

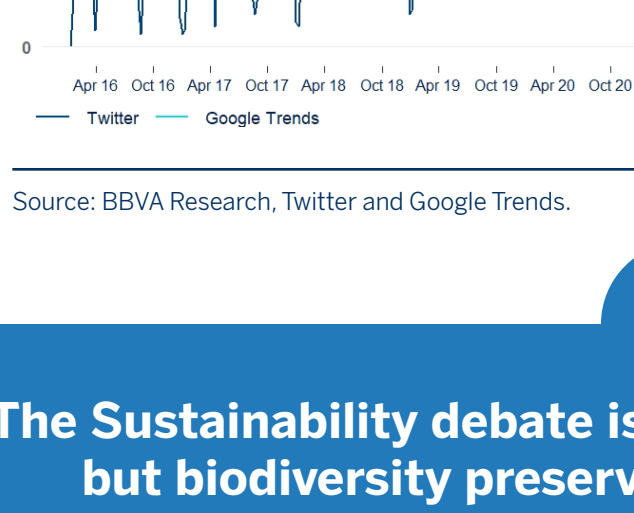
Understanding sustainability framework using big data

Insights from the global media, social network discussions and people's concern.



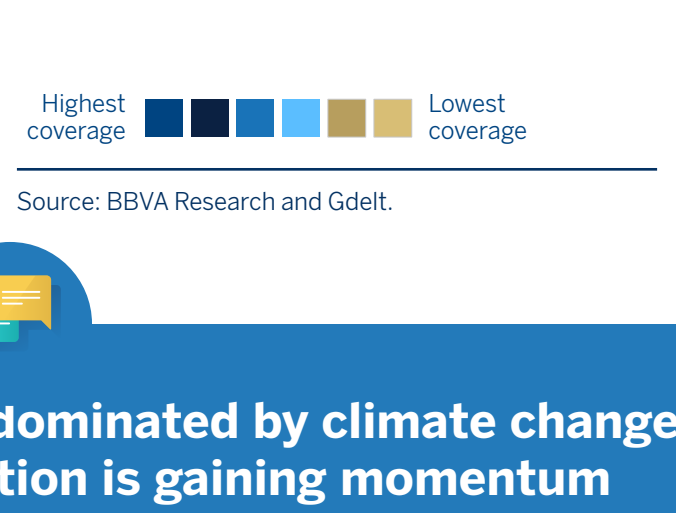
A growing social call to action on sustainability is spreading around the world at a rapid pace

SUSTAINABILITY COVERAGE IN SOCIAL NETWORKS (NORMALIZED DATA. 2016-2020, WEEKLY)



Source: BBVA Research, Twitter and Google Trends.

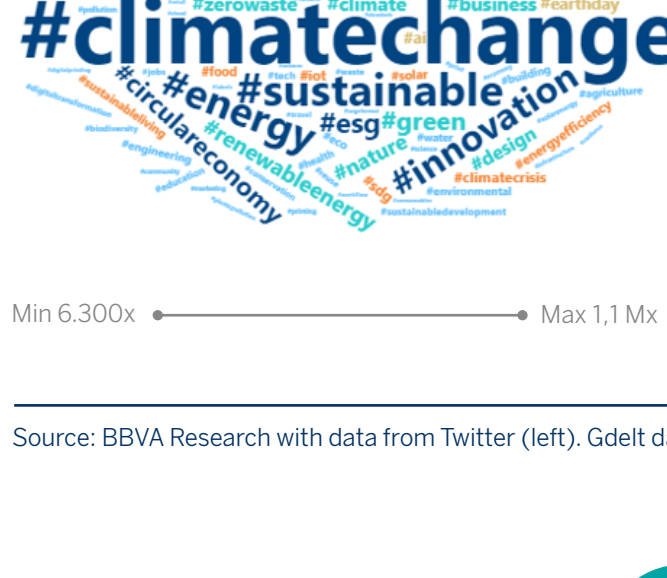
GLOBAL MEDIA COVERAGE OF SUSTAINABILITY BY COUNTRY (2020)



Source: BBVA Research and Gdelt.

The Sustainability debate is dominated by climate change, but biodiversity preservation is gaining momentum

HASHTAGS WORDCLOUD RELATED WITH SUSTAINABILITY IN ENGLISH TWEETS (SIZE AND COLOR ARE PROPORTIONAL TO FREQUENCY, 2019-2020)



Min 6.300x Max 1,1 Mx

Twitter conversation shows a clear dominant position of climate change in sustainability discussions.

