

Are you talking about marine plastic pollution? An exploratory analysis of two years of Twitter conversations

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WHY?

Every day, about 200M people go on Twitter to share their updates, talk about their interests, and connect with others from all over the world. Although not as popular as platforms like Facebook or Instagram with billions of users, Twitter still has a loyal audience of those that log in on a regular basis. Users use this platform to spread large amounts of information on very diverse topics. For this reason, Twitter is a good place to observe citizen concerns about environmental issues, including marine ones.

HOW?

We have searched for tweets containing words 'plastic' or 'microplastic' in combination with any of these words: 'coast[s]', 'beach[es]', 'marine', 'ocean[s]'. The following languages have been taken into consideration: English, Japanese, Spanish, Portuguese, French, Italian, Malaysian, German, Turkish, Thai, Korean and Indi. Data pre-processing was required to eliminate unrelated tweets as far as possible.

THE TWILITTER DASHBOARD

To determine who, where, when, and for what reason marine plastic pollution is discussed, a data visualization dashboard called **Twilitter** has been developed. The analysis of ~500K tweets in 12 different languages posted during two years (1 Oct 2020 - 1 Oct 2022) shows, among other things, that London is the city from where this subject is tweeted the most, that World Ocean Day is the most celebrated date and that activity increases after the dissemination of news about relevant or impacting scientific advances. Knowing these data can be vitally important in aligning the messages of the institutions responsible for environmental protection with the interests and way of expressing themselves of the general public.

LOOK!



[HTTP://TWILITTER.HEROKUAPP.COM/](http://twilitter.herokuapp.com/)

