

# Setting Up GEE

# Step 1:

## GEE Registration

- 1) Visit <https://signup.earthengine.google.com/>
- 2) Sign-up with your Google account
- 3) After signing up, you should obtain the approval instantaneously or within minutes

# Step 1

## GEE Registration



Google Earth Engine <earthengine-noreply@google.com>

8:16 PM (26 r

to me ▼



## Welcome to Earth Engine!

Greetings, Earth Engine Developer, and welcome! You now have access to:

- The [Earth Engine Code Editor](#) - the primary Earth Engine development environment.
- The [Earth Engine Developer docs](#) - including our [development guides](#), [API reference](#), and [and tutorials](#).
- The [Earth Engine Explorer](#) - a graphical user interface. No programming skills needed.

Note that it may take a few days before this change is propagated through the system.

To get started with Earth Engine, we suggest you:

- Read our [Frequently Asked Questions](#).
- Check out our [Get Started](#) guide, [tutorials](#), and complete [documentation](#).
- Visit the Earth Engine [developers list](#).

It's great to have you on board. We look forward to seeing what you can do with Earth Engine!

## Step 2

### Creating an EE project

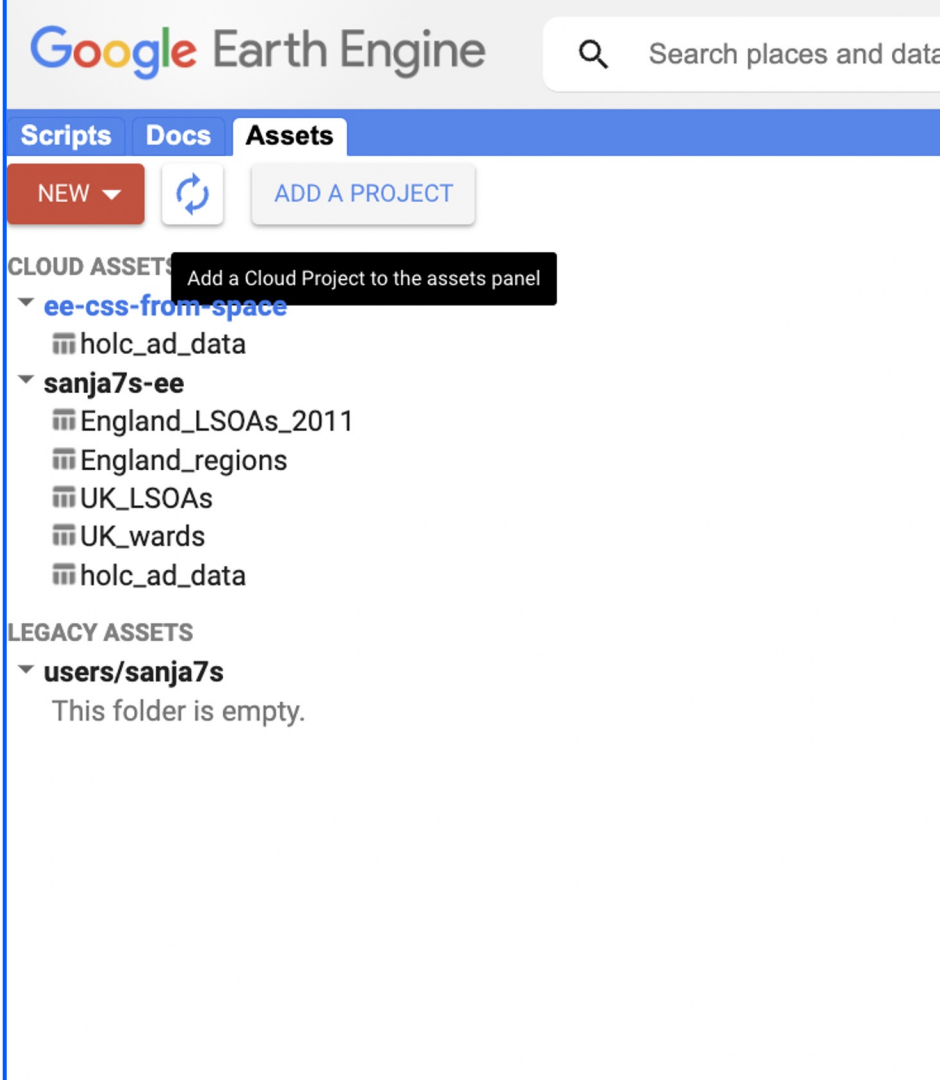
Go To:

