JCOM

RE-EXAMINING SCIENCE COMMUNICATION: MODELS, PERSPECTIVES, INSTITUTIONS

Exploring the digital media ecology: insights from a study of healthy diets and climate change communication on digital and social media

Supplementary material

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Scoping study protocol

Each of the following steps should be taken for each topic (i.e. case study). Please, follow the protocol step by step so that everyone carries out the scoping study in the same manner.

If you find an individual or institution through a means that is not included in the protocol (e.g. you know them through your contact network or you found them through a web link), please do not include them and send us a note.

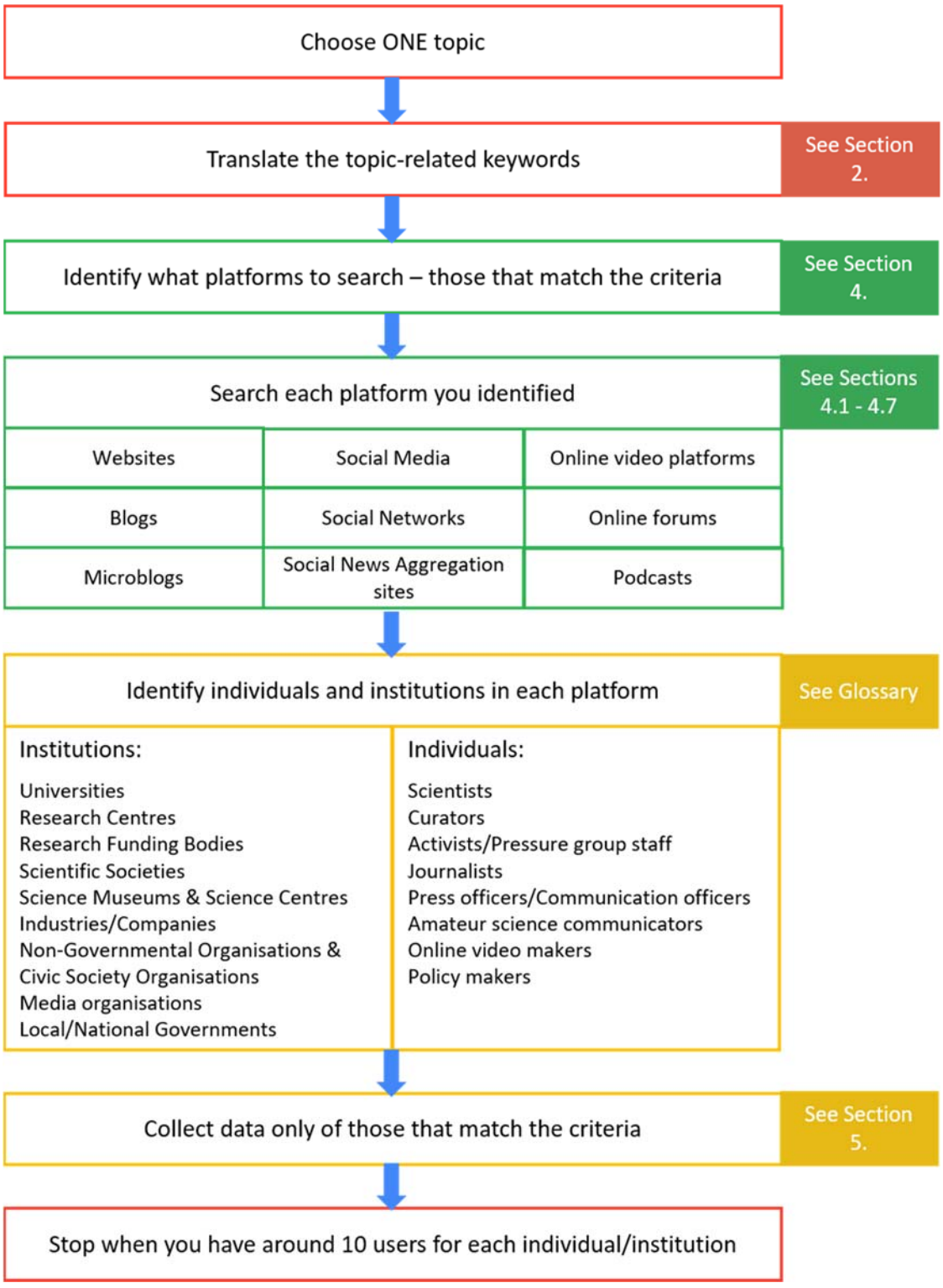
You will need to run through the scoping study protocol for each topic, i.e. **Climate Change** and **Healthy Diets**. Every time you do this, please follow each step of this protocol. The diagram below provides an overview of the steps you will need to take.

1. Data collection period

The scoping study will be carried **from the 6th of May to the 14th of June**. During this time, search for each topic on different platforms (see Section 4) and identify the potential individuals and institutions that communicate about the topic online (see Section 5). You can include data generated before the collection period (e.g. users' accounts or websites/blogs launched before 2019).

Because the scoping study period does not include holidays (e.g. Easter, summer), it should not be influenced by these events. However, the amount of content shared may vary depending on the occurrence of topic-related events (e.g. approval of a new environmental policy to tackle climate change). Hence, users that do not usually talk about the two topics may publish content on them. If an event or issue happens within your country, which is likely to have a significant impact on the data collected, please report this back to us as a research note.

Overview of scoping study process



2. Select the keywords

Choose a topic, and then translate the provided **keywords** into your language. If you already know a keyword that is often used in your country to communicate about a topic online, but it is not listed, you can add it to your set. If you do so, please send us a note with the keyword and its English translation.

Keywords for the topic *Climate Change*:

- Climate change
- Global warming

Include any content that considers the causes or implications of climate change on the environment, the economy, policies and society. Including content that disputes the causes.

Exclude content that mentions climate change incidentally, but does not focus on the science of climate change. For example, content that criticises a government's environmental policies but does not provide any information on the processes behind climate change should be excluded. As should content that discusses the fossil fuel industry or green energy development without mentioning their role in climate change.

Keywords for the topic *Healthy Diet:*

- *Healthy eating*
- *Healthy diet*
- *Healthy nutrition*

Include content that discusses healthy nutrition and eating healthy.

Exclude content related to eating disorders, food safety and regulations, the food industry, farming and fresh food.

3. Before starting the search

Before carrying out your search, go to your browser's settings, and clean your search history. It would be even better if you could use a browser that you have not used before and that does not have any bookmarks (e.g. webpage saved). This step is particularly important because Google and other search engines use your previous searches and visited websites, blogs and social media sites to refine your future searches. For example, if you already visited or bookmarked websites on *climate change*, Google would show those websites first when you search for information on climate change. So if your search history isn't cleared, it would mean that your results would be influenced by what you have searched for previously rather than purely the key words you are using now.

You should clear your history before starting the search for any new topic.

4. Select the platforms to map

You should search for Websites, Blogs, Online video platforms, Social Media, Social Networks, Social News aggregation sites, Microblogs, Online forums, and Podcasts related to the investigated topic. These outlets and sites are described in the Glossary, under the category *Platforms*. You should think about the potential platforms to search and check if they satisfy the inclusion criteria (see below) before conducting the scoping study.

You do not need to search all **platforms** available online for the topic. The platforms you should consider should satisfy the following inclusion criteria[1]:

- **Geographical reach**
  Include platforms that are known in your country. These platforms should be widely used by the people from your country.
  You can test the suitability of a platform as follows: pick one of the keywords and search the platform for that keyword. See whether it returns many results and whether those results seem to be relevant. If you struggle to find content in your language, then that platform may not be used in your language to discuss this topic and you should exclude it.

- **Type of facilitated communication**
  Include any platform that facilitates communication from one user to many, from many users to many other users (big networks), or from few users to few users (small groups).

- **Type of users**
  The users using the platform can have any background, social class, education level, ethnicity and gender. The platform should not exclude any group (though some groups may not use one medium and prefer another instead).
  The users can either have an interest in Science, Technology Engineering, Mathematics and Medicine (STEMM) or not. The platform can be focused on STEMM content sharing and discussion or not.

- **Format and content characteristics**
  Include platforms that facilitate sharing of textual, visual and audio content.
  Exclude platforms that are educational channels (e.g. YouTube education) or strictly academic sites (e.g. ResearchGate, Google Scholar).

- **Accessibility and availability**
  Select platforms that allow you to search for their content and users for research purposes. If you cannot access and search the platform without having an account or, if you cannot find content written in your language or users from your country, do not include that platform. However, it would be useful if you reported this to us as a research note, even if it is not included in the data.
  It would be better if the platform offers an advanced search function. An advanced search offers the possibility to filter the search results and display only those that match specific criteria, such as language, country, etc. Google and Twitter have an advance search function.

[1] These criteria are based on those for media selection stated in the chapter 'Content Analysis', from Hansen A, Cottle S, Negrine R, Newbold C (1998) *Mass Communication Research Methods*.

4.1 Searching for websites

To search for websites, use Google advanced search. You can access Google advanced search through this link. Otherwise, search Google for any word related to the topic; then go to “Settings” under the search bar (see Figure 1) and select the option “advanced search”.

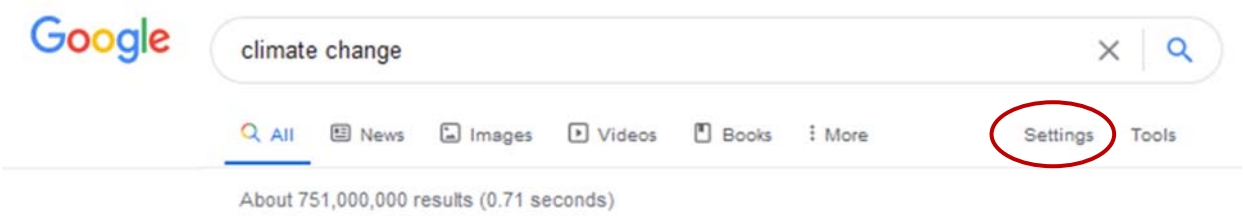


Figure 1

In the advanced search, fill the search box ‘Any of these words’ with the keywords you selected. Put the keywords formed by more than one word in quotation marks, for example “climate change”. Select your language under the search box ‘Language’ and your country under the search box ‘Region’. Figure 2 shows an example of how to complete the advanced search form.

