

Understanding Sustainability framework using Big Data

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

2021 April

Big Data sources used to understand the sustainability framework



GDELT monitors the world's broadcast, print, and web news from nearly every corner of every country in over 100 languages. It identifies the people, locations, organizations, themes, sources, emotions, counts, quotes, images and events driving our global society every second of every day.



Media Cloud includes selected media sources with print, broadcast and digital news collections. It allows to create an instant analysis of how digital news media covers any topic of interest, attention to the issue, the language used, and the people and places mentioned.

Google Trends

Google Trends shows the most popular search terms, in the Google browser, of the recent past. The data represents how often a search for a particular term is performed in various regions of the world and in various languages. It has the option of displaying news related to the search term, showing how events affect popularity.

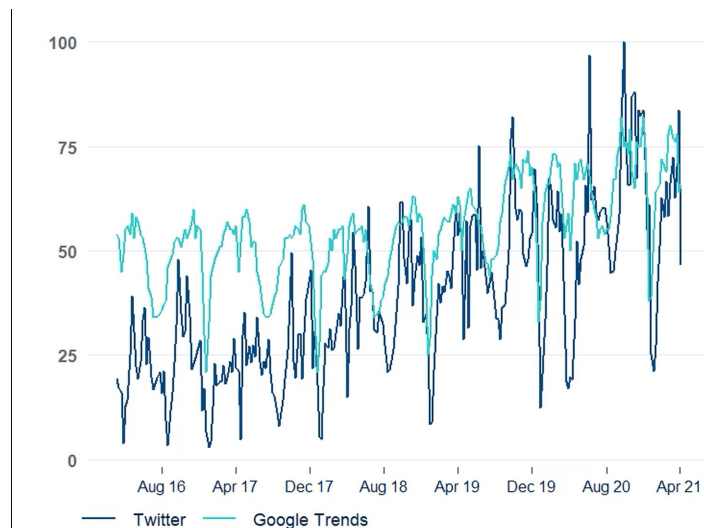


The **Twitter** network allows sending short plain text messages, with a maximum of 280 characters, called tweets that are displayed on the user's home page. Users can subscribe to other users' tweets. By default, messages are public, but can be broadcast privately.

An increasing social call for global action on Sustainability... is spreading across the globe...

Sustainability coverage in Social Networks

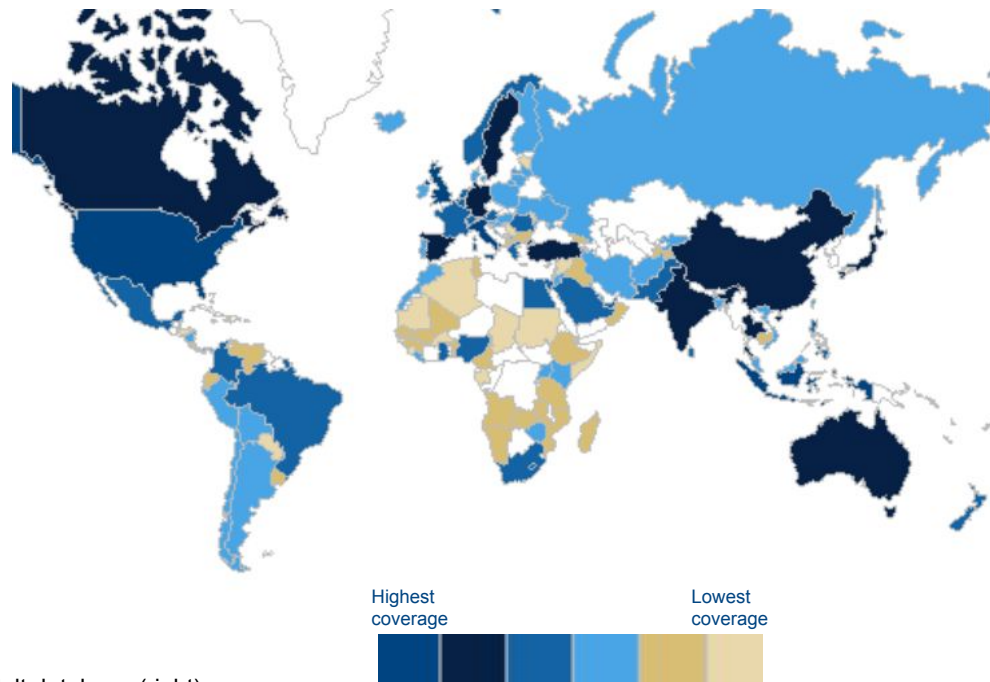
(Scaled data between 0-100. 2016-2021, weekly)