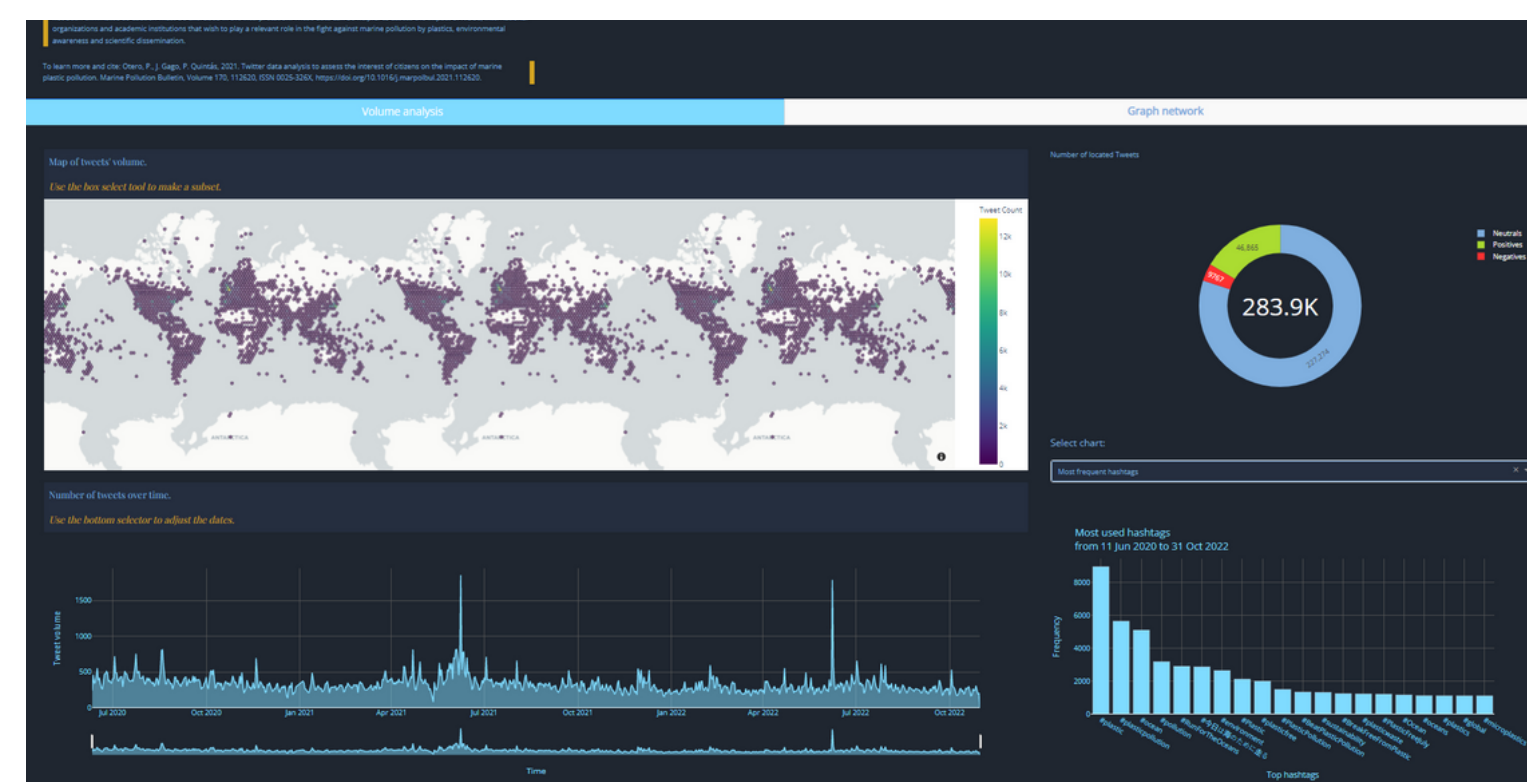


Fig 1. Screenshot of the Twilitter dashboard

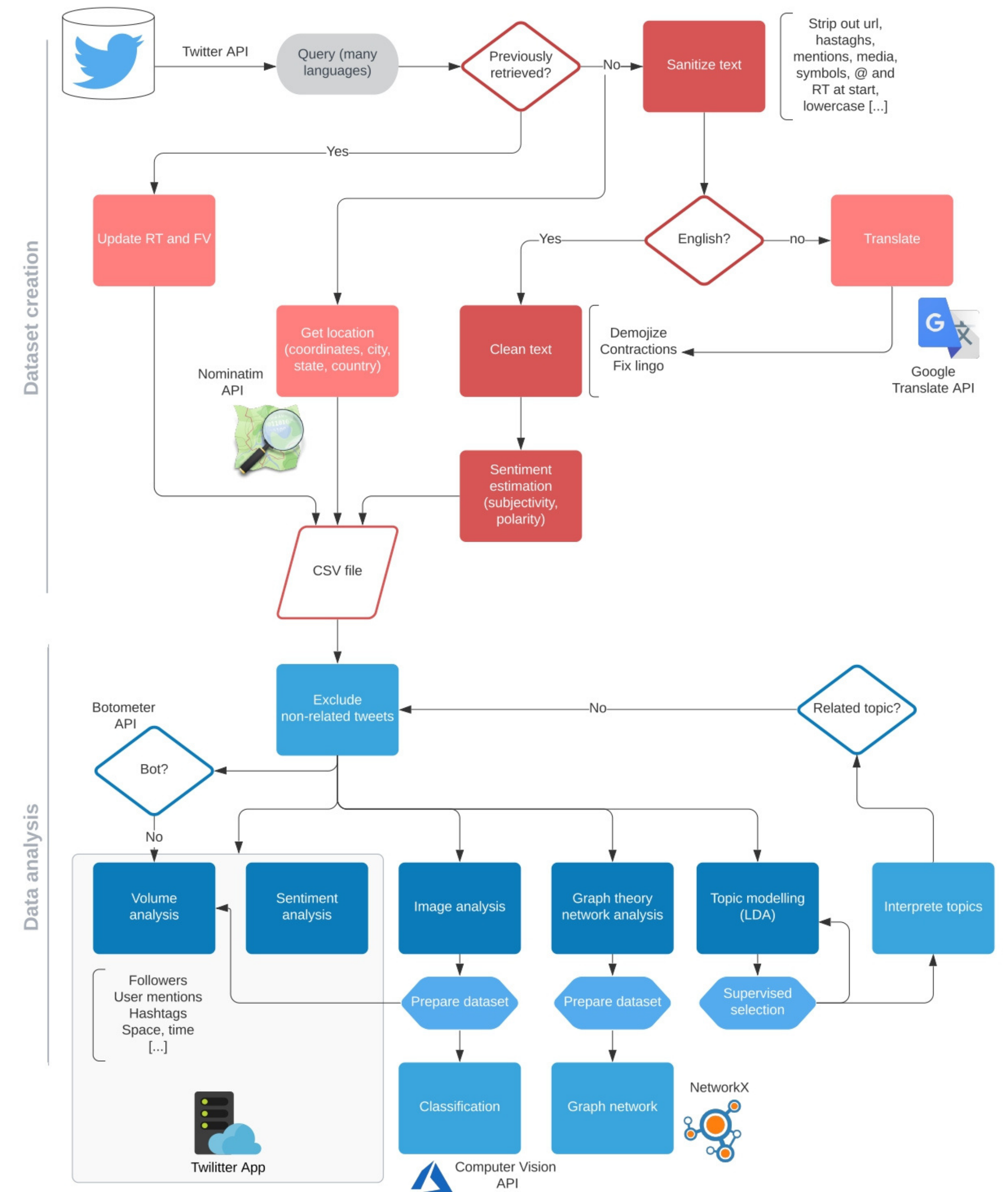


Fig 2. Flow chart showing the data processing steps

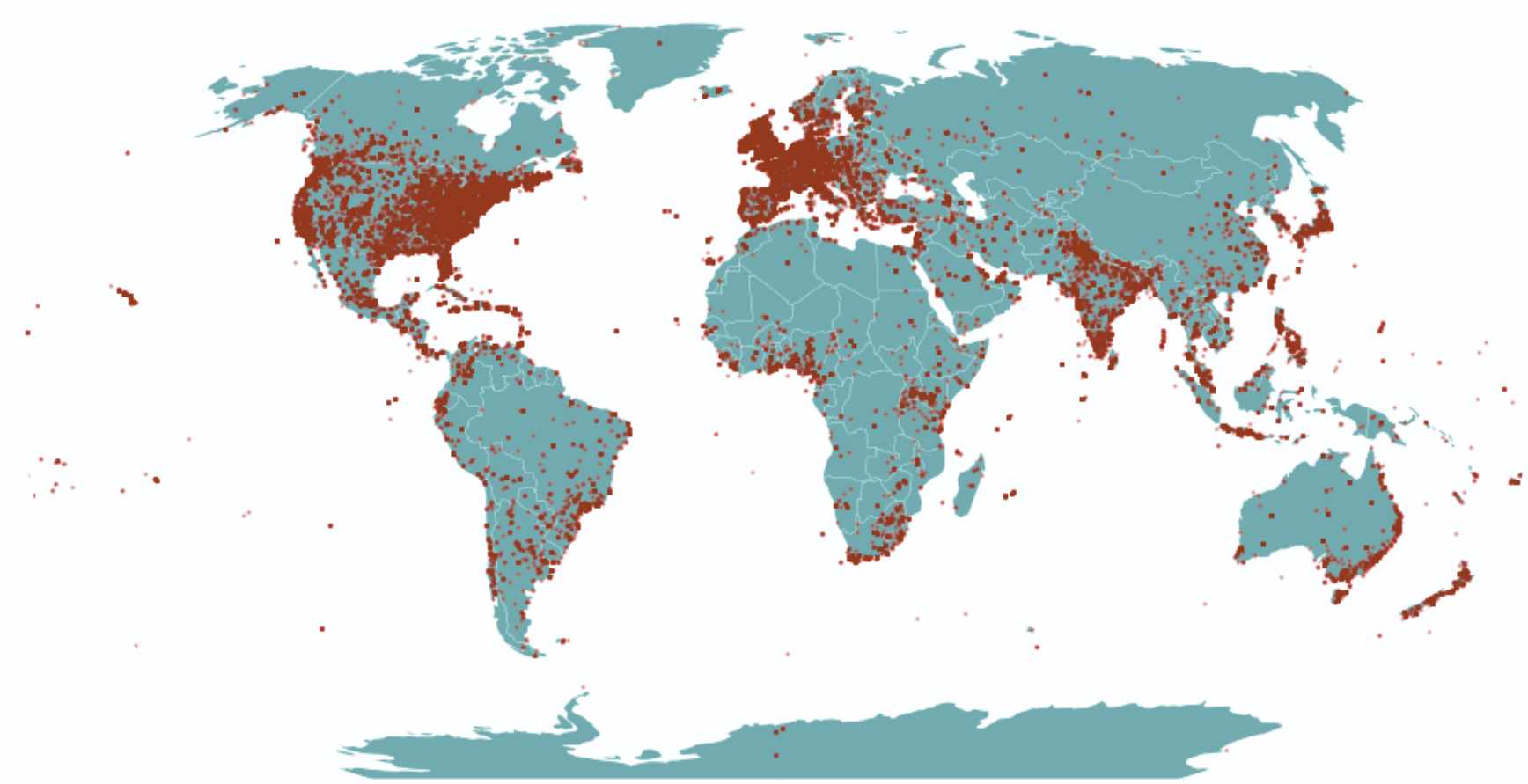


Fig 3. Worldwide distribution of tweets about marine plastic pollution

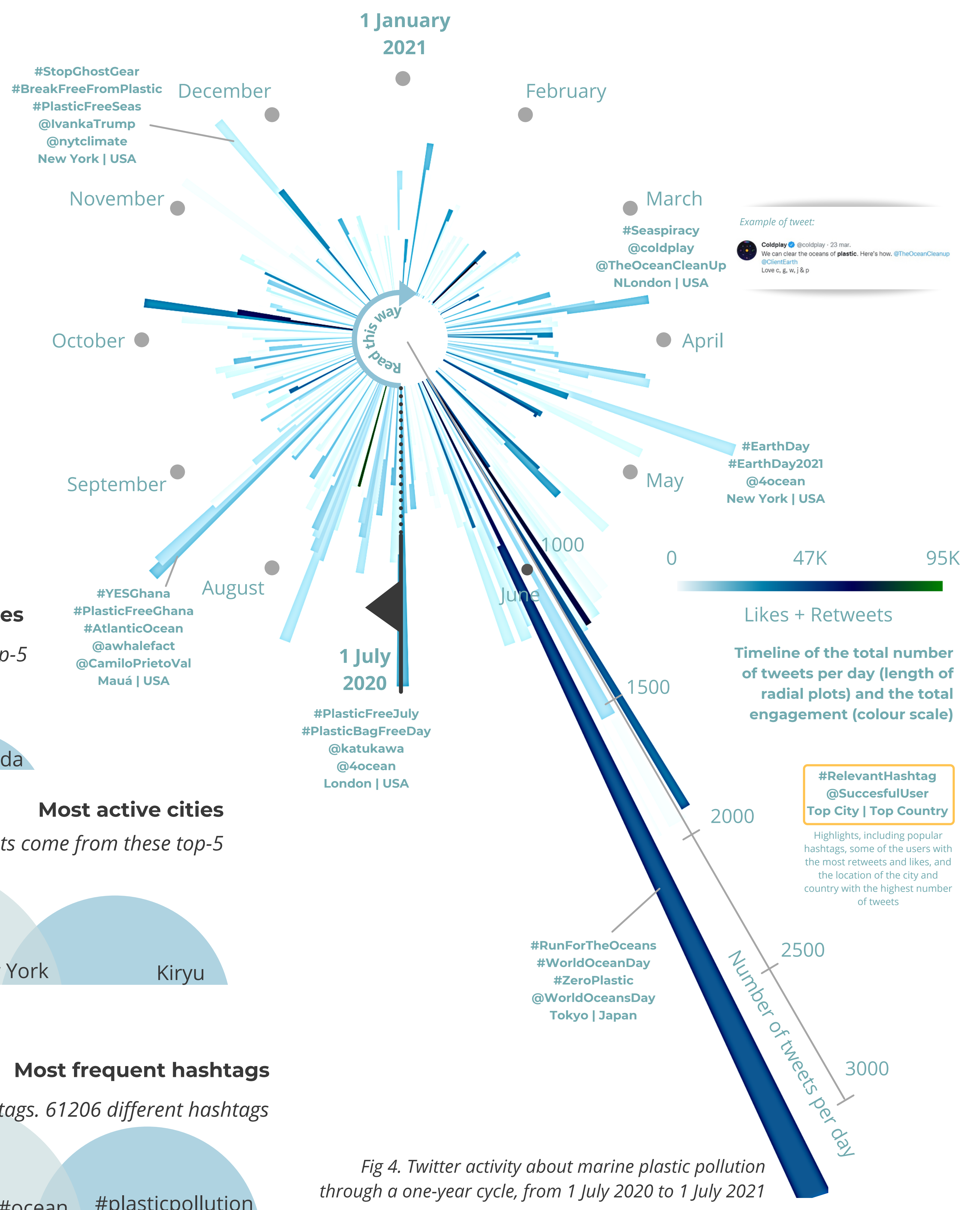


Fig 4. Twitter activity about marine plastic pollution through a one-year cycle, from 1 July 2020 to 1 July 2021

Areas of circles proportional to the number of counts.

Most speaking languages

93.4% of tweets come from these top-5

n ~ 340K

English Japanese Spanish French Portuguese

Most active countries

33.4% of tweets come from these top-5

n ~ 53K

USA UK Japan Spain Canada

Most active cities

4.6% of tweets come from these top-5

n = 8075

London Allerdale Tokyo New York Kiryu

Most frequent hashtags

57% of tweets contain one of these hashtags. 61206 different hashtags

n = 12654

#plastic #RunForTheOceans #今日は海のために走る #ocean #plasticpollution

= #runfortheseatoday

