1 **GC Insights: Storming the news media, the reporting of weather hazards during Northern**
2 **Hemisphere Summer 2021**

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7 **Abstract:** The news media has been identified as one of the ways weather hazard risk can be
8 communicated. However, hazards become subject to newsworthiness. Here, it is presented
9 that the media focus of Northern Hemisphere Summer 2021 was storms and flooding. This is
10 despite the fact there were also a number of high profile extremes for heat waves, droughts
11 and wildfires.

12 **1. Introduction**

13 Weather hazards are having an increasing impact on our lives. The latest IPCC reports
14 demonstrates that storms, flooding, heat waves, wildfires and droughts have been increasing
15 in intensity and frequency with climate change (IPCC,2021). The Northern Hemisphere
16 Summer of 2021 experienced a number of notable weather hazards, such as the Pacific North
17 West Heat wave and European Flooding in June and the Mediterranean Heat wave and
18 Wildfire in August (Kreienkamp et al., 2021; Sjoukje Philip et al., 2021; Sullivan, 2021).

19 Therefore, a mandate to highlight hazard risk and links to climate change became available
20 from the news media (Kitzinger, 1999). Using simple advance search tools provided by Google
21 allows for an examination of the English news media articles produced over the Northern
22 Hemisphere to answer the key questions: what weather hazard had the most attention? And,
23 how many articles also discussed climate change?

24 **2. Methods and Data**

25 A Google search was carried out for the period 1st June to 25th August 2021 as the Northern
26 Hemisphere Summer months of June, July and August come to an end. The individual search
27 selection was for all news articles in the period containing the keyword flooding, heat wave,
28 wildfire, storm and drought and then the search was carried out again this time including
29 Climate Change as a key word (cf. Brimicombe et al., 2021). Each hazard was evaluated

30   separately and their results compared. Limitations of this method are it can capture articles

31   not explicitly about the weather hazard and is only likely to capture the English news media.

32   **3. Results**

33   The hazard that had the most news media articles as a proxy for attention for Northern

34   Hemisphere Summer 2021 was storms. Storms had 39.6 million search results, more news

35   media articles than the other 4 weather hazards (heat waves, drought, wildfire and flooding)

36   combined (Figure 1). The weather hazard with the least number of articles is heat waves with

37   2.13 million articles (Figure 1).

38   Storms had the greatest number of articles also containing the word climate change (Figure

39   1). This was because of the sheer volume of news media articles. But, the hazard had the

40   lowest proportion of articles also about climate change, at under 1% of its total. Drought was

41   the hazard which had the largest proportion of articles including climate change at 3% of its

42   overall number of articles (Figure 1).

43   Overall, a small proportion of the total number of news media articles also included Climate

44   Change being less than 5% for all of the weather hazards. By number heat wave again had the

45   least number of news articles also considering climate change, despite having the 2nd biggest

46   proportion of total articles considering climate change at 2% after drought (Figure 1).

47   **4. Discussion**

48   This study's results highlight a huge reporting bias in favour of storms in the news media. This

49   is not because there has been an exceptional number of storms during this period in

50   comparison to the other hazards thereby causing more articles to be produced. The hurricane

51   season for example is not as active in 2021 as during 2020 (National Oceanic and Atmospheric

52   Administration, 2021).The 2nd most reported weather hazard during this period was flooding

53   which is often one of the impacts of storms (Kreienkamp et al., 2021).

54   Heat waves have the least amount of news media articles. This should not be of surprise given

55   other research demonstrating the consistent underreporting of this weather hazard

56   (Harrington and Otto, 2020; Vogel et al., 2019). It however, may be of surprise given the

57   number of record-breaking heat waves during this season such as the Pacific North-West heat

58   wave which was found likely to of been impossible without Climate Change (Sjoukje Philip et

59 al., 2021). In comparison, Drought also received a relatively low number of news media

60 articles. But, both Drought and Heatwave had the largest proportion of their articles also

61 including Climate Change of 3% and 2% respectively, showing that the links between these

62 hazards and climate change is explored more often.

63 How events get attention and are reported is subject to 'newsworthiness'. This is made up of

64 4 main factors: *the availability effect/heuristic which is if a hazard is presented as risk before*

65 *it is more likely to be remembered in this manner, stories from impacted groups,*

66 *geographically bound and are visually impactful* (Kitzinger, 1999; Tomlinson et al., 2011). The

67 results of this study show that the hazards that fit this criteria the most (Storms, Flooding and

68 Wildfire) had the biggest quantity of articles written about the hazard in Northern

69 Hemisphere Summer 2021. This is despite all the weather hazards posing an increasing risk to

70 the world as outlined in the latest IPCC report (IPCC, 2021). However, the bias where storms

71 and floods receive more attention is not just evident within the news media, with some

72 studies presenting how it is also evidence within Science and Research (Brimicombe et al.,

73 2021; Harrington and Otto, 2020; Howarth and Brooks, 2017; Vogel et al., 2019).

74 **5. Conclusion**

75 A bias existed in news media reporting of weather hazards during Northern Hemisphere

76 Summer 2021. This lead to storms having more news media articles than all other weather

77 hazards combined, this is not indicative of number of storms or risk. All weather hazard news

78 media articles should more often include climate change. Science should take a lead in

79 addressing the reporting bias through it's communication of research with the news media.

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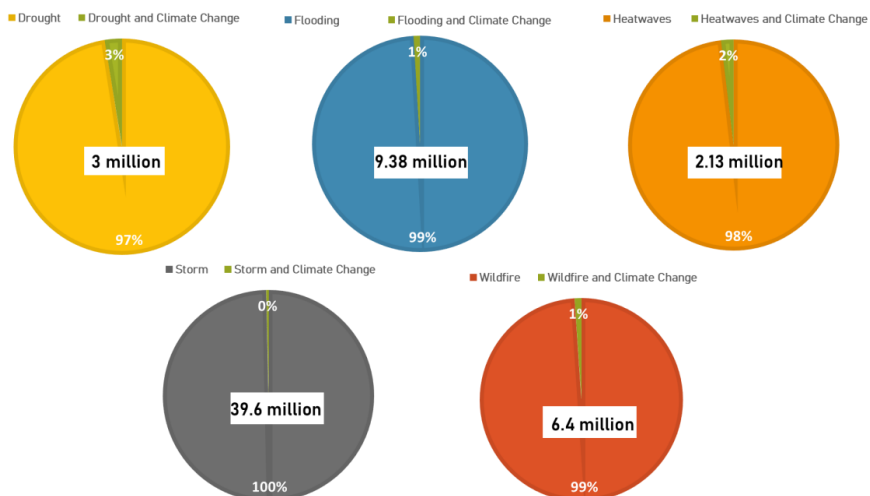
Figure 1: Showing the number of news media articles and the proportion of the articles that also discuss climate change for the weather hazards of drought, flooding, heat waves, storms and wildfire for the period 1st June to 25th August 2021 obtained through a Google keyword search.