Click on the graph to activate the dynamics

Global media coverage of sustainability by country

(2020)



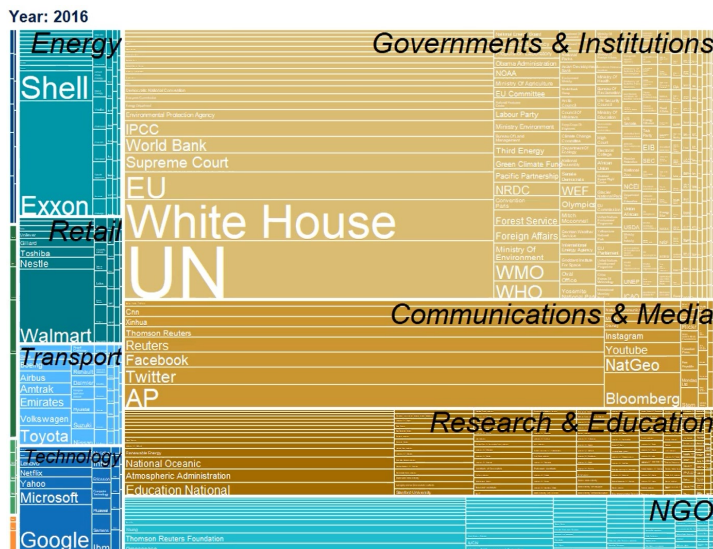
Source: BBVA Research with data from Twitter and Google trends (left). Gdelt database (right)

Click on the graph to activate the dynamics

... including the Business and Communications spheres, which show a rapid and increasing commitment on sustainability...

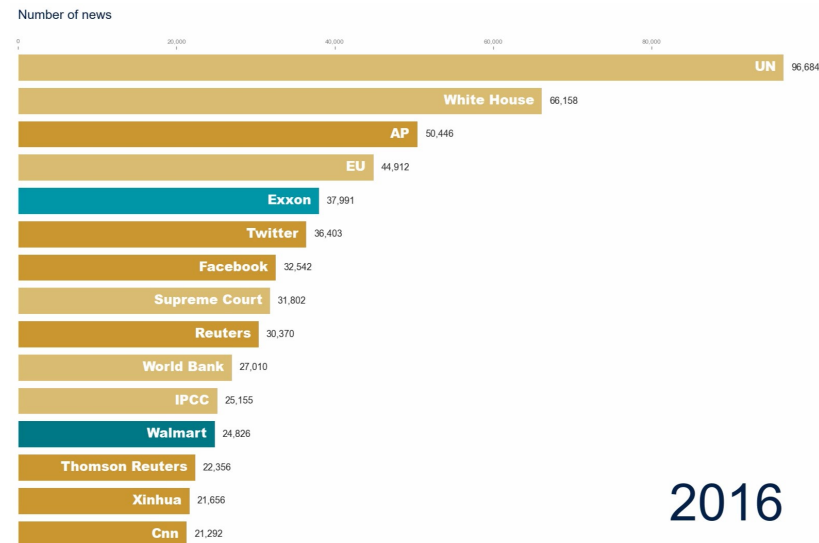
Private companies show increasing involvement in climate change action and have gained prominence in media coverage, which may point to a greater commitment. Media and social networks voices are also more active.