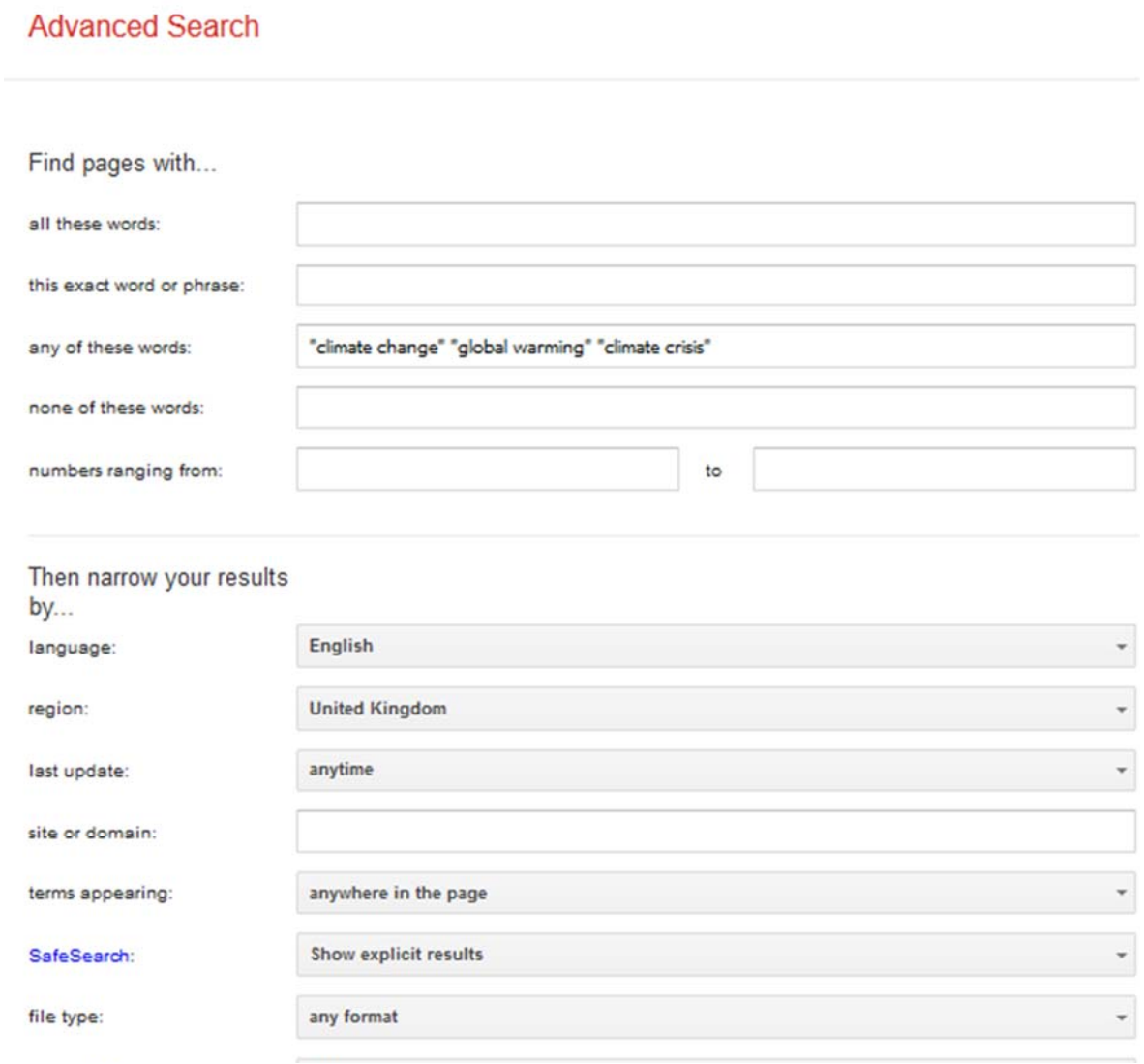


Figure 2

Once you have filled the form, begin the search. You may find results such as those in Figure 3. In the Figure, you can see that Google returned results such as a company's website, a governmental department's website, a scientific society's webpage, and two universities' webpages.

You will need to look at the first 10 pages at least. Look at the description of the webpages under the URLs, and click on the links when they are relevant to the topic. Check the webpage and see if the user (individual or institution) matches the criteria explained in Section 5.

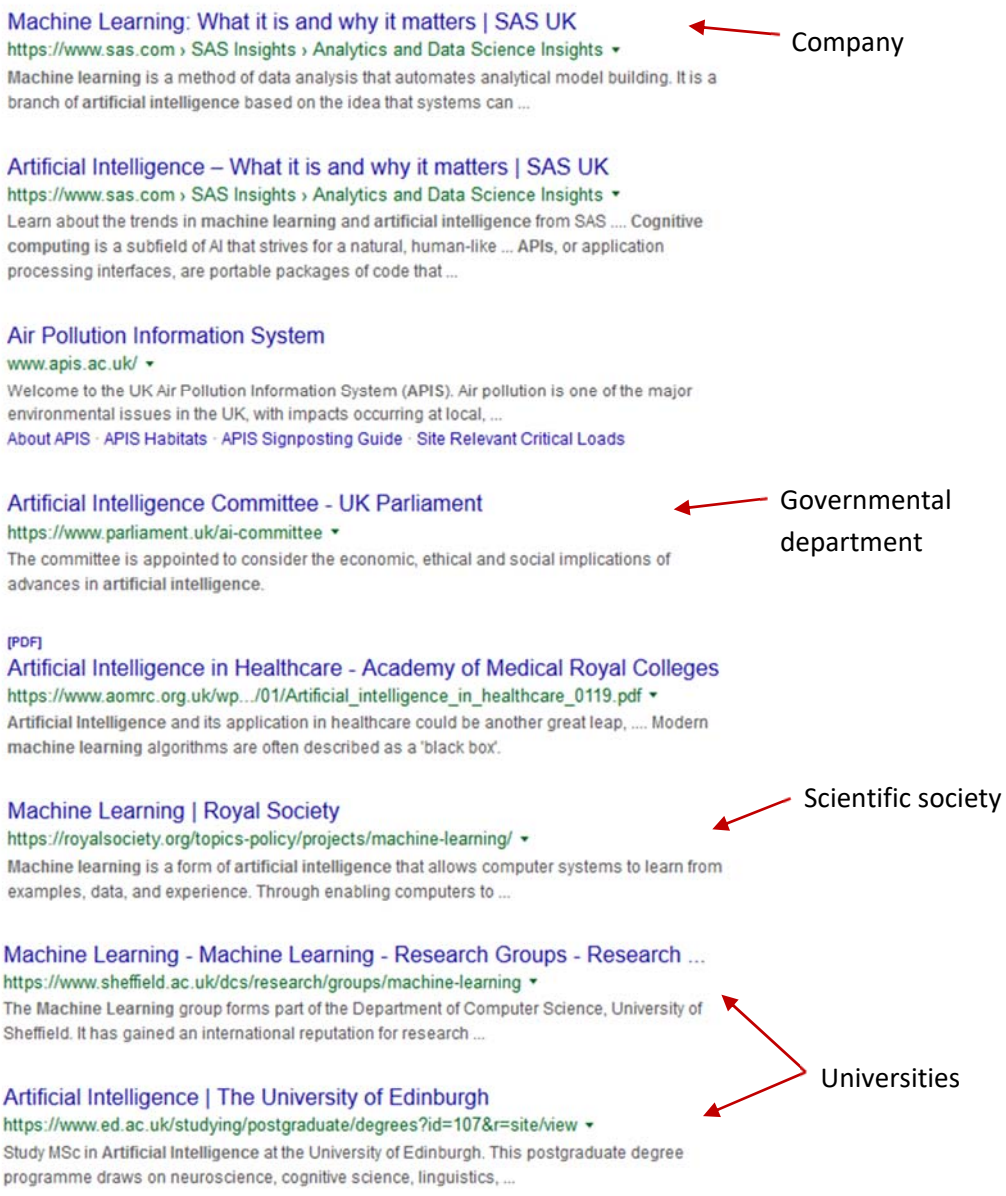


Figure 3

If your result stream shows only companies, shops, and enterprises in the first 10 pages, you can amend the search criteria to exclude these types of businesses. In this way, you will be able to find websites curated by individuals and other types of institutions. However, if you decide to run the search again excluding companies, please report this back to us as a research note.

To exclude companies, you need to set the search as it was before, and fill the search box 'none of these words' with all the terms that may indicate company or enterprise. Figure 4 shows an example of this type of advanced search. The asterisk "*" at the end of the word (e.g. enterprise* or compan*) tells Google to search for variations of the same word (e.g. enterprise and enterpriseS, or companY and companIES).

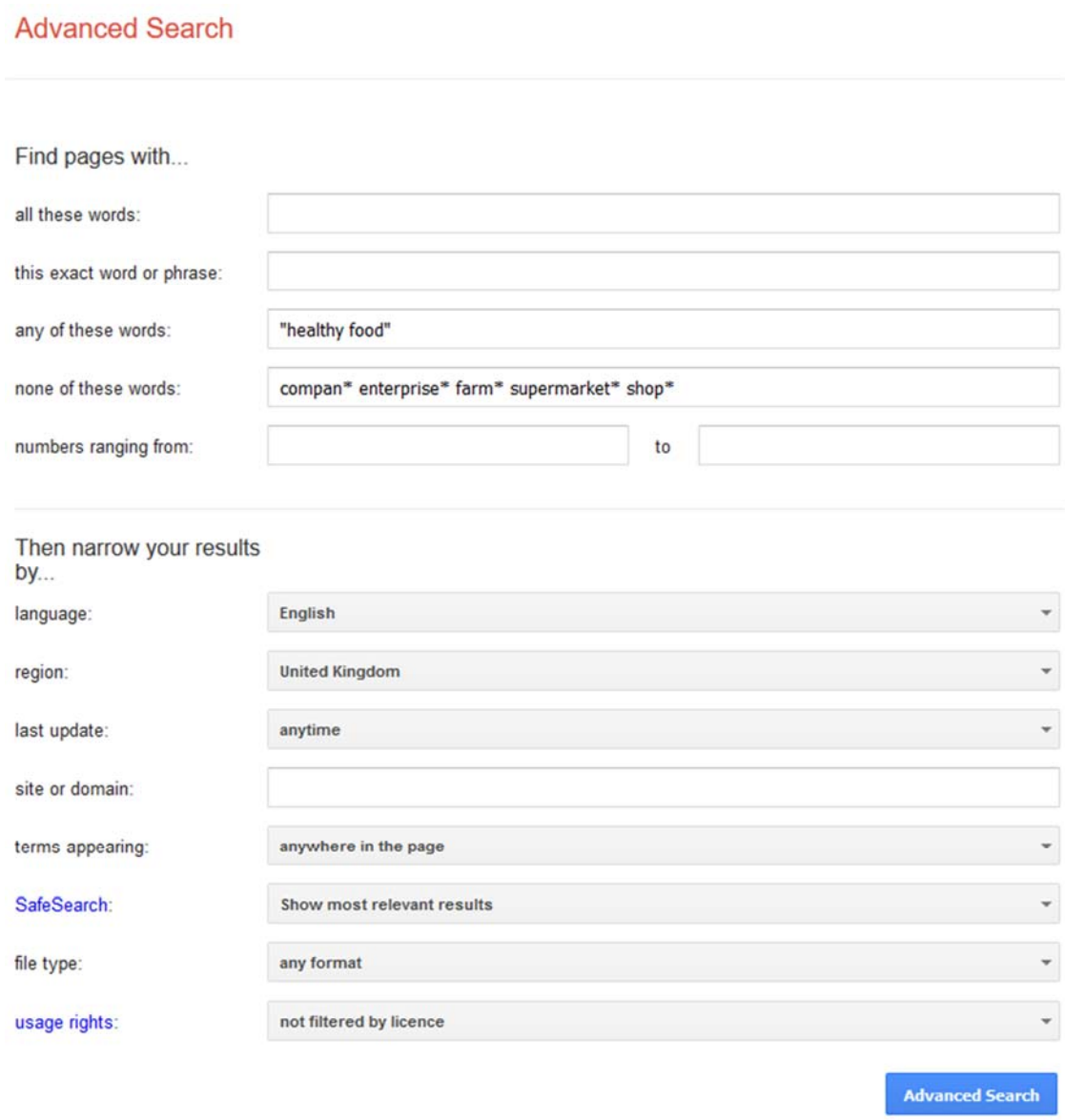


Figure 4

4.2. Searching for blogs

Use Google advanced search to search for blogs, and follow the steps below:

1) Fill the search box 'All these words' with the word "blog"
2) Fill the search box 'Any of these words' with the keywords you selected
3) Select your language under the search box 'Language'
4) Select your country under the search box 'Region'.