<https://code.earthengine.google.com>

Select Tab “Assets”

Click:

ADD A PROJECT

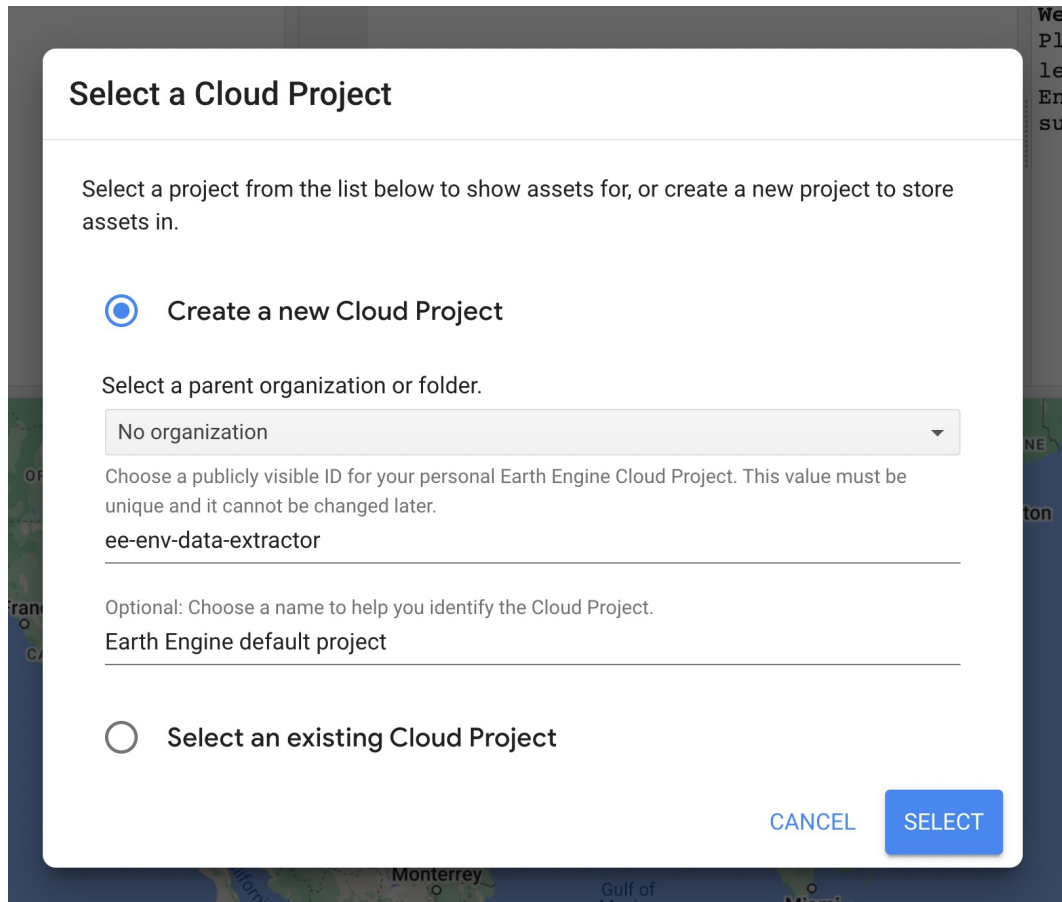


## Step 2

### Creating an EE project

Click **Create a new Cloud Project**

\*This project name you will later use in Colab Notebooks.



The screenshot shows a 'Select a Cloud Project' dialog box. At the top, it says 'Select a Cloud Project'. Below that, it instructs the user to 'Select a project from the list below to show assets for, or create a new project to store assets in.' There are two radio button options. The first option, 'Create a new Cloud Project', is selected. Below this, it asks the user to 'Select a parent organization or folder.' with a dropdown menu currently showing 'No organization'. Then, it prompts the user to 'Choose a publicly visible ID for your personal Earth Engine Cloud Project. This value must be unique and it cannot be changed later.' with the text 'ee-env-data-extractor' entered. Below that, it says 'Optional: Choose a name to help you identify the Cloud Project.' with 'Earth Engine default project' entered. The second radio button option is 'Select an existing Cloud Project'. At the bottom right, there are 'CANCEL' and 'SELECT' buttons.

