme weather and what action is needed".
- Line 41 delete "previously".
- Line 41 change to "found that the media often gives".
- Line 42 change: "outlier" to "sensationalist"
- Line 44 delete "previous".
- Line 48 delete "this is".
- Line 50-54 change to: "Reported here for the first time, this study uses open science principles (Armeni et al. 2021; Nosek et al. 2015) alongside the advanced search tools provided by Google, and the emergency database (EM-DAT) (CRED 2020), to examine how weather hazards are mentioned in news articles, from 2017-22. The aim is to understand: (1) has the number of articles focused on weather hazards increased since 2017; (2) which weather hazards receive the most attention; and (3) how often is climate change discussed in relation to those weather hazards".
- Line 60: Not sure this is the correct definition of 'open science'.
- Line 64 change to: "The search involved two stages: first, a search for all news articles in the period containing keywords – flood, heat wave, wildfire, storm and drought, was conducted, and second, this search criterion was repeated with the keywords – climate change".
- Line 69 delete "Further".
- Lines 73-76, I'm not sure the logic for removing 21% of the articles makes sense. This calculation assumes that there is an even distribution of relevant and irrelevant news articles not only in the sample chosen, but also the rest of the articles collected. A clearer explanation is needed here.
- Line 77 is unclear. Please rephrase.
- How do you know the search results returned from Google are news-articles? What process was involved in determining that the articles came from news outlets and were written by journalists?
- Line 87 – who is the 'we' in this sentence? Or 'us' in line 91 and 93?
- Could Table 1 be reformatted so that it includes the data for the weather hazards per year? For example, a column for 2017, 2018, 2019, 2020, and 2021. Then the reader can learn the frequency of the events – before understanding the frequency of the reporting. That is, there were 10 droughts in 2017.
- Line 99: what are the biases?
- Line 111 is imprecise. Do you think the number of articles has increased year-on-year? That the number in 2021 is more than in 2017? Or something else? The current phrasing suggests a comparative dimension, but what is being compared? No data is provided to pre-2017.
- Line 112: "More articles are written about storms each year compared to other weather hazards. Whereas the fewest number of articles were written about heatwaves each year".
- Line 115: write the full figure 169,000.
- Figure 1 is visually deceptive. Could a different style be used to illustrate the vast differences in reporting? Perhaps a treemap? Or a visual where the risks are

represented by their size?

- Line 122 is confusing to read. Are you saying that out of the 142 million articles, only 1.03 million discuss climate change and the weather hazard? If that is the case, you really should showcase it. "Of interest, only 0.7% of all news articles mentioned climate change and the weather hazard together. This type of reporting has increased year-on-on-year, however".
- Line 123-128 do not add much. Do you need to explain the rank order in relation to climate change? Is there a difference? If not, delete this.
- Lines 130-137, I am not convinced about the logic here. The disproportionate number of articles focused on 'storms' will make any correlations to events potentially misleading. Moreover, one 'storm' might generate 10x more articles than another, but this nuance is lost by aggregating the totals. I do not think this analysis adds anything, and instead it creates confusion. Indeed, this analysis is not needed to answer the paper's research aims.
- Lines 147-154 could be condensed in two sentences that explain that drought articles were more likely to include mentions to climate change, and floods the least.
- Line 177 change to: "which was attributed to climate change".
- Line 194 delete "in addition".
- Why is that the media are happier to attribute climate change to hazards associated with warming (heatwaves, droughts) and less willing to do so for hazards associated with wetness (floods, storms)?
- Line 210 change to: "There is a bias in terms of which weather hazards English language news media report on, and a bias in terms of which weather hazards are linked to climate change".
- A lot of space is dedicated to explaining if journalists link extreme weather events and climate change. But why is this important? Why does it matter if certain weather events are attributed more often to climate change than others?
- How were articles treated that focused on primarily on one weather event but mentioned others too?