Figure 5 shows an example of how to complete the advanced search form. Once you have filled the form, run the search.

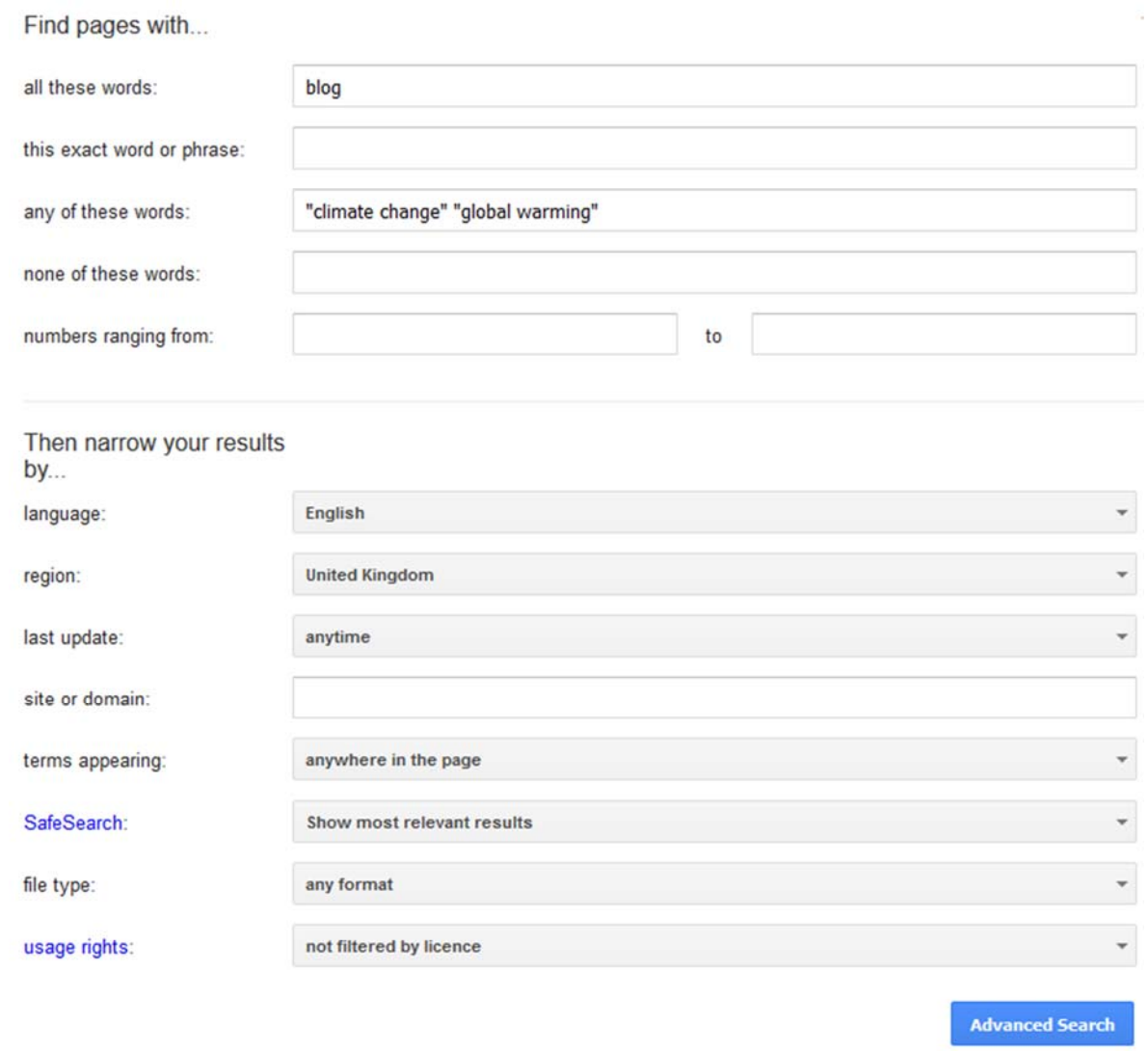


Figure 5

4.3. Searching social networks, social media and microblogging sites

To find individuals and institutions that share content on the chosen platforms, you can search these platforms or run a Google advanced search. Below, different types of searches are shown for Facebook, Instagram and Twitter.

These processes can be adapted to other platforms as well, and they all have the same three steps:

1) Search for the selected keywords
2) Set your language
3) Set the site or domain (see below).

Facebook

For example, to search Facebook content, you can run and Google advanced search as before (see Section 4.1) with a few adjustments. Fill the search box 'Any of these words' with the **keywords** you selected, then select **your language** and **your country**, and add "**Facebook.com/pages**" in the search box 'site or domain'.

Figure 6 shows the last part of the filled form.

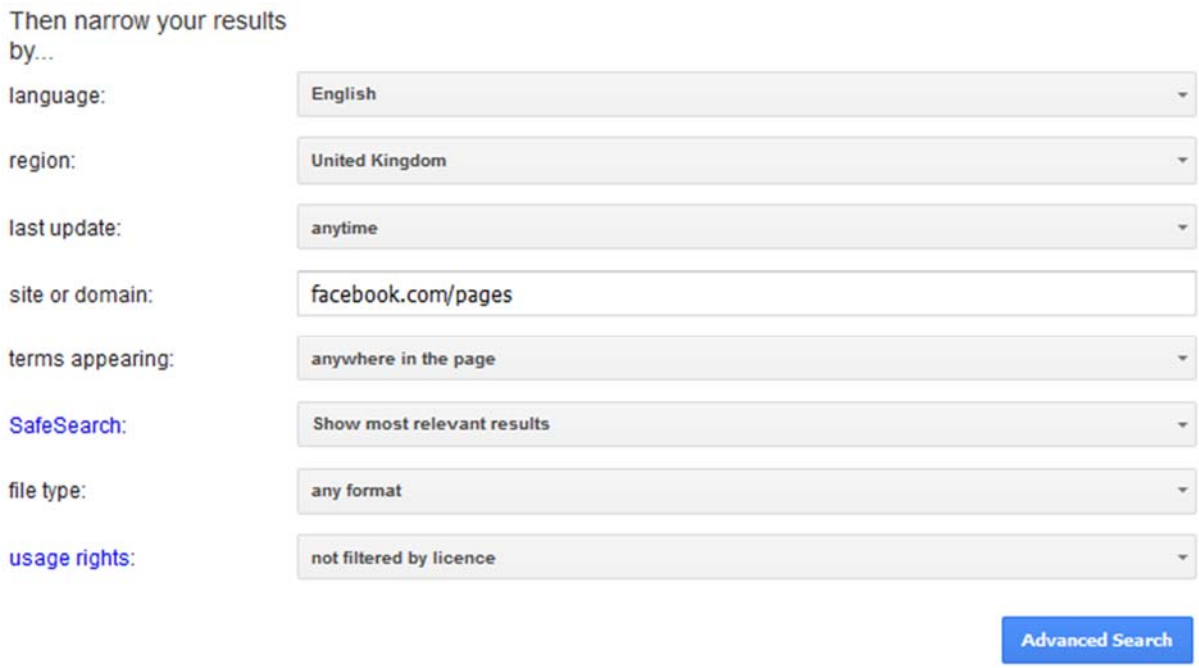


Figure 6

Searching for Facebook Pages will exclude events, groups and careers or advertising. However, it will also exclude profiles. Therefore, this search should be compensated by other types of search, such as trying to search Facebook itself (though this social network returns only profiles that have the queries in the title, not in the description or in other places).

If the Google search returns only Facebook pages related to companies and other businesses, modify the advanced search as followed:

1) Think about words that may mean 'shop', 'company', 'selling', 'enterprise' etc.
2) Add these words in the search box 'none of these words'
3) Run the search again (see Figure 7).

In this way, you will be able to remove commercial pages from your search, and to find other types of users.

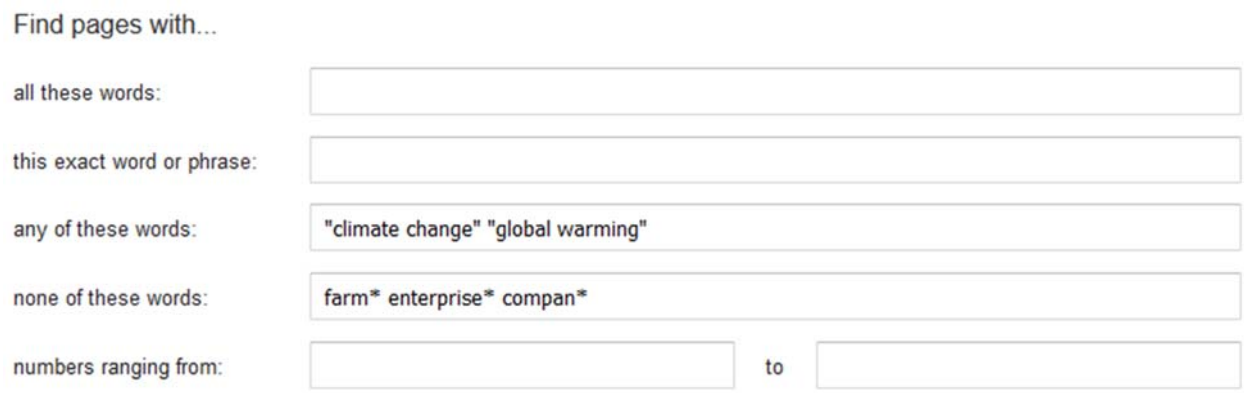


Figure 7

Instagram

Instagram has poor search settings, hence you should conduct your search on Google advanced search.

To search for Instagram users, follow these steps:

- Fill the search box 'This exact phrase' with "Instagram photos and videos"
- Fill the search box 'Any of these words' with the keywords you selected
- Write "inurl:explore" in the search box 'None of these words'
- Select your language
- Write "Instagram.com" in the search box 'site or domain'
- DO NOT select your country (see Figure 8).