Related organizations in climate change global news (2016-2020)



Click on the graph to activate the dynamics

Top 15 organizations in climate change (2016-2020)



Click on the graph to activate the dynamics

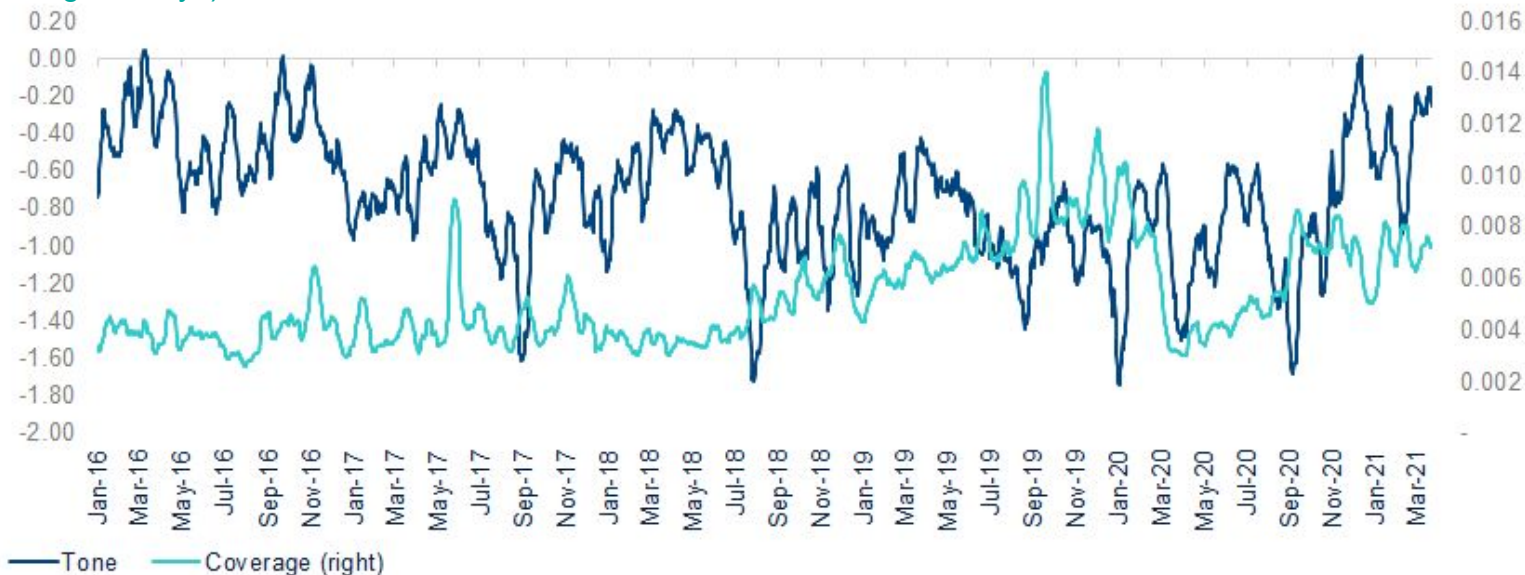
2016

Climate change perception has been dominated by a negative trend... and news about record temperatures shows the relevance of this fight

Governments' commitment to take more specific actions to reduce emissions has improved media sentiment since the last quarter of 2020