Select a Cloud Project

Select a project from the list below to show assets for, or create a new project to store assets in.

☒ Create a new Cloud Project

Select a parent organization or folder.

No organization

Choose a publicly visible ID for your personal Earth Engine Cloud Project. This value must be unique and it cannot be changed later.

ee-env-data-extractor

Optional: Choose a name to help you identify the Cloud Project.

Earth Engine default project

☐ Select an existing Cloud Project

CANCEL SELECT

## Step 3:

Place this folder, i.e.,  
**code/collate\_data/environmental\_data\_extractor**  
to Your Drive

e.g., drive/MyDrive/your\_project\_folder



## Step 4: GEE Assets

Upload LSOA/Region Data from  
**data/auxiliary\_data** to

To your GEE Assets on

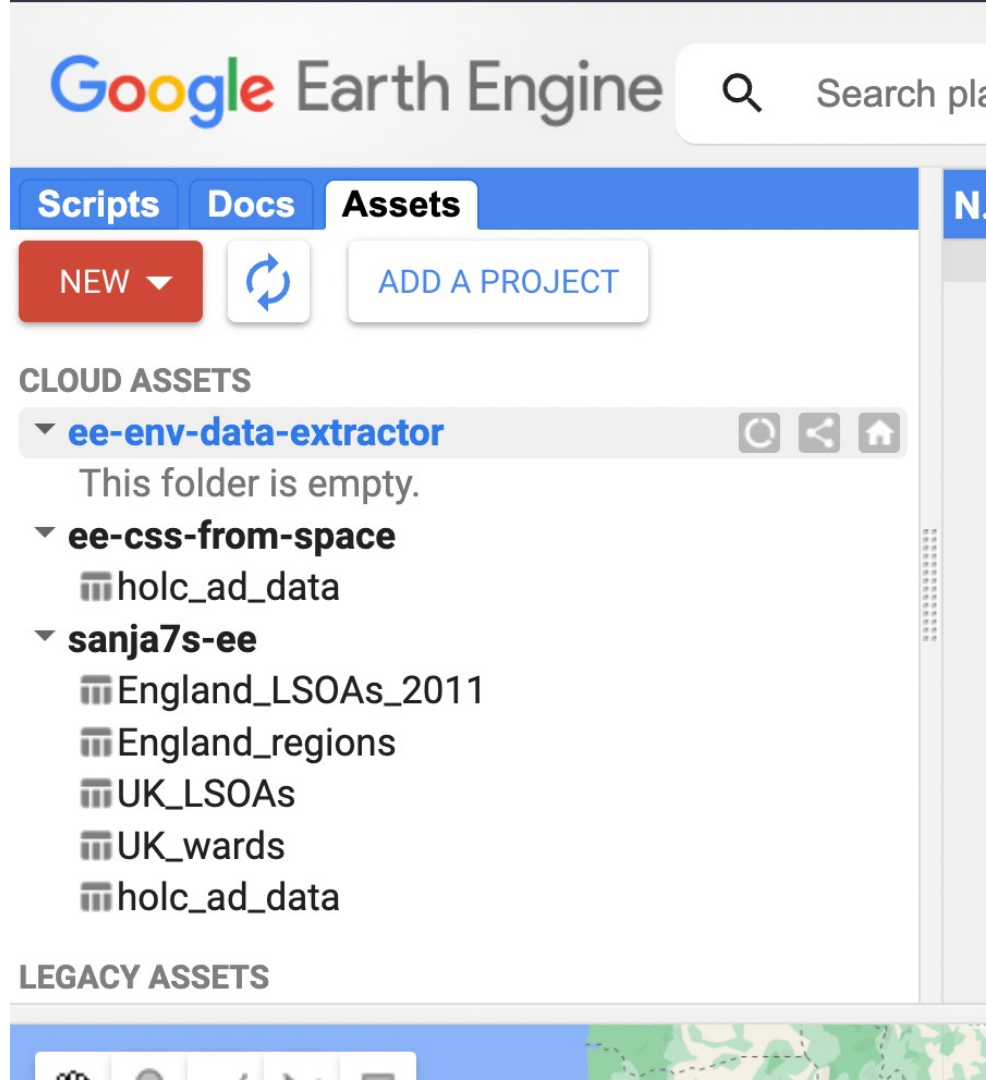
<https://code.earthengine.google.com/>

## Step 4: GEE Assets

<https://code.earthengine.google.com/>

Select your newly created project