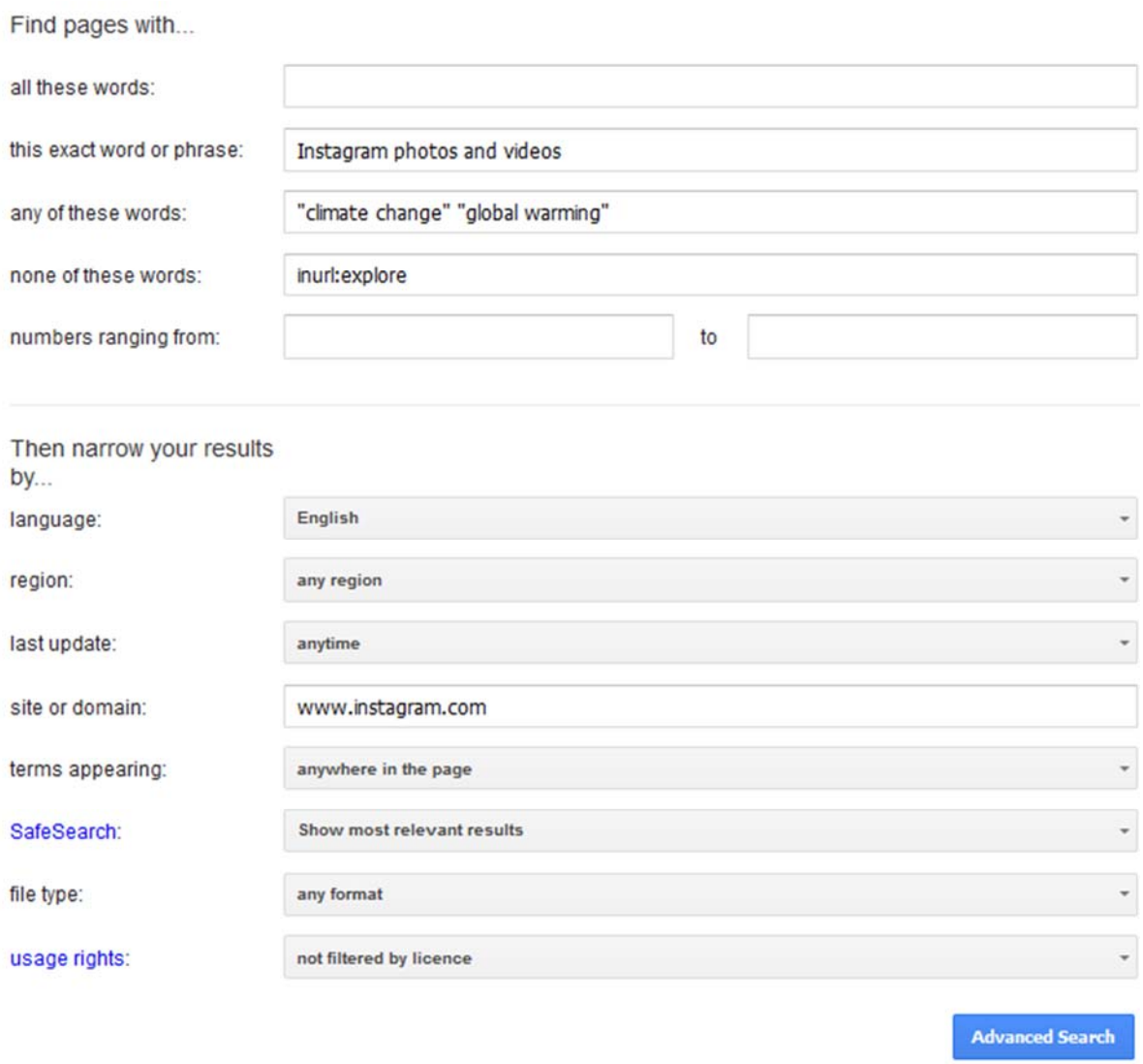


Figure 8

The phrase “Instagram photos and videos” is common on Instagram profile pages, and it will filter the results in order to display only the users’ profiles, not the singles photos and videos they share.

By excluding the term “inurl:explore” you will exclude the suggestions offered by the function *Explore* on Instagram. This function shows the posts and profiles that could match the interests of the user conducting the search; hence it could show results that are out of topic.

Instagram does not have a version of the website for each country, like Facebook; hence, it is not possible to filter the results by country. For this reason, it is important to filter the results by language at least, and verify the location of the user (if available).

This search will return Instagram accounts that have the keywords in their name. Hence, it may exclude users who do not have these keywords in their name, but communicate about the topic

Using similar settings for the search, it is possible to search for Instagram posts on the topic. From these, you can explore the users that post them and decide whether to consider it a potential individual/institution for the mapping or not (see the criteria discussed at Section 5 for guidance).

To search for Instagram users, follow these steps:

- Fill the search box ‘Any of these words’ with the keywords you selected
- Write “inurl:p inurl:explore” in the search box ‘none of these words’
- Select your language
- Write “Instagram.com” in the search box ‘site or domain’
- DO NOT select your country (see Figure 9).

As mentioned before, Instagram does not have a version of the website for each country; hence, it is not possible to filter the results by country. For this reason, it is important to filter the results by language at least, and verify the location of the user (if available).

By excluding the terms “inurl:p” and “inurl:explore”, you will exclude Instagram profile pages and posts shows in the Explore page, respectively. In this way, only Instagram posts are displayed in the results.

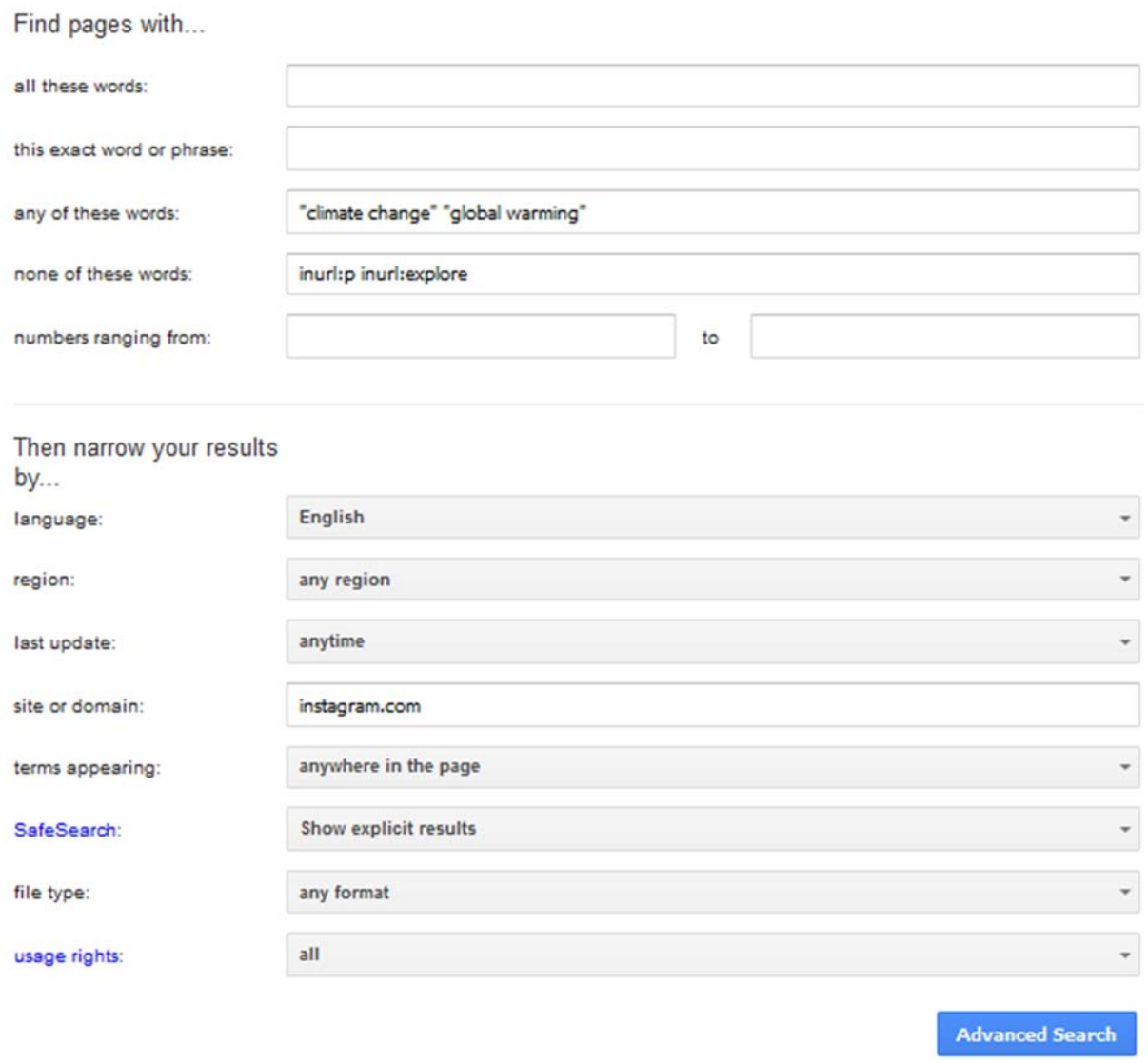


Figure 9

Twitter

There are two ways to find users on Twitter that should be combined. The first one includes the Twitter search, the second includes Google advanced search.

Before searching Twitter, write your query in a text file (e.g. Word document):

1) Write the keywords you selected and include in quotation marks those longer than one word. Separate each keyword with the operator "OR". You may want to use specific hashtags; for example, some English hashtags are #ClimateChange and #GlobalWarming
2) At the end of the query, write lang: followed by the ISO 639-1 code of your language. You can find your code at this link. This operator filters the tweets returning only those written in your language
3) Copy and paste your query in the Twitter search bar and run the search.

An example query is the following: "climate change" OR #climatechange OR #globalwarming OR #climatecrisis OR "global warming" lang:en

Some users may add specific words (e.g. climate change expert) or hashtags (e.g. #climatechange expert) in their biography. Hence, by combining hashtags and key words in the search query you will be able to find either type of users.

After launching the search, select the option "People" from the bar on the top to see Twitter users tweeting about the topic specifically (see Figure 10).

Figure 10

Not all users will have these keywords in their name, handle or biography; hence, it may be difficult to find them in this way. Searching for a Twitter list can solve this issue.

Twitter lists are lists of actors posting content about a certain topic, and they are created by other users. To search for lists, go to Google advanced search, fill the search box 'Any of these words' with the **keywords** you selected, select **your language**, and add "**Twitter.com/*/lists**" in the search box 'site or domain' (see Figure 11). DO NOT select your country.