Climate change media evolution: coverage and sentiment

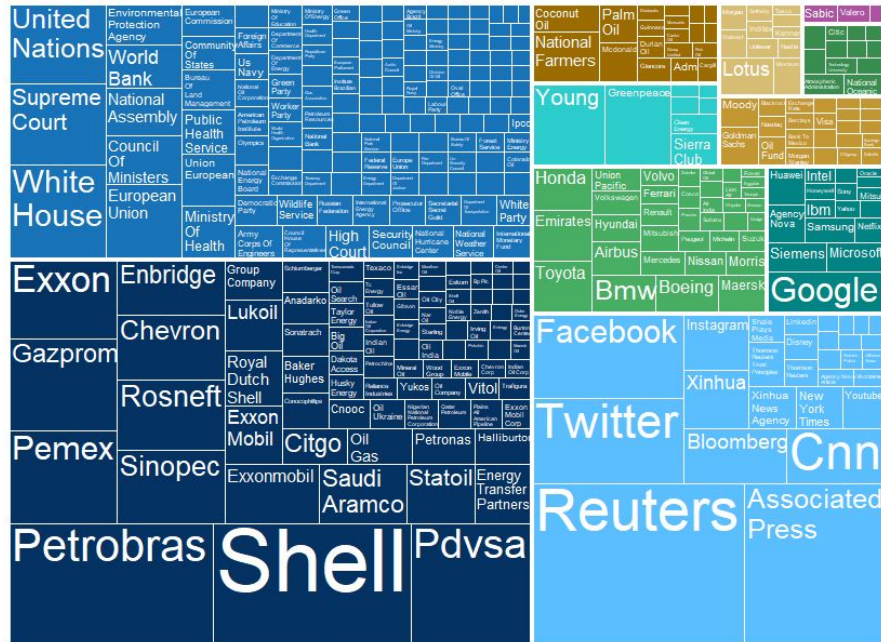
(Sentiment goes from -10 to 10. Media coverage is the ratio of climate change news over total news per day. Data is on mov.avg. 14 days)



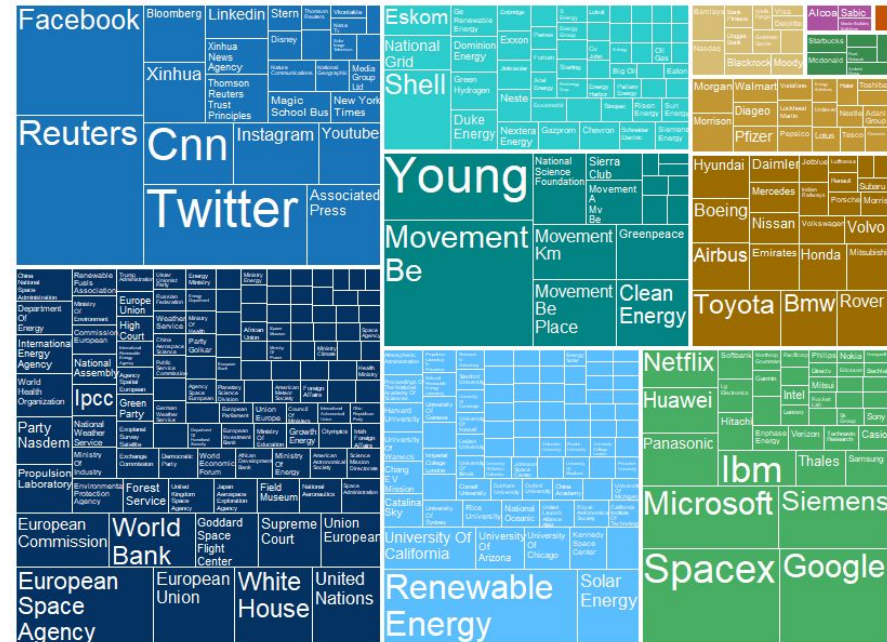
Source: BBVA Research with GDELT database

Technology companies emerge strongly as alternative modes for energy transition

Fossil energy companies mentioned in news (2020)



Renewable energy companies mentioned in news (2020)



