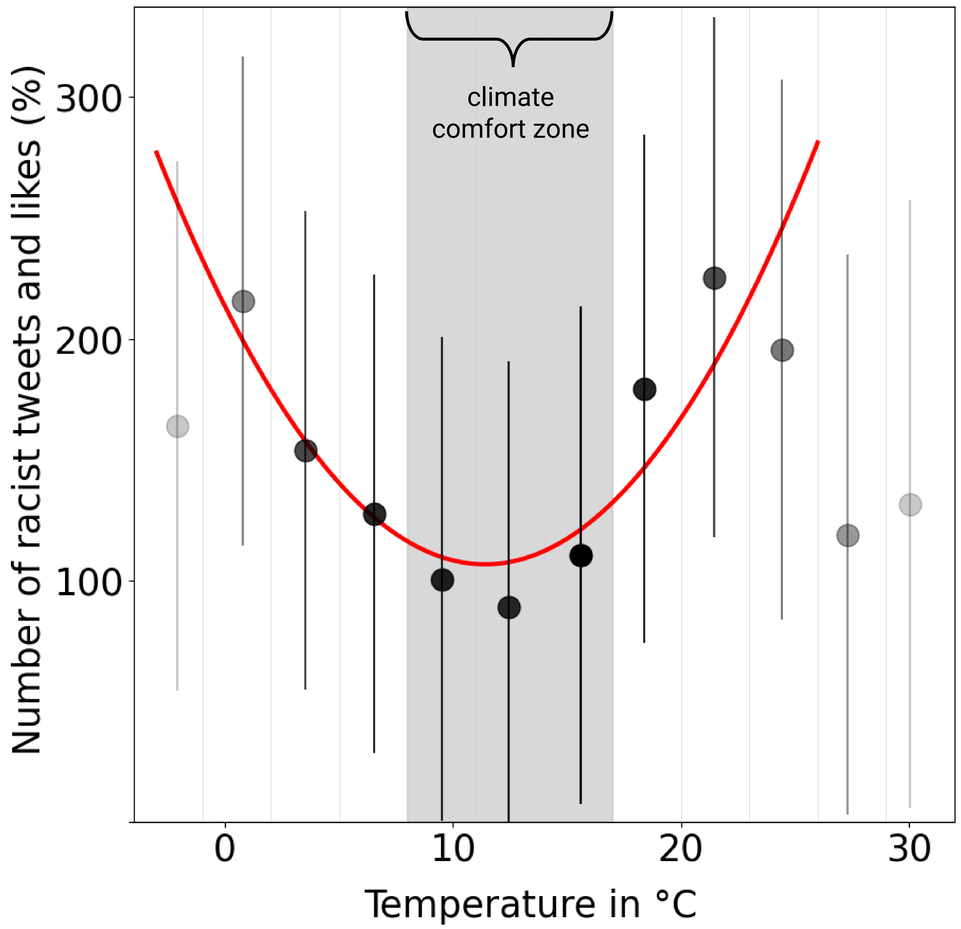
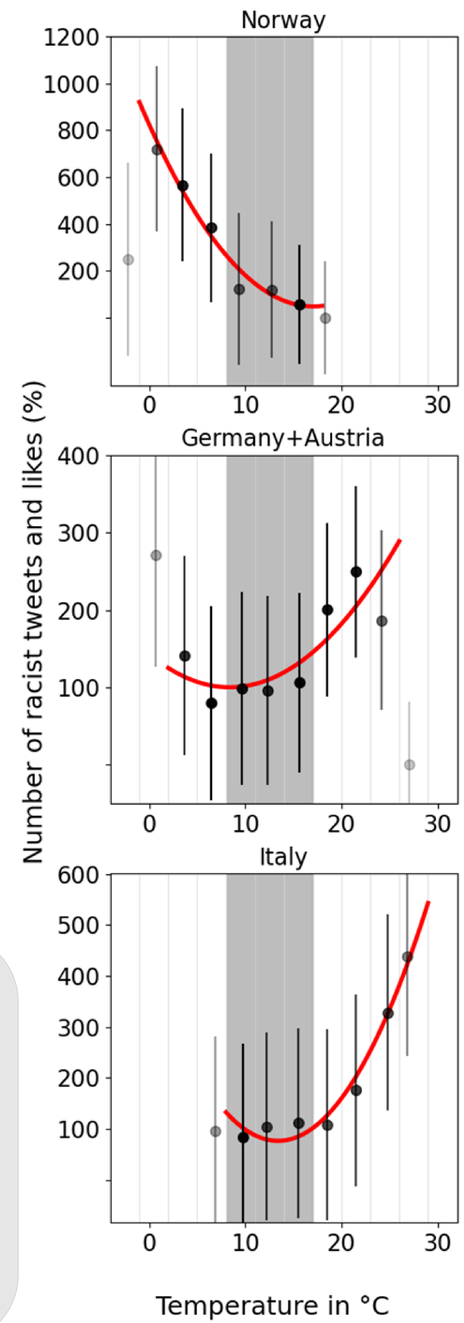
Strong increase of racist tweets outside of climate comfort zone in Europe

Annika Stechemesser, Maximilian Kotz, Leonie Wenz, Anders Levermann





- 10 million racist tweets in nine different European languages from multiple climate zones (2012-2018)
- binned fixed-effects panel regression model
- Quasi-quadratic non-linear relationship with low values between 8°C and 17°C (climate comfort zone)
- climate comfort zone is consistent for individual country analyses

PRESENTER
Annika Stechemesser
Stechemesser@pik-Potsdam.de

Approach

Step 1: Data Procurement

Identify tweets containing slur words.

Add tweets containing expressions that are offensive in combination.

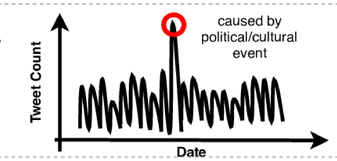
Obtain data sets in seven different uniquely spoken languages covering 2012 to 2018.

Step 2: Filtering and Aggregation

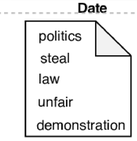
Remove duplicates.

Aggregate to daily level.

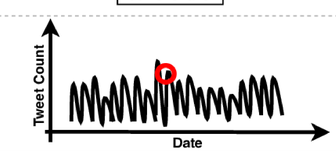
Detect non-temperature-related spikes using z-score outlier detection.



Identify the five most common words tweeted on these days omitting search words and stop words.



Remove all tweets containing these words and update tweet count.



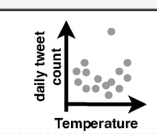
Step 3: Weighting

Multiply each tweet by the number of likes it received.

Check "viral" tweets manually and exclude if not racist/xenophobic.

Step 4: Tweets and Temperature

Match daily tweet count with population-weighted maximum temperature time series.



Add data for regression controls.

Input in regression model