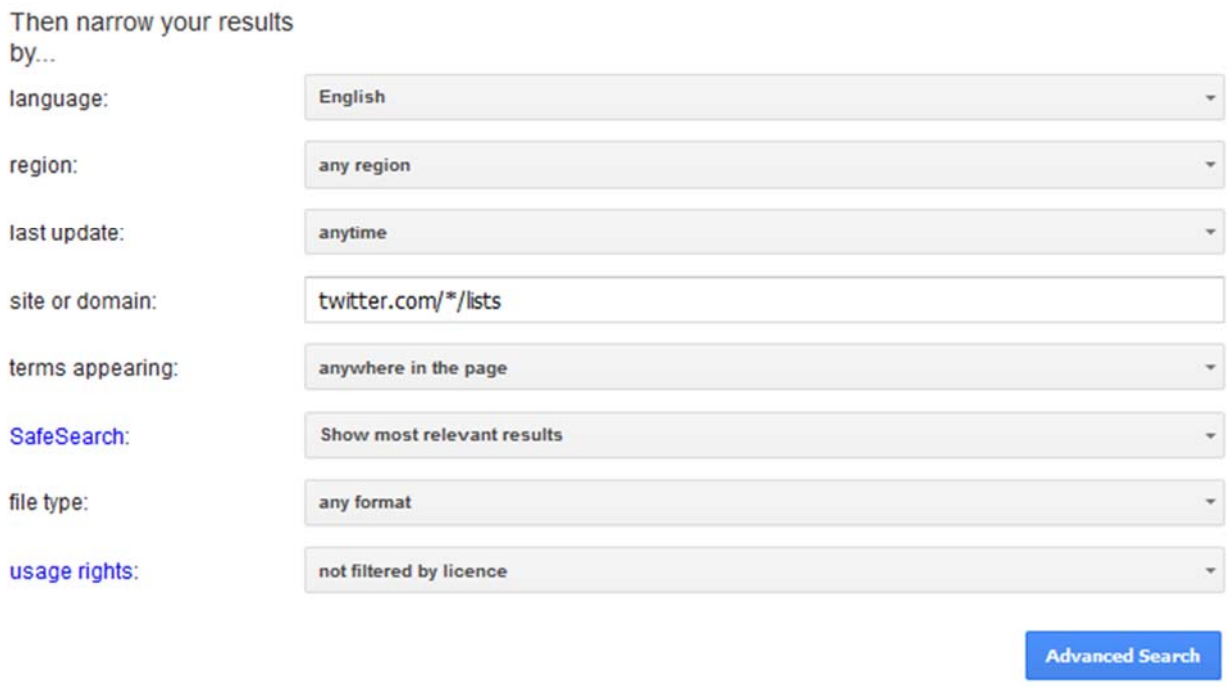


Figure 12

This search will return Twitter lists that you can explore. When you click on a list, then click on "members" to see the users that are included. Remember to select only users that tweet in your language. Figure 12 shows an example of a Twitter list found through this process.

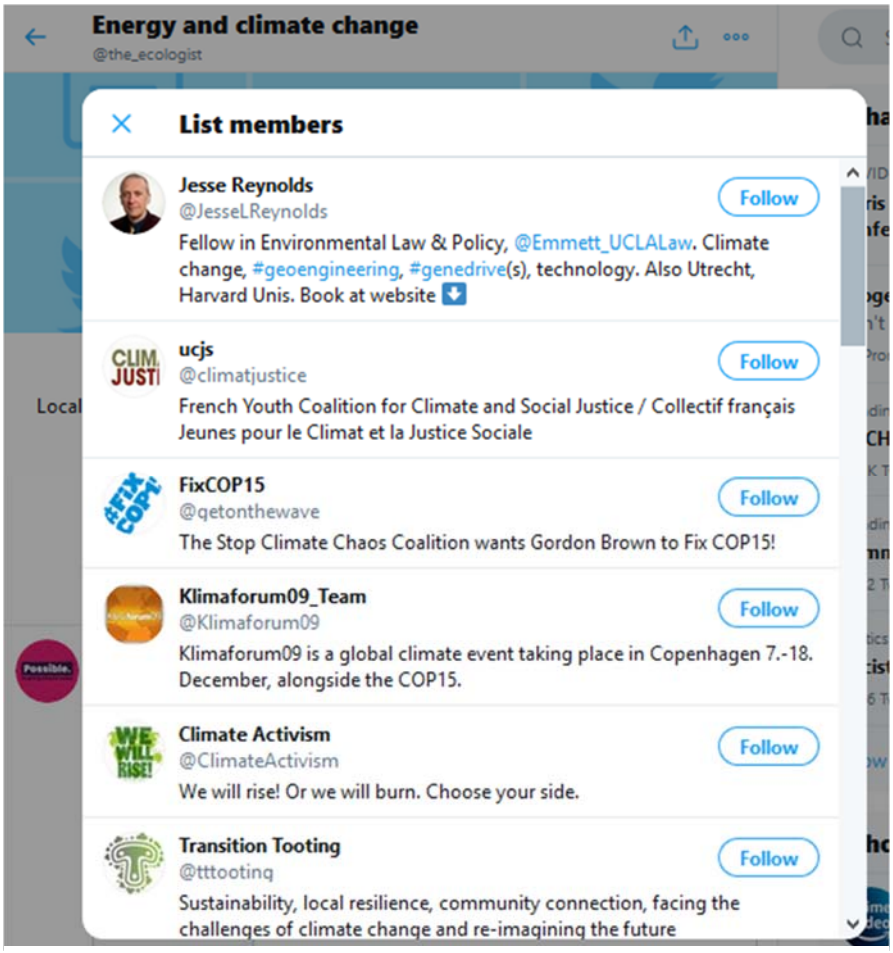


Figure 112

4.4. Searching online video platforms

To search for video platforms users there are two options. One is to search the platform itself and the other one is to use Google advanced search.

YouTube

On YouTube, write your keywords in the search bar, then click on filters. Select the search box "Channel" under 'Type', and "View count" under 'Relevance' (see Figure 13). In this way YouTube will visualise only channels (i.e. users) that have uploaded many videos and have many subscribers (followers).

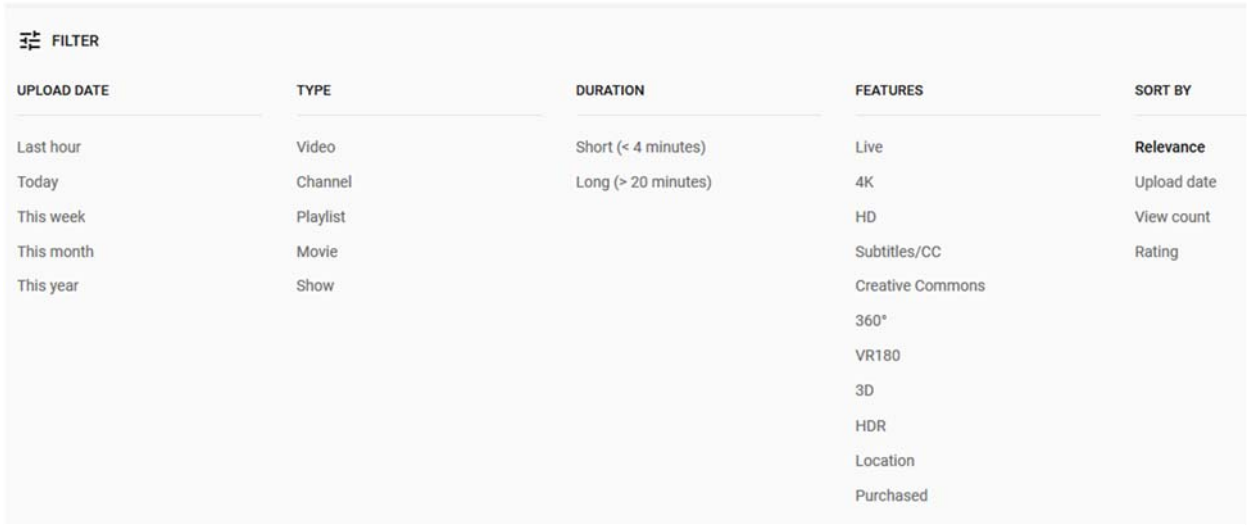


Figure 13

You should type one or two keywords at time and run the search on YouTube. You can open more than one browser tab, each on YouTube, and run several different searches at the same time.

Figure 14 shows an example of the results found using this search.

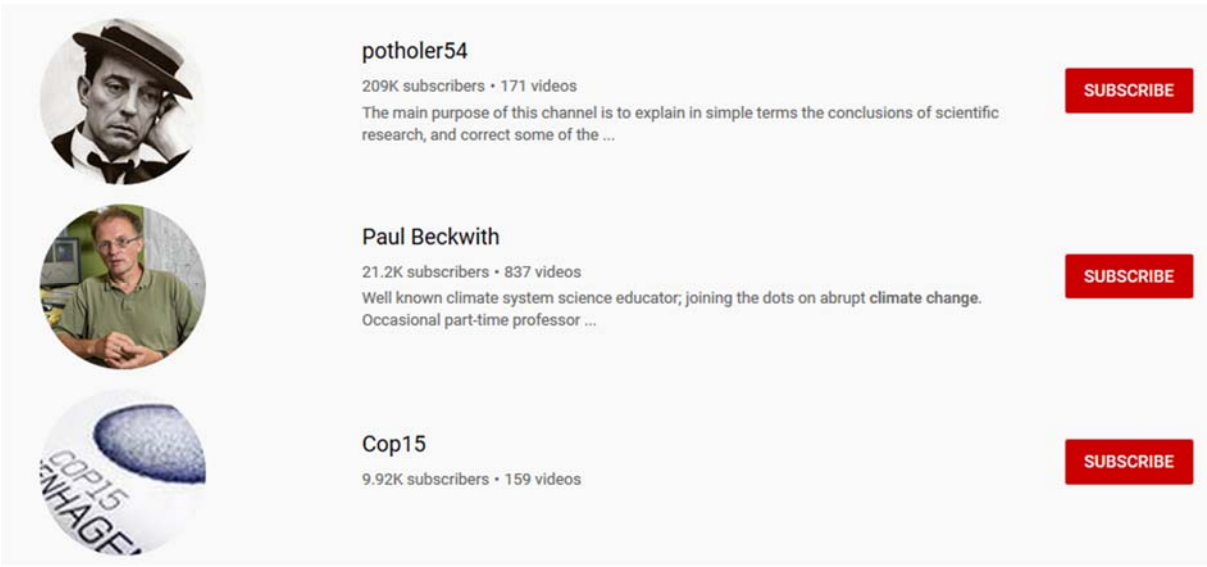


Figure 14

YouTube search can be limited, hence it would be worth combining its results with those of a Google advanced search. Go to Google advanced search, fill the search box 'Any of these words' with the **keywords** you selected, select **your language**, and add "**YouTube.com/user**" in the search box 'site or domain' (see Figure 14). DO NOT select your country because YouTube does not have a version for each country.