Clear targets such as "2°C" place climate change awareness as the top priority in the quest for a more sustainable world.

At the same time, biodiversity preservation (i.e. environment) is also climbing up the list of people's interests.

Source: BBVA Research with data from Twitter (left), Gdelt database (right).

The debate is shifting from the political sphere to businesses and consumers

RELATED ORGANIZATIONS IN CLIMATE CHANGE GLOBAL NEWS (2016-2020)



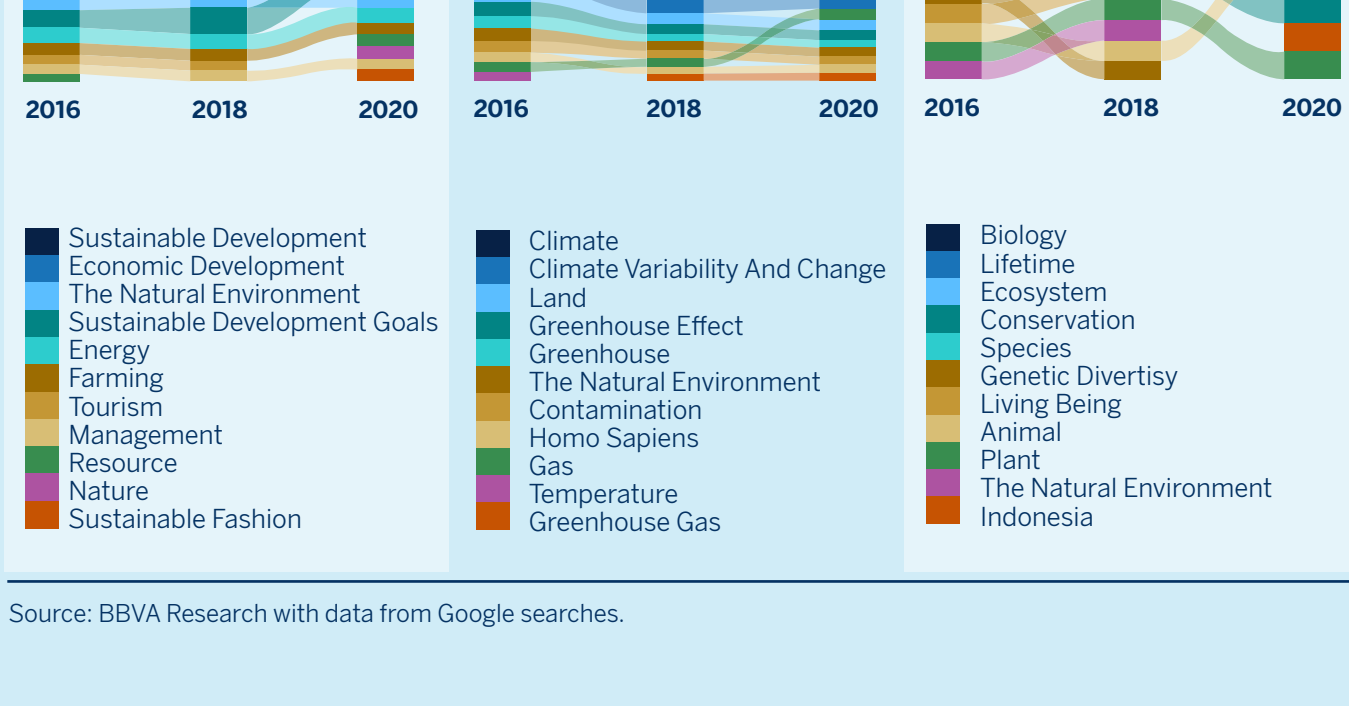
Corporates and the communications industry are showing an increasing engagement with sustainability

The United Nations remains the main actor in terms of media coverage. The European institutions are gaining ground in relevance, reflecting a more active role including the design of public policies to address a sustainable transformation of the economy (NGEU).

Source: BBVA Research with Gdelt database.