and then choose **NEW**

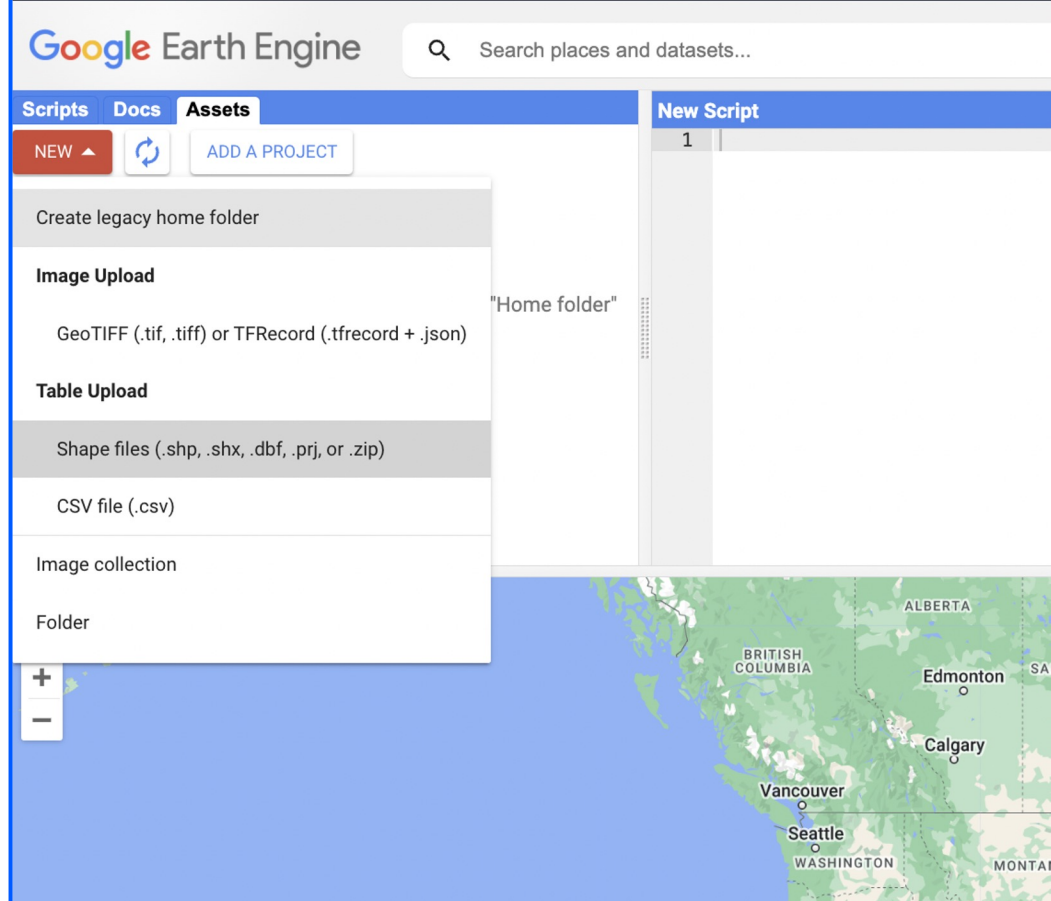




# Step 4: GEE Assets

<https://code.earthengine.google.com/>

choose **Shape files**

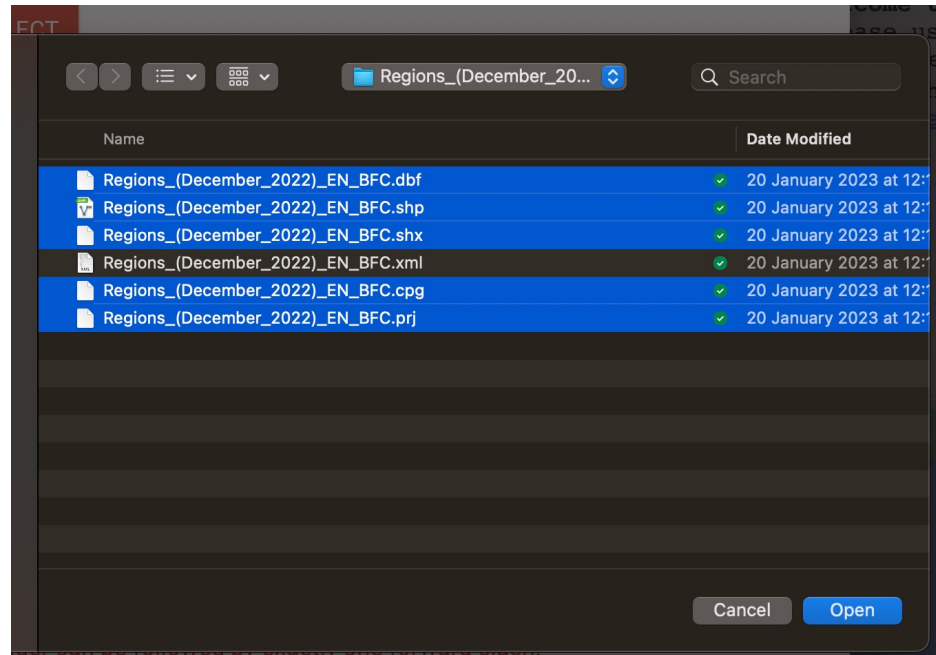


## Step 4: GEE Assets

<https://code.earthengine.google.com/>

For Regions, choose all the files from **Regions\_(December\_2022)\_EN\_BFC** except the .xml file.

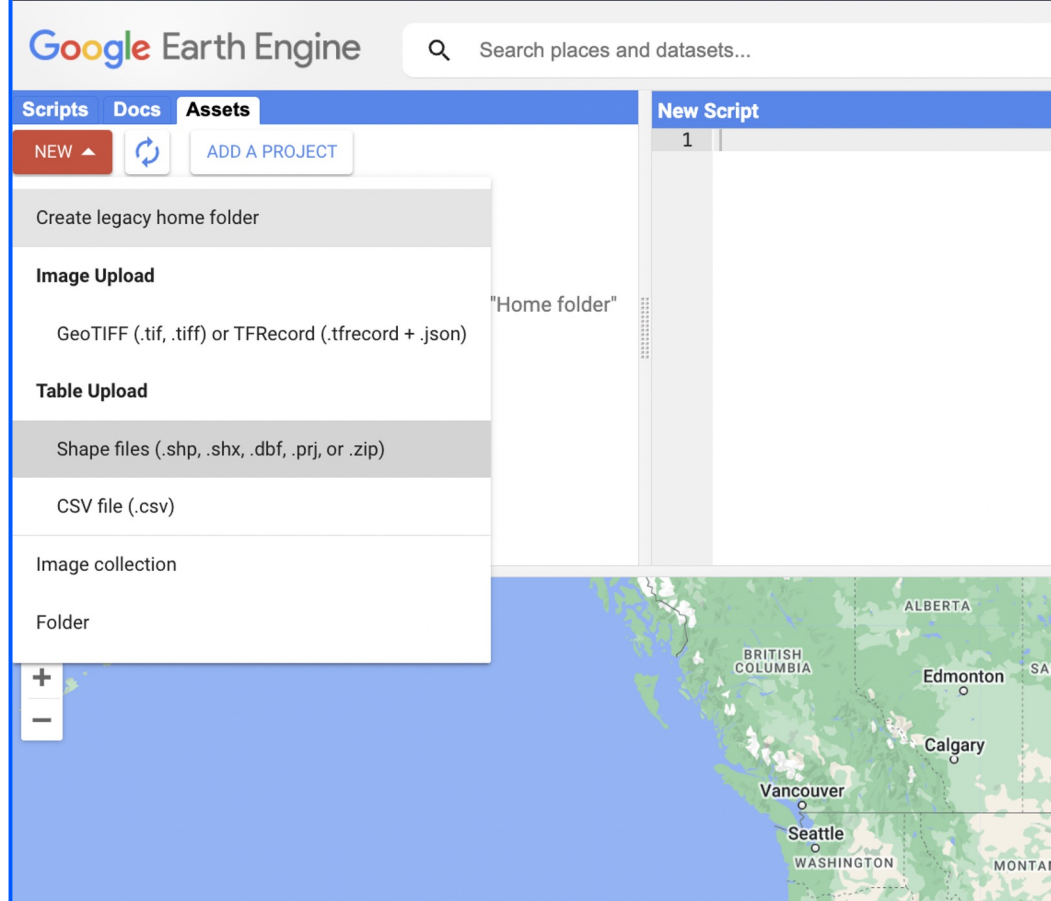
Set asset name as **regions** and then press **UPLOAD**.