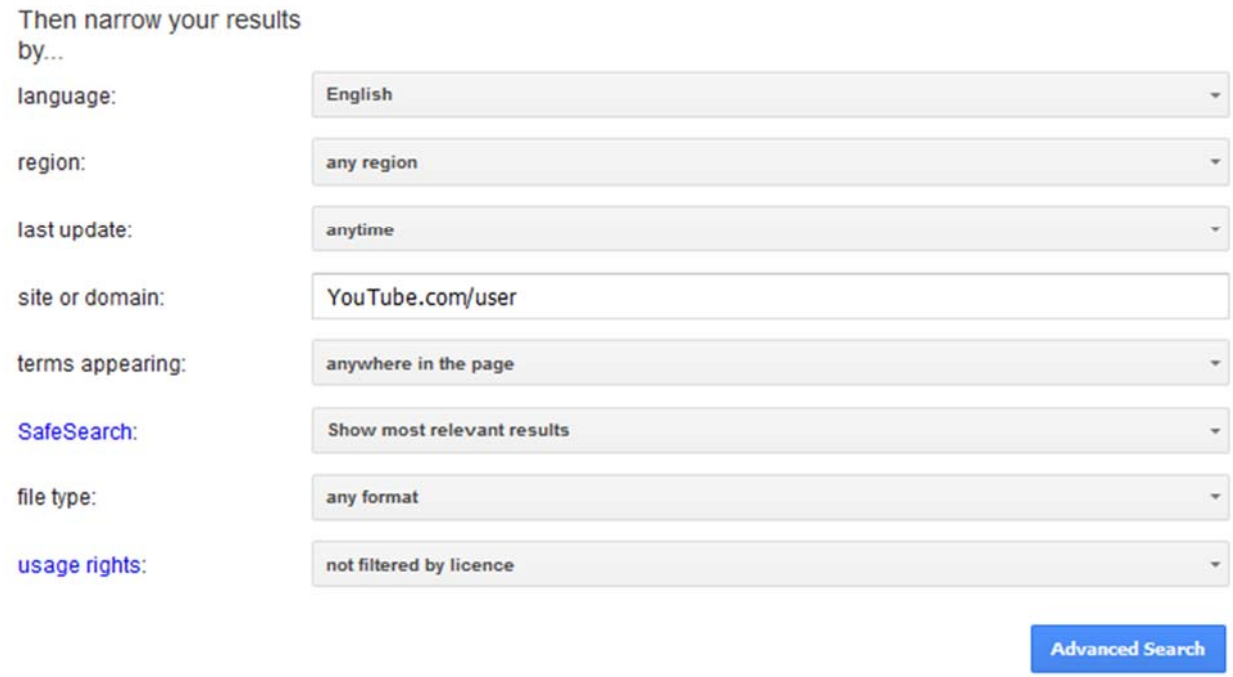


Figure 15

Vimeo

To search for users on Vimeo, type one keyword at a time on the Vimeo search bar on the top right (as you did on YouTube).

Then, select the option "Channels" from the Menu 'Show results for' on the left (see Figure 16). Channels are similar to YouTube Playlists, they are a collection of topical videos.

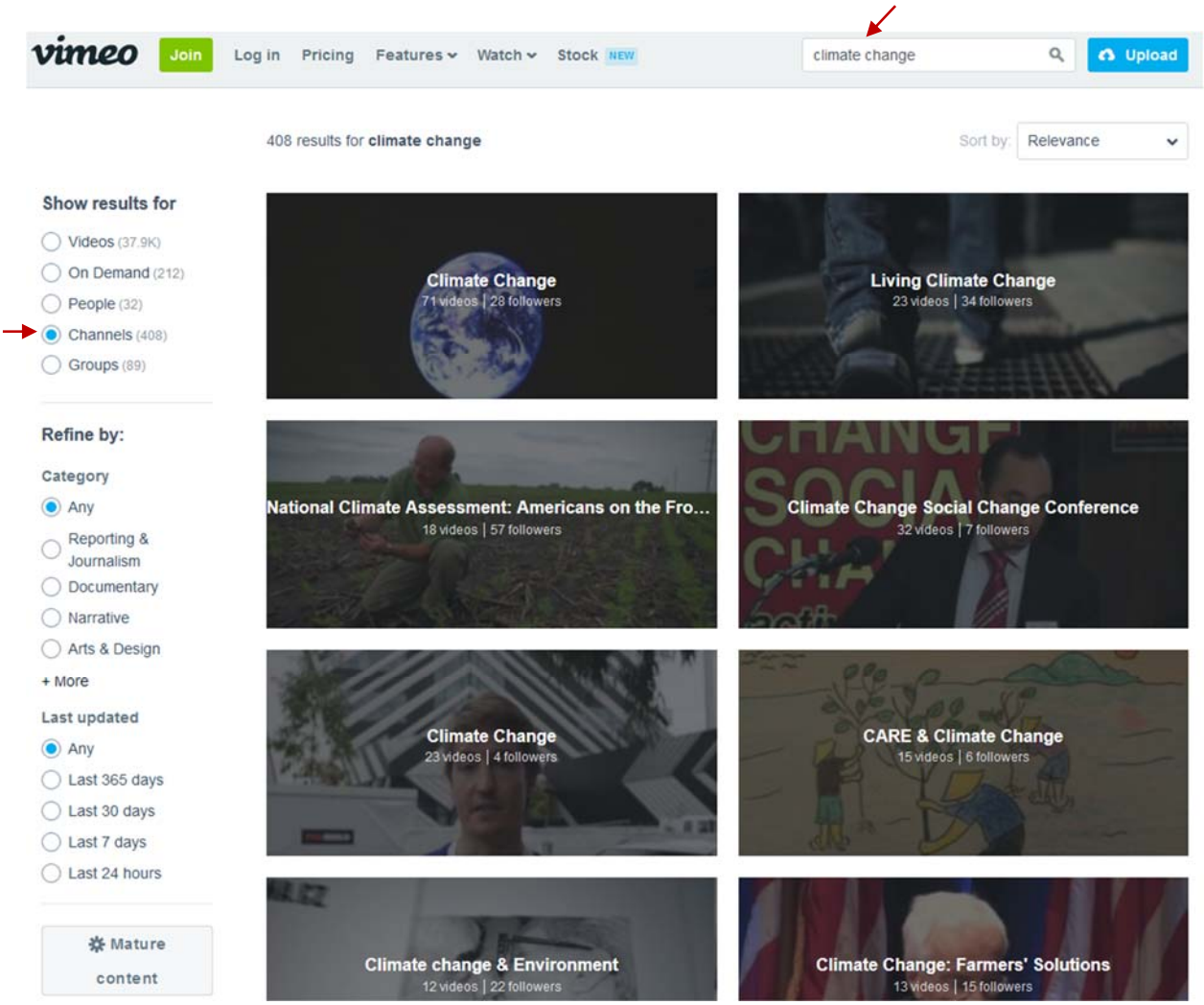


Figure 16

Click on a relevant channel and then on the user that created it (see Figure 17). Check if the shared videos and the user match the criteria defined in Section 5 and those defined in the *Inclusion Criteria* file.

Figure 17

As YouTube, Vimeo search can be limited, hence it would be worth combining its results with those of a Google advanced search. Go to Google advanced search, fill the search box 'Any of these words' with the **keywords** you selected, select **your language**, and add "**Vimeo.com/channels**" in the search box 'site or domain' (see Figure 18). DO NOT select your country.

Remember to collect data only from the users who speak your language and are from your country.

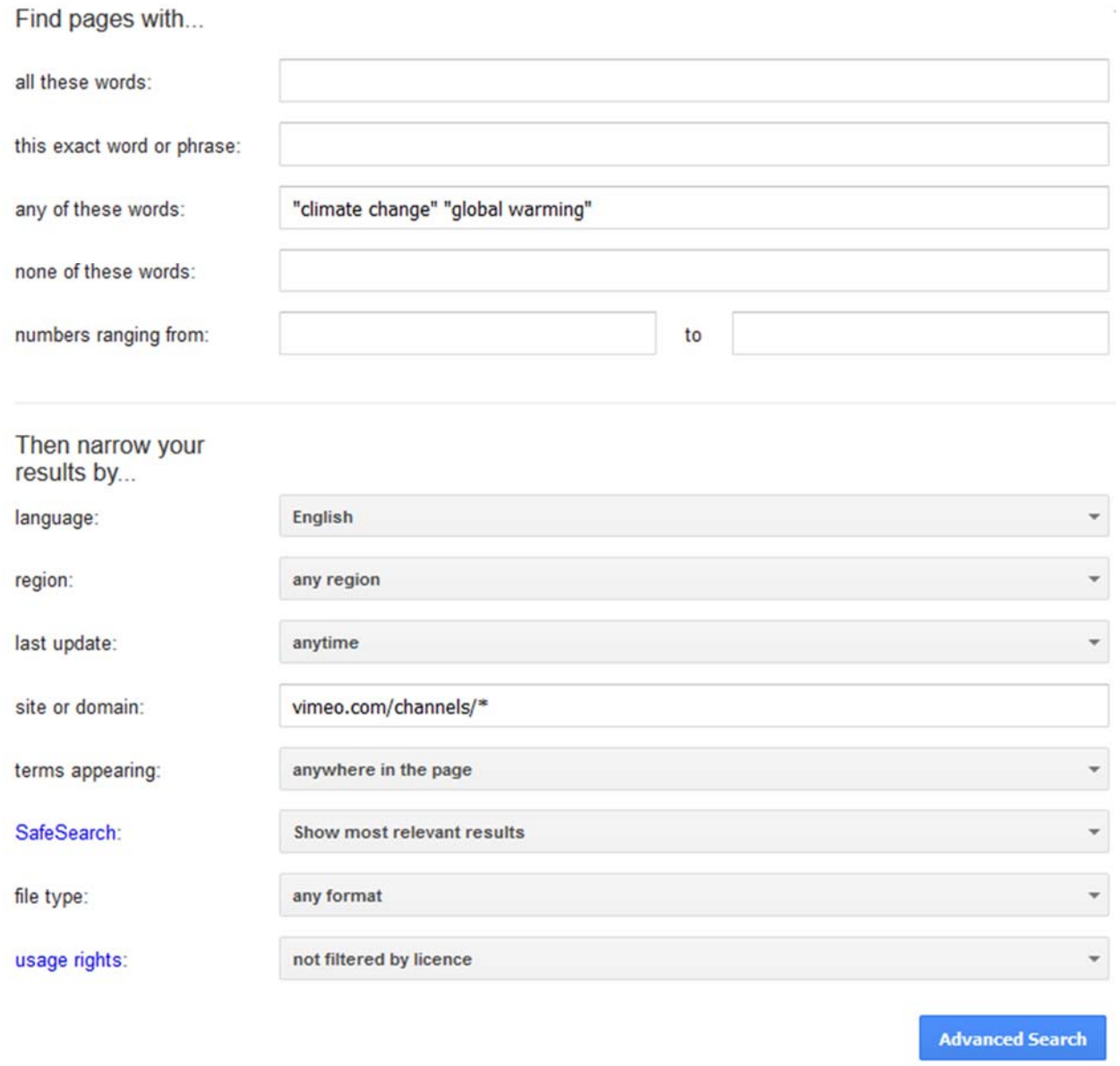


Figure 18

4.6. Searching online forums

To search for online forums, use again Google advanced search.
You can complete the form as you did for Facebook, adding in the search box “site or domain” the URL of the forum you want to explore (e.g. Quora.com). Follow the steps below:

- Fill the search box ‘Any of these words’ with the keywords you selected
- Fill the search box ‘site or domain’ with the URL of the forum
- Select your language under the search box ‘Language’

Figure 19 shows an example on how to fill the advanced search for Quora.

In the case of Quora, it is better to write “Quora.com/topic” in the search box ‘site or domain’. In Quora, topics are aggregations of conversations on the same theme.