People is concerned about sustainable development, climate change and the ecosystem

GOOGLE SEARCHES (NORMALIZED INDEX. 2016-2020)

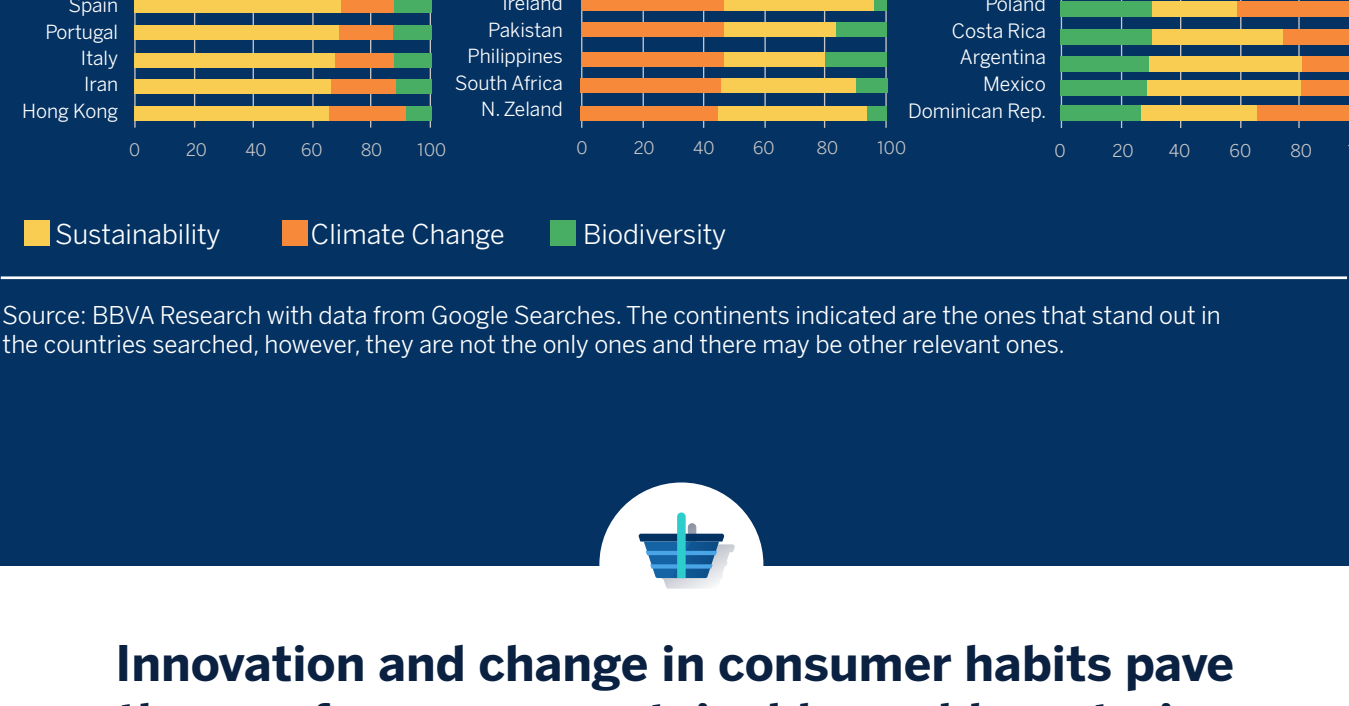


Source: BBVA Research with data from Google searches.

Sustainability, as a broad concept, concerns mostly European countries while climate and biodiversity are critical in other regions

Non-european regions, directly affected by particular sustainability-related consequences, show dominant concern for climate and biodiversity. Asian countries, the United States and Canada are more interested in climate change issues. Latin American countries, on the other hand, are clearly worried about biodiversity.

GOOGLE SEARCHES (NORMALIZED INDEX. 2016-2020)