## Step 4: GEE Assets

<https://code.earthengine.google.com/>

Repeat the same for LSOA  
shape files

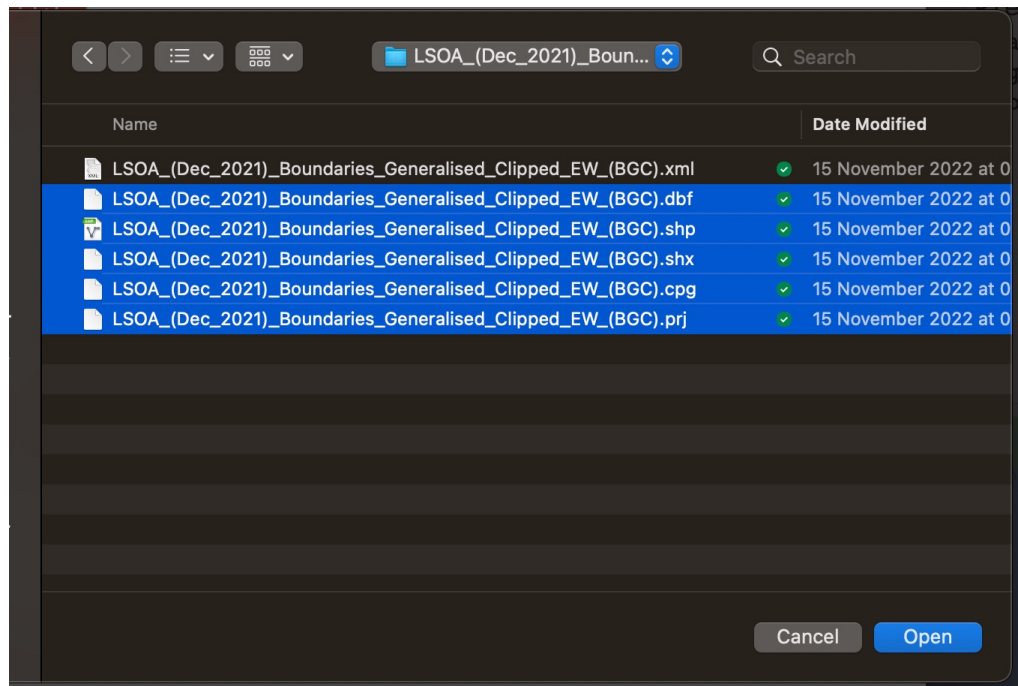


## Step 4: GEE Assets

<https://code.earthengine.google.com/>

For LSOAs, choose all the files from  
**LSOA\_(Dec\_2021)\_Boundaries\_Generalised\_Clipped\_EW\_(BGC)**  
Except the .xml file.

Set asset name as **LSOAs**  
and then press **UPLOAD**.