Click on a conversation that seems relevant, than on the users that live in the country (you should see this detail in their biography). Then check who the users are and what their expertise is. Their expertise is defined in the menu ‘Knows about’ on the left, which shows the topics they answered and how often their contributed to these topics (see Figure 20).

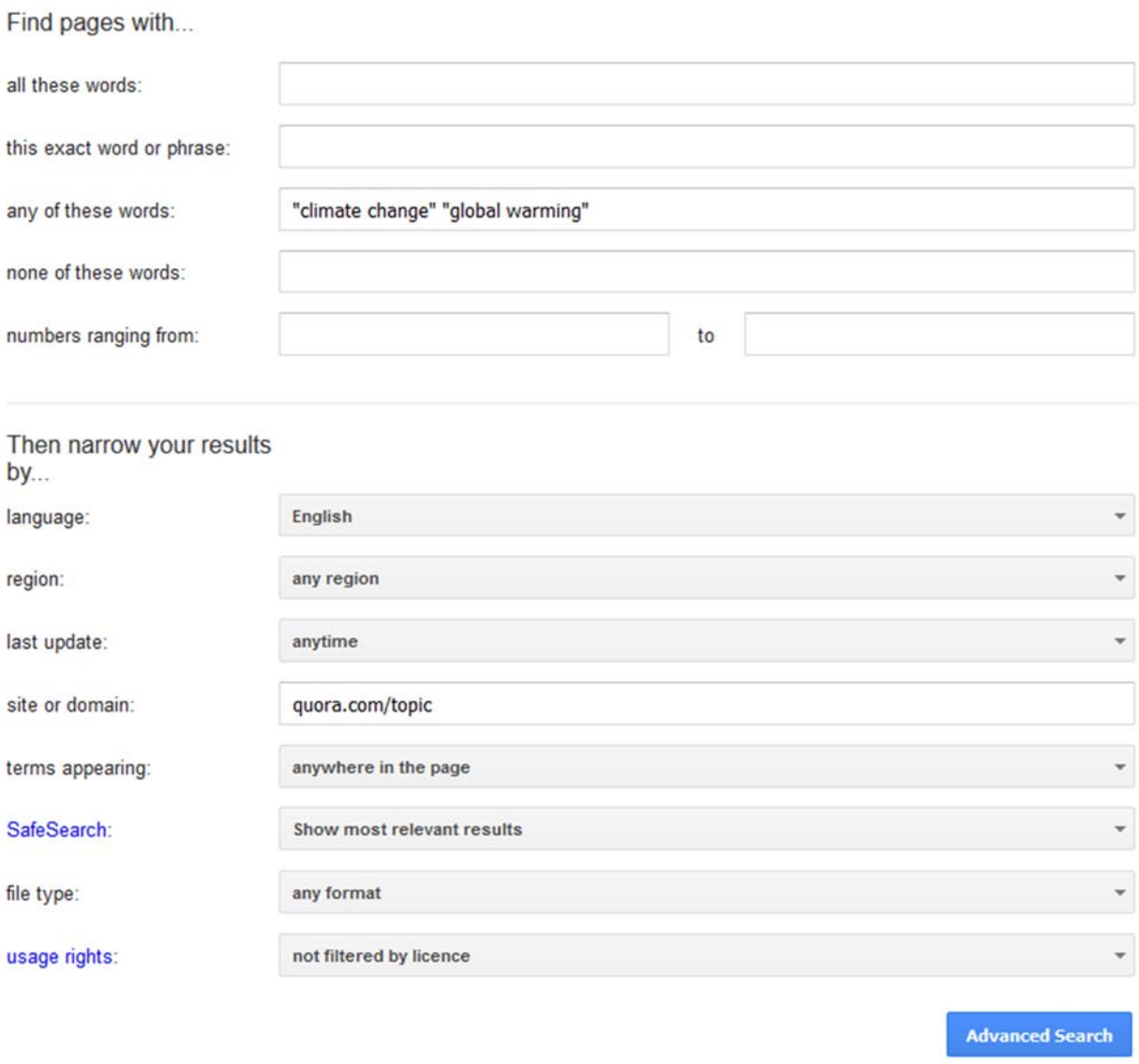


Figure 19

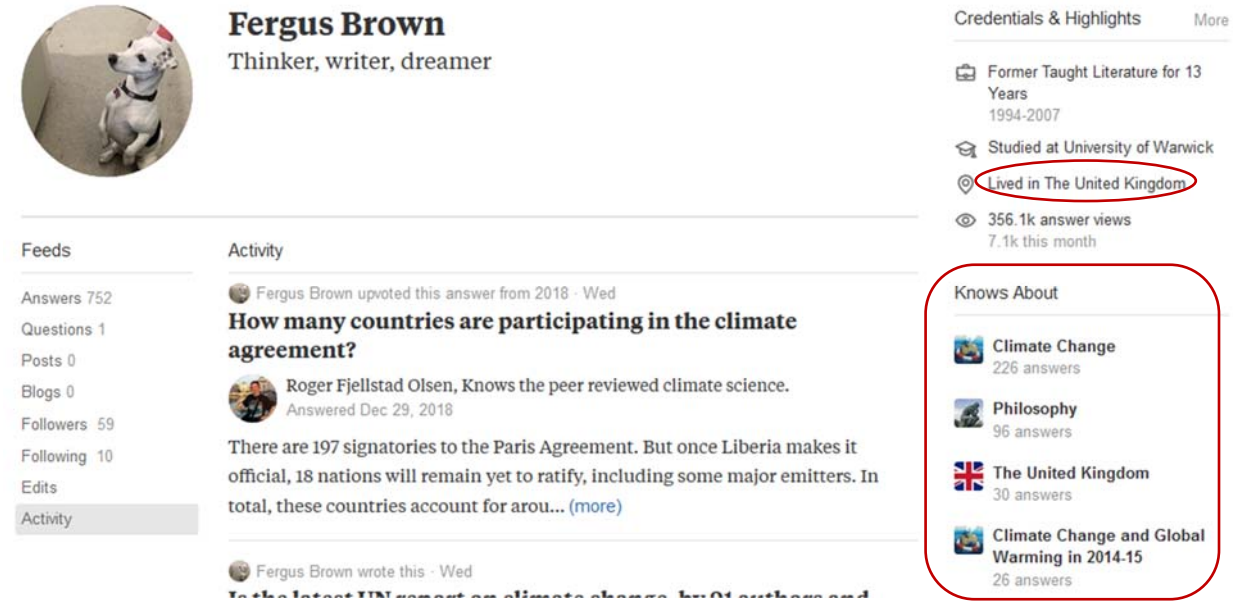


Figure 20

4.7 Searching podcasts

To search for podcasts, use Google advanced search and fill the search boxes as follow:

- Fill the search box 'All these words' with the word "podcast"
- Fill the search box 'Any of these words' with the keywords you selected
- Select your language under the search box 'Language'
- Select your country under the search box 'Region'.

Figure 21 shows an example of how to complete the form.

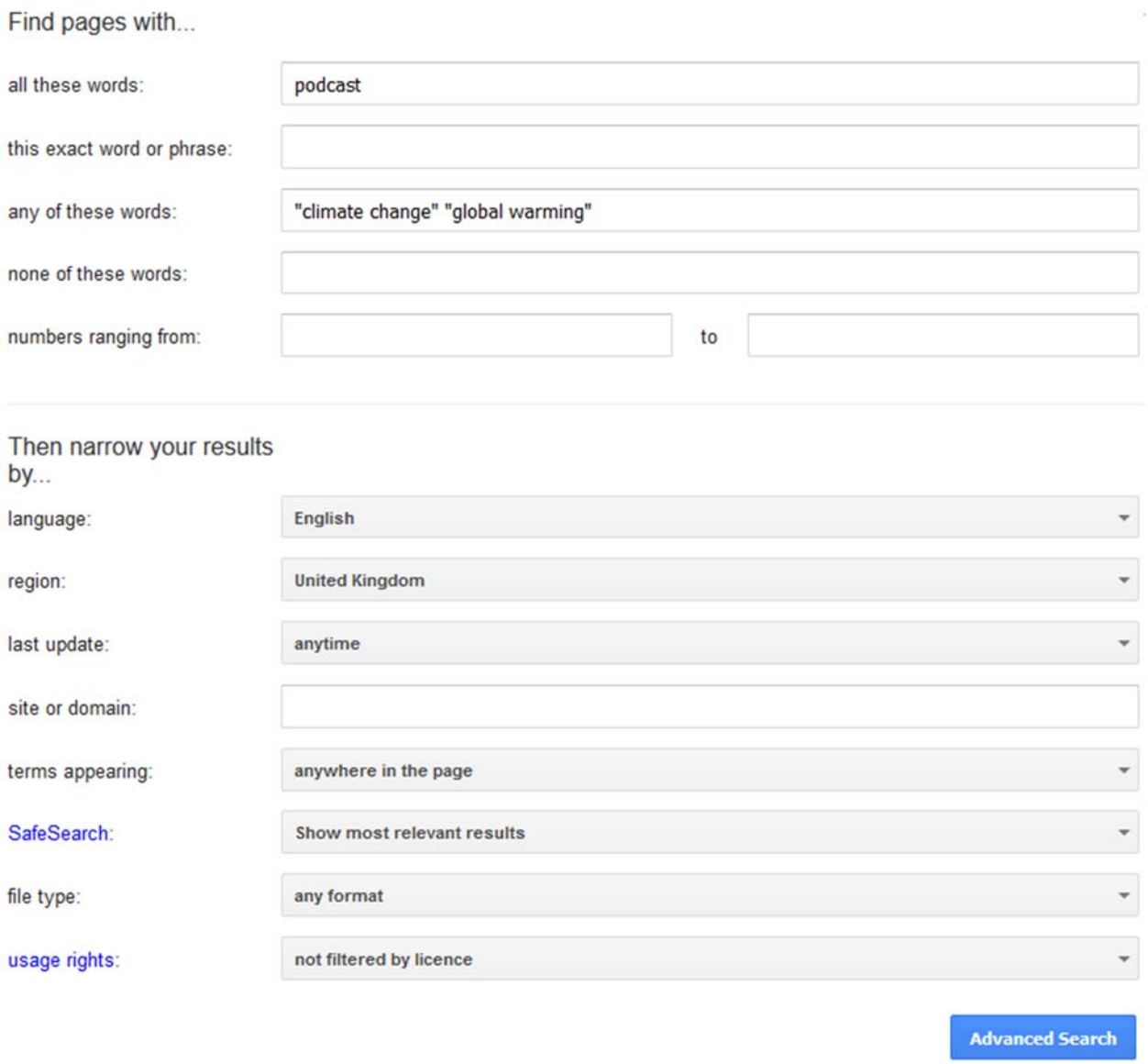


Figure 21

In this way, it is possible to search for podcasts uploaded on any publicly accessible platform. Some platforms, such as Spotify.com, allow access to the podcasts only to their subscribers and they will not appear in the results of this type of search.

5. Selection of the users (individuals/institutions)

When you search a platform, you will find many **users** that share content on the topic. Among these users, select those that are identifiable (i.e. provide a biography or description of who they are) and satisfy the following criteria:

- **Geographical reach**
  Select users that communicate in your language.
  It would be better if these users are based in your country as well. You can find this information if they share their location on the account profile.