Classification

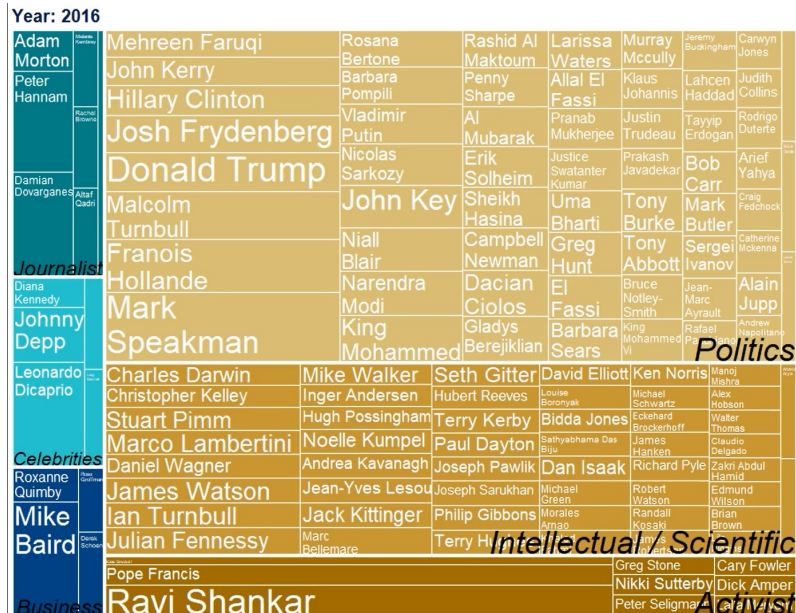
- Energy
- Governments & Institutions
- Communications & Media
- Transport
- Technology
- NGO
- Agrifood
- Finance & Consulting
- Retail
- Research & Education
- Chemistry Industry

Classification

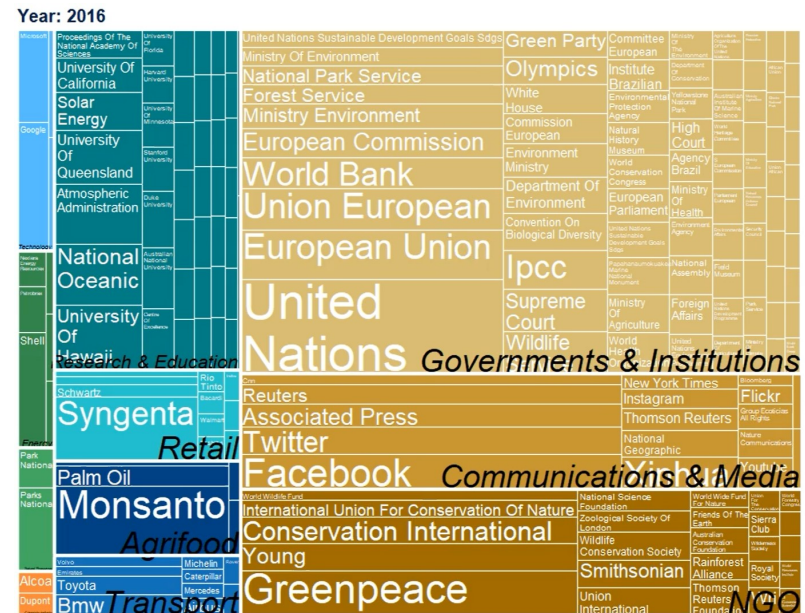
- Governments & Institutions
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- Technology
- NGO
- Energy
- Transport
- Retail
- Finance & Consulting
- Agrifood
- Chemistry Industry
- Financial Services

Biodiversity start to follow the path of Climate change.. with Public institutions & Academic Research taking the lead of the Call

Related personalities in biodiversity global news (2016-2020)



Related organizations in biodiversity global news (2016-2020)



Click on the graph to activate the dynamics

Source: BBVA Research with GDELT database

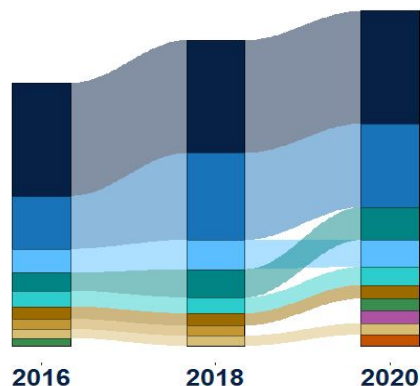
Click on the graph to activate the dynamics