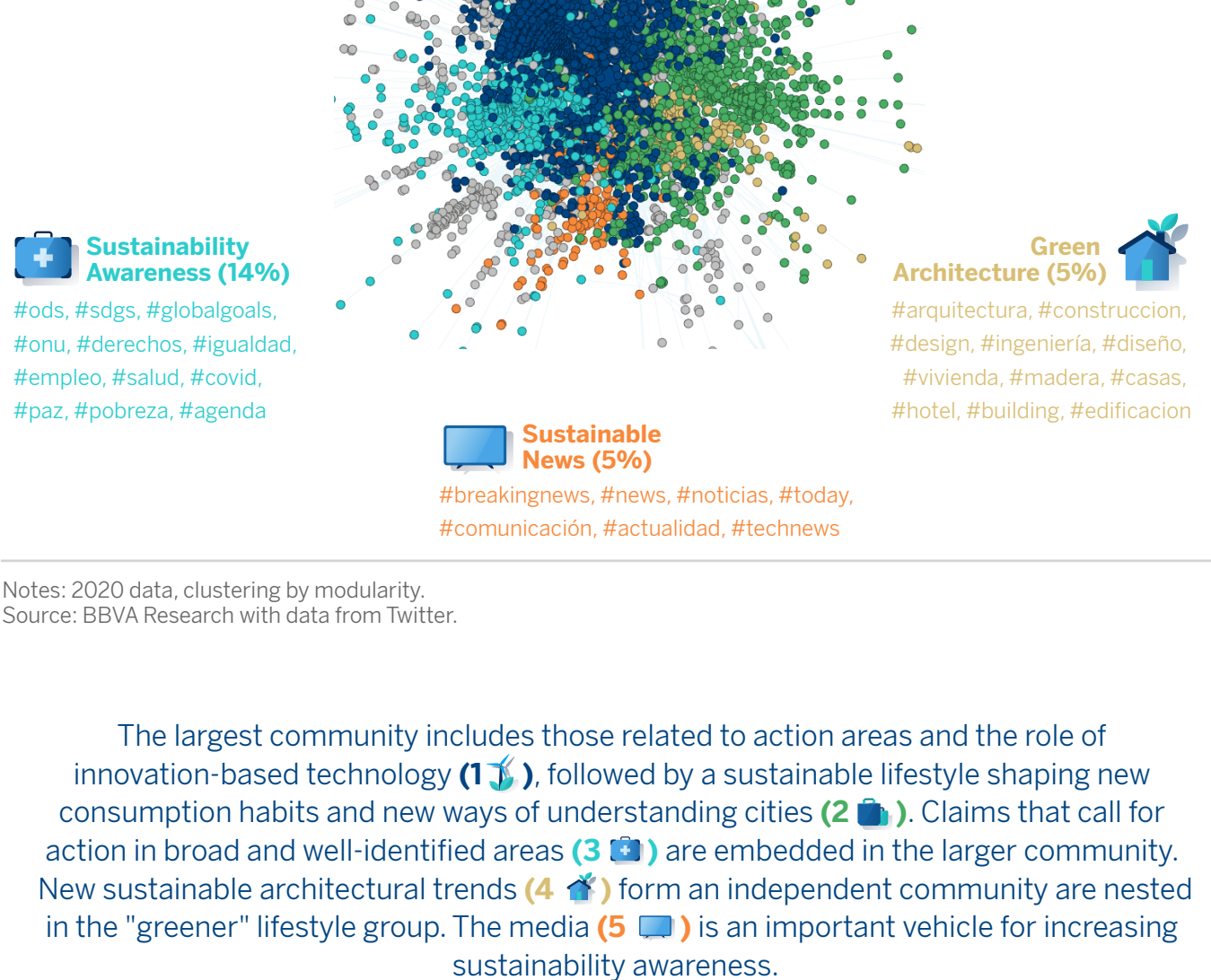


Source: BBVA Research with data from Google Searches. The continents indicated are the ones that stand out in the countries searched, however, they are not the only ones and there may be other relevant ones.

Innovation and change in consumer habits pave the way for a more sustainable world, centering the social networks debate

Increasing efforts of **transport, fashion** and **food** to be sustainable position them in the dialogue. Social issues such as equality and rights have a spot in the conversation too.

TWITTER HASHTAGS CO-OCCURRENCE NETWORK AND COMMUNITIES FROM SPANISH TWEETS



Notes: 2020 data, clustering by modularity. Source: BBVA Research with data from Twitter.

The largest community includes those related to action areas and the role of innovation-based technology (1), followed by a sustainable lifestyle shaping new consumption habits and new ways of understanding cities (2). Claims that call for action in broad and well-identified areas (3) are embedded in the larger community. New sustainable architectural trends (4) form an independent community are nested in the "greener" lifestyle group. The media (5) is an important vehicle for increasing sustainability awareness.

Financial and energy sectors dominate the sustainability debate. Spanish companies lead the Spanish debate in Twitter

Among the 30 most mentioned companies in Twitter conversations, out of a total of 500, **BBVA** highlights for the highest number of mentions in tweets related to **sustainability**, showing its relevant positioning in the discussion.

TOP MENTIONED COMPANIES IN SPANISH TWEETS (2020)



Source: BBVA Research with data from Twitter.