- **Active accounts**
  Include users who have an active account or website. You can find this information on the bottom of the webpage of a website, or by looking at the last post published on a social media account or blog. If the user has not used the platform since April 2018, do not include them.

- **Content characteristics**
  Include users that share content on one of the three topics, in a way that's freely available and public. The topic must be the *central element* of the content, it should not be an introduction to other content, a metaphor or an analogy.
  Exclude users that publish content on *how* to communicate the topics or STEMM, or on science communication research.
  Include users that share textual, visual and/or audio content, digital collections, comics, or infographics. Exclude users that share movies or documentaries. See the Glossary to see the type of content that users to include should share.
  Exclude users that clearly share only educational or academic content (e.g. a video lecture, the link to the live-streaming of a conference, the screenshot of a paper, an academic publication).

- **Account popularity/engagement**
  Aim to include users that engage with their audience over than ones that do not.
  A user sharing a high number of posts/articles, having a high number of readers/followers, likes/favourites, shares, and comments, is more likely to have a regular and/or engaged audience than one with a low number. For example, a user that rarely publishes and does not receive any comments or shared on their post, is unlikely to have a regular audience and to engage with them.

- **Audience**
  Users can communicate to audiences of any size, either broad audiences or niche audiences. However, it is more likely that you will find users with broad audiences than those reaching small ones because the APIs of the media tend to favour the former.
  The audiences of these users may have any background, social class, education level, ethnicity and gender, and they should be interested in at least one topic (climate change, healthy diets), but not necessarily in STEMM.

- **Accessibility and availability**
  Select only users with a public account or website/blog that you can find by searching a search engine or the platform.

If the users have a public account, they consciously share content to everybody with access to the platform or the Internet. If they have a private account, they may share confidential content and it would not be ethical to collect data on them.

When you identify a user that satisfies the criteria above, record their data in the Excel document *Mapping template*. You may find many users that satisfy those criteria but aim to select maximum 10 of them for each category of *Individuals* and *Institutions*. These categories are:

- Institutions
    - Universities
    - Research Centres
    - Research Funding Bodies
    - Scientific Societies
    - Science Museums & Science Centres
    - Industries/Companies
    - Non-Governmental Organisations, Civic Society Organisations, Think Tanks and Foundations
    - Media organisations
    - Local/National Governments
- Individuals
    - Scientists
    - Health practitioners
    - Curators
    - Activists/Pressure group staff
    - Journalists
    - Press officers/Communication officers (also public engagement officers)
    - Amateur science communicators
    - Online video makers
    - Policy makers
    - Support communities

See the *Individuals* and *Institutions* sections in the Glossary for a detailed description of each of these categories. If there are not one or more of those categories in your country (e.g. there are not scientific societies in your country), you can avoid searching for them. If that happens, please send us a note about it. Focus on the *Individuals* and *Institutions* that are present in your country. If you are not sure whether a user fits the description of a category, please contact us.

Choose a maximum 10 top users for each category, i.e. the users you came across first during your search. Exclude any promoted users from your selection, whose content or profile show the tag “promoted” or “ad”. These users pay the platform to have their content or profile displayed at the top of the search results.

If you cannot find 10 users for one category, select only those you have found. This situation can arise, and it is not a problem. Select only users that satisfy the criteria above.

To help you collect data on the users, we developed a template in Excel (see *Mapping template*). You will need to complete following data about each user you select:

- **User Name** – the real name of the individual or institution you selected; if the real name is not available, you can consider their moniker (nickname)
- **Individual/Institution** - the category to which your user belongs (see Glossary, *Individuals* and *Institutions* sections)
- **Platform** – the platform where you found the user (e.g. Twitter, Website, YouTube)
- **URL** – web link of the profile account or website/blog of the user
- **Number of readers** – how many readers or followers the users have (if provided)
- **Topic** – what topic the user communicates (i.e. Climate Change, Healthy Diet)
- **Email address** – email address of the user (if provided)
- **Date collection** – when you collected the data about this user

When you identify a potential individual/institution to include in the mapping, check if they have any other accounts. For example, if the user has a website, they may also have a Twitter or Facebook account connected to it. Explore each link and see if these accounts are active. If they are, you can include these data in the spreadsheet.

You can find if a user has connected other accounts to the platform in the following ways:

- If the platform is a website, you will find the icons of the connected social media on a corner on the top or at the bottom of the home page. You may also find them at the page "Contact".
- If the platform is a social media or social network, you will find the links to the other accounts on the page "About" (e.g. on Facebook), or as a link on the bottom of the profile biography (e.g. Twitter and Instagram), or as icons on the banner (e.g. YouTube)

Do not make a note of those accounts or sites that do not meet the inclusion criteria. Sometimes the same individual/institution can share different content depending on the platform.

Glossary

Institutions

Universities | Higher education institutions that offer Science, Technology Engineering, Mathematics and Medicine (STEMM) programs of studies, such as Bachelor's Degrees, Master's Degrees, and Research Degrees (e.g. PhD). Some of these institutions may also conduct STEMM research.

Research Centres | Institutions that conduct STEMM research. They may or may not be related to universities.

Research Funding Bodies | Governmental institutions or charities that provide funding for national or regional research projects on STEMM. For example, the *Research Councils* in the UK.

Scientific Societies | Academic societies or associations of scientists that provide fellowships, grants, and/or other forms of support relevant for a science career (e.g. formative courses, networking opportunities, bureaucratic advice) to their fellow members. Some of these associations can be formal institutions. For example, the Koninklijke Nederlandse Akademie van Wetenschappen (KNAW) in the Netherlands, the Royal Society in the UK, and the Ordine dei Biologi in Italy.

Science Museums & Science Centres | A science museum is an informal education institution "open to the public, which acquires, conserves, researches, communicates and exhibits the tangible and intangible heritage of humanity and its environment for the purposes of education, study and enjoyment" (ICOM Statutes, 2007). Included institutions must focus on STEMM rather than broader cultural heritage or arts. A science centre is an informal education institution open to the public, which communicate STEMM through interactive exhibits and hands-on activities and may not have its own research collection.

Industries/Companies | Businesses that produce and sell products related to the topic – either serving a relevant industry or in some way producing a product or service that has a baring on that topic (e.g. petrochemical companies and climate change). They may communicate science to engage with their consumers and/or the wider public to improve their reputation or more broadly to influence discussions/debates relevant to their industry. For example, they may talk about the potential causes of the climate change and show how they are tackling them to become more environmentally sustainable.

NGOs, CSOs, Think Tanks and Foundations | Non-governmental organisations (NGOs), non-profit organisations, charities, foundations, and Civil Society Organisations (CSOs). They are advocacy groups and voluntary societies that aim to address a social or political issues and/or represent the needs of a local community. These groups are formal organisations that work independently of governments, for example, Greenpeace. These groups can also be organisations with a political/ideological background that conduct their own science research or fund research.

Media organisations | Organisations involved in the dissemination of information and news to the general public through mass media (e.g. newspapers, magazines, radios, television, online material).

Local/National Governments | Authorities that govern a country, a region or a province. This might include, for example, departments within an administration such as ministries of health and ministries of agriculture and at local level it could be city councils, regional councils and local councils.

Individuals

Scientists | Senior researchers, Early Career researchers, PhD students, associate and full professors, engineers, and university lecturers in STEMM that use digital media to communicate science and research. Researchers can be employed in universities, research centres, or in businesses.

Health practitioners | Physicians, nurses, General Practitioners, surgeons, allied health professionals, midwives, and pharmacists that use digital media to communicate medicine and health.

Curators | Curators of science exhibitions, centres and museums, who use digital media for the purpose of science communication.

Activists/Pressure group staff | Individuals or groups of individuals that aim to address a social or political issues and/or represent the needs of a local community. They may be part of formal organisations (such as NGOs) or not belong to formal organisations, but form spontaneously around a common cause and lack a defined hierarchical structure.

Journalists | Individuals who write articles, investigative reports, opinions for newspapers, news websites, magazines or other mass media. They are employees in media organisations and are paid by the organisation to produce media content.

Press officers/Communication officers (also public engagement officers) | Staff working on behalf of an organisation to communicate the organisation's research or activities. These staff are likely to be found in universities, research institutes, funding bodies, scientific societies and industry. They may also be found in NGOs and CSOs.

Non-professional communicators – Individuals using digital media for science communication who are not employed as scientists, engineers, curators, activists, journalists, or policy makers. They may have a STEMM background, they may be Bachelor's or Master's students, and they do science communication for personal/professional interest (e.g. as a hobby, or as an effort to make a career in science communication). These individuals can include bloggers, vloggers, social media influencers, Facebook/Reddit group moderators.

Online video makers | Individuals who produce STEMM-related videos and upload them online. These videos can be news, tutorial, and explanatory videos.

Policy makers | Individuals involved in making policies in local, regional and national governments. They have the power to make decisions on how a law is implemented, how a legislation is applied and converted to practice. They can also affect the strategy to make a legislation. Policy makers can also be involved in corporate policy and Non-Governmental Organisations policy.

Support community | Individuals with similar interests that form an online community, where they exchange information, news, and emotional support. The community is regulated by moderators or administrators (e.g. of a Facebook Page), who curate the posts shared by the community and share content as well.

Platforms

Websites | Set of related web pages located under a single domain and about a particular subject. Websites are often published by institutions, such as universities, science museums, companies. Pages that communicate science will be included but not those related to the organisation/administration of the organisation, details of staff (staff directories) or undergraduate/postgraduate programmes/training offered by the institution.

Blogs | Blogs are similar to websites but they can host several posts on the home page, which are ordered chronologically from the newest to the oldest. Blogs are often informal, and they can be hosted by platforms such as WordPress, Blogger, Tumblr.

Online video platforms | Platforms based on video uploading and sharing, for example YouTube and Vimeo.

Social Media | Sites where multimedia content can be created, uploaded, downloaded, and shared selectively (private accounts) or publicly (public accounts). Social media users form reciprocal and non-reciprocal relationships with other users that know already (offline) or not. Users often follow others based on shared interests. On social media, the content is often shared from one to many (all site's users or followers). An example of social media is Instagram.

Social Networks| Sites were multimedia content can be created, uploaded, downloaded, and shared selectively (private accounts, private groups) or publicly (public accounts, public pages, public groups). Social networks' users form only reciprocal relationships with other users that know already (offline) or not. An example of social network is Facebook.

Social News aggregation sites | Sites where users share news and information on various topics. Users can become members of more than one topical group inside the site and interact with the other participants. There may be some mechanism to rate posts. An example of Social news aggregation site is Reddit.

Microblogs | Sites where users post short blog messages, updates. These messages can include multimedia content and web links, and can be liked, re-shared, quoted and forwarded from the users' followers to other audiences. An example of microblogging site is Twitter.

Online forums | Online discussion site where users can hold conversations in the form of posted messages. These messages can be either short or long, and they stored for long time (years). An example of online forum is Quora.

Podcast platforms | Platforms that host podcasts.