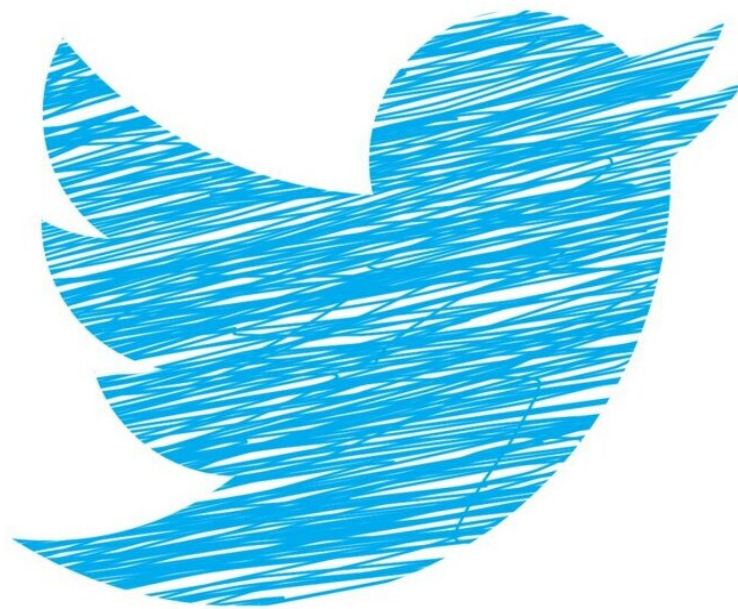


Study explores how social media users behave on Twitter during heat waves

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A first of its kind study into global Twitter activity during heat waves has revealed why social media should be leveraged to spread information about extreme temperatures.

The Charles Darwin University (CDU) study, in collaboration with Pardeborn University in Germany, explored how social media and in particular Twitter, can be used to understand how people feel about [heat waves](#) and how they respond.

It examined 62,920 tweets made between January and April of 2022, when there were above-average temperatures in Asia, South America, the Atlantic and Pacific Oceans and Australia. The tweets were searched based on a series of keywords including "heat wave," "heat warning" and "heatstroke."

The study, one of the few to investigate [social media use](#) during extreme heat, found 66% of tweets discussed climate-related extreme heat and heat waves. Topics of discussion included health impacts at 20% and extreme weather and climate change at 17%. The study, "Responses to heat waves: what can Twitter data tell us?" was published in the journal *Natural Hazards*.

CDU Associate Professor and lead author Kerstin Zander, from the Northern Institute, said the research affirmed the importance of using social media to share vital information about [extreme heat](#).

"Our analysis suggests that many Twitter users are aware of heat or heat waves and that social media can help to disseminate information about [extreme temperatures](#) and weather updates," Associate Professor Zander said.

"Many users employ Twitter to share how they feel about unbearable heat and Twitter communications were also used, albeit to a lesser extent, to talk about how to cope with and get relief from heat stress.

"We also identified the circumstances under which tweets are likely to be retweeted, including the role of timeliness and social networks, which

can help when organizations need to disseminate information in an emergency," Andy Nguyen, data scientist and co-author said.

Associate Professor Zander said the study showed users trusted Twitter accounts managed by scientists, science organizations and media corporations for credible climate information.

"We detected little fake news or account activities by users who disseminate false information about climate change and related heat, as can sometimes happen on [social media](#)," she said.

"The most prolific accounts belonged to individual scientists or scientific organizations. This suggests that people rely strongly on scientific information and traditional news channels during [extreme weather](#) events and that these channels are not having to compete with misinformation."

The data showed government emergency services did not feature highly among heat wave-related tweets.

More information: Kerstin K. Zander et al, Responses to heat waves: what can Twitter data tell us? *Natural Hazards* (2023). [DOI: 10.1007/s11069-023-05824-2](#)

Provided by Charles Darwin University

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