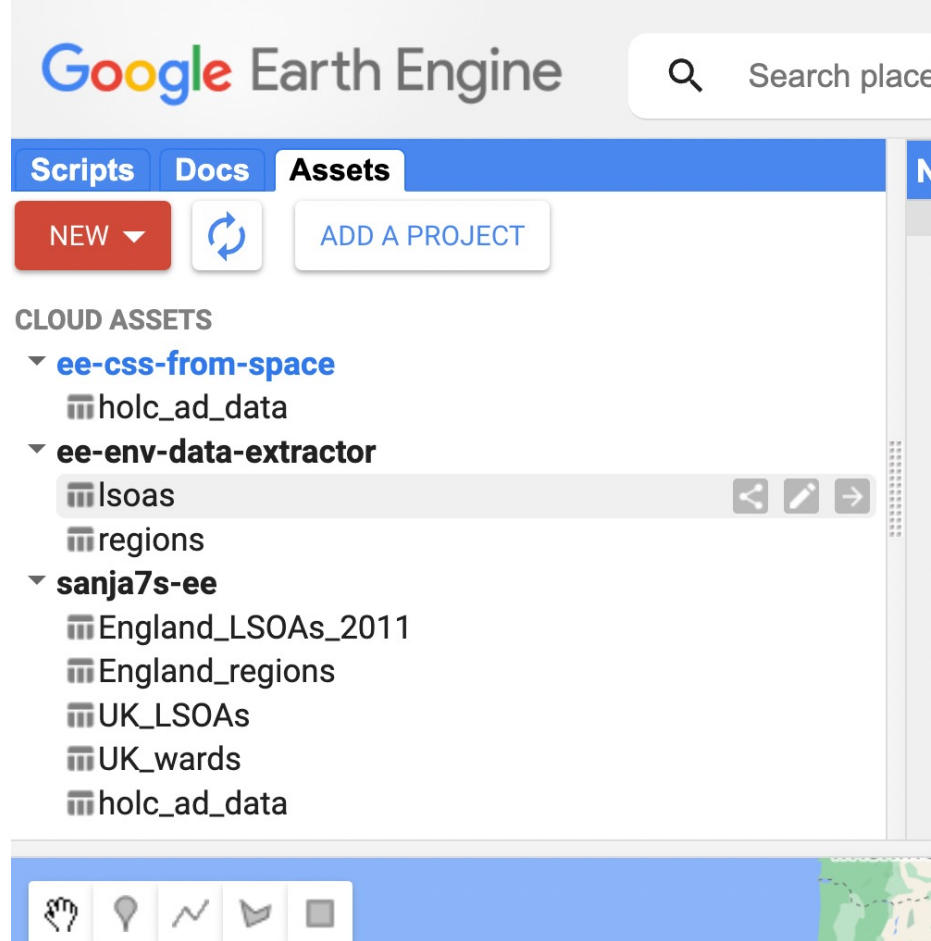


## Step 4: GEE Assets

<https://code.earthengine.google.com/>

Please do wait a bit, as these are large files, and it will take a couple of minutes that they are uploaded to your assets.

Once they are, you should be able to see them as so to the right.



# NOW THE EXTRACTOR SHOULD WORK FOR YOU!

# Why we need a tool such as Google Earth Engine (GEE)?

Satellite and EO data are huge, and it takes time to download, preprocess and analyze them.

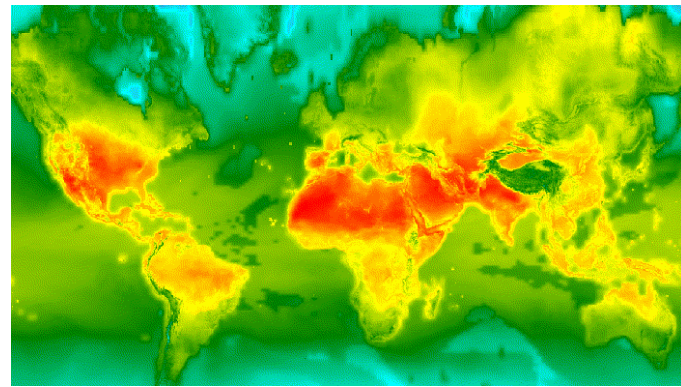




# What is Google Earth Engine (GEE)?

A cloud-based tool that consists of:

1. A large repository of analysis-ready **EO data** (Earth Engine Data Catalog)
2. **Computational Infrastructure** with a pool of servers co-located with data
3. Powerful **API** (JavaScript, Python, Julia, etc.)





# How GEE works?

## Main data data structures