While sustainable development remains a key concern it is increasingly associated to economic, climate and ecosystem terms

There is increasing awareness in sustainability, and other topics such as biodiversity gain traction adding to the already well-established climate change topics

Google searches (Normalized index. 2016-2020)

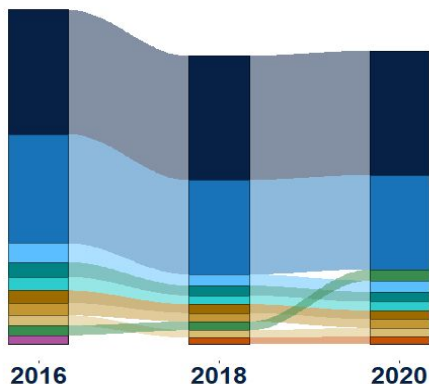
SUSTAINABILITY



Topic

- Sustainable Development
- Economic Development
- The Natural Environment
- Sustainable Development Goals
- Energy
- Farming
- Tourism
- Management
- Resource
- Nature
- Sustainable Fashion

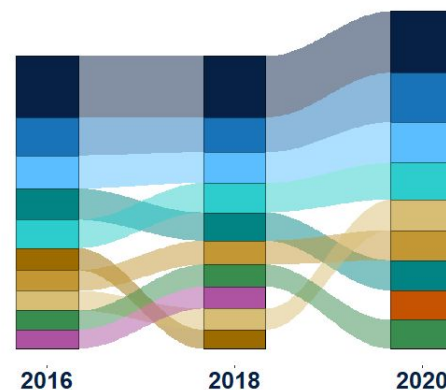
CLIMATE CHANGE



Topic

- Climate
- Climate Variability And Change
- Land
- Greenhouse Effect
- Greenhouse
- The Natural Environment
- Contamination
- Homo Sapiens
- Gas
- Temperature
- Greenhouse Gas

BIODIVERSITY



Topic

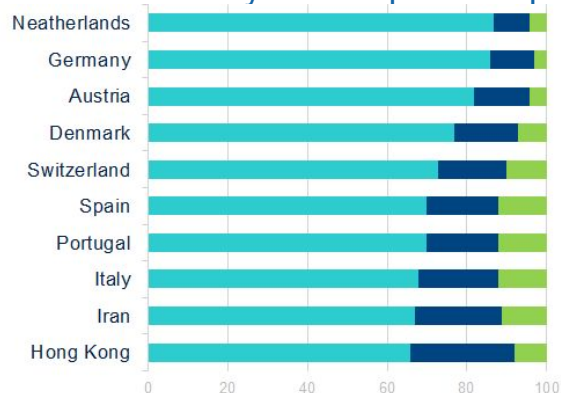
- Biology
- Lifetime
- Ecosystem
- Conservation
- Species
- Genetic Diversity
- Living Being
- Animal
- Plant
- The Natural Environment
- Indonesia

While a broad Sustainability concept dominates in richer countries... Climate & Biodiversity look to be more critical in emerging markets...

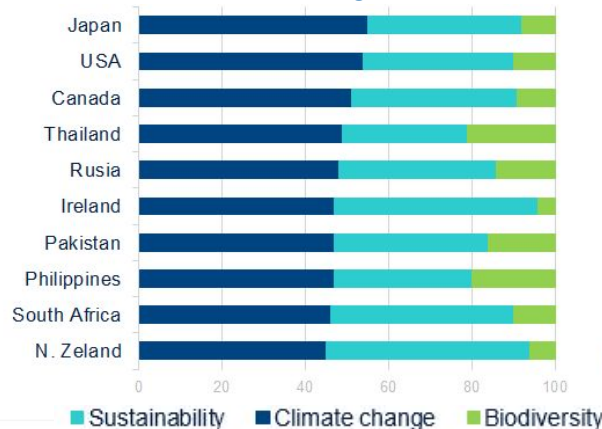
GOOGLE SEARCHES

(Normalized index. 2016-2020)

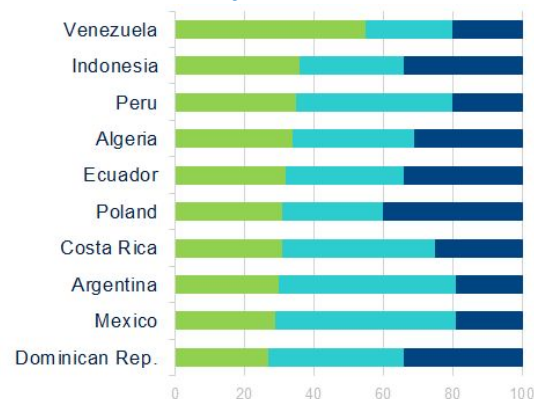
Sustainability: Developed Europe*



Climate Change: Asia



Biodiversity: Latin America



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 are perceived as key ingredients for a more “Sustainable world”

Twitter hashtags co-occurrence Network and communities from tweets in spanish

Environmental Sustainability & Innovation (50%)

#sostenibilidad, #medioambiente, #cambioclimatico, #biodiversidad, #calentamientoglobal, #naturaleza, #planeta, #zerowaste, #agua, #reciclaje, #energia, #innovation, #tecnologia, #renovables

Sustainability Awareness (14%)

#ods, #sdgs, #globalgoals, #onu, #derechos, #igualdad, #empleo, #salud, #covid, #paz, #pobreza, #agenda

Sustainable Transport & Fashion & Food (24%)

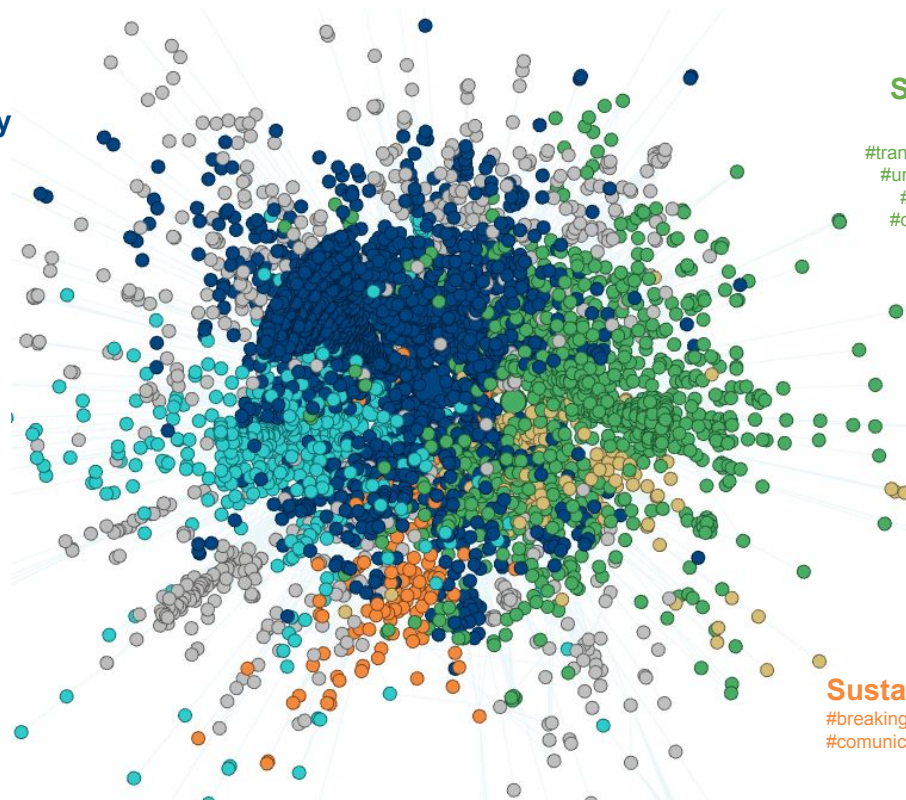
#transporte, #movilidad, #coches, #bicicleta, #urbanismo, #moda, #ropa, #slowfashion, #handmade, #modasostenible, #foodie, #cocina, #pesca, #alimentación, #vegan, #consumo

Green Architecture (5%)

#arquitectura, #construccion, #design, #ingeniería, #diseño, #vivienda, #madera, #casas, #hotel, #building, #edificacion

Sustainable news (5%)

#breakingnews, #news, #noticias, #today, #comunicación, #actualidad, #technews



The sustainability debate in Twitter focuses on the Sustainable Development Goals (SDG), particularly on climate change

Financial and energy sectors stand out, with BBVA leading the conversation

Hashtags related with sustainability in tweets in spanish
(size and color proportional to freq, 2020)



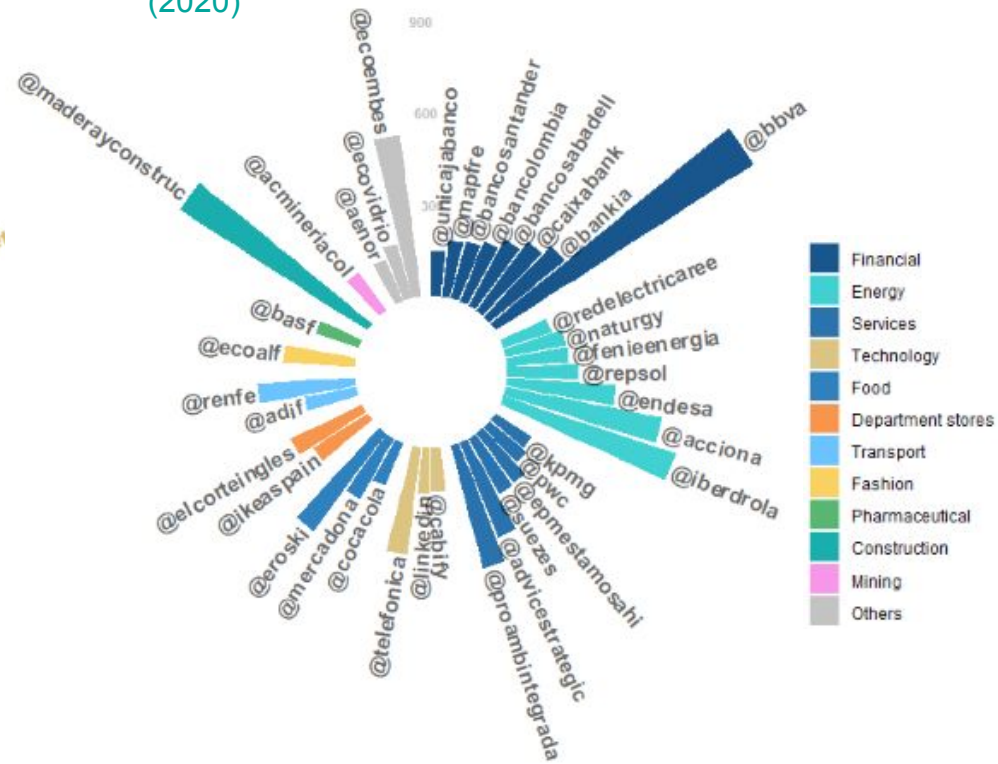
Min 800x ← → Max 85.000x

*Hashtags '#sostenibilidad', '#sostenible' and '#medioambiente' have been removed

*ODS: Sustainable Development Goals -SDGs-

Source: BBVA Research with data from Twitter

Top mentioned companies in tweets in spanish
(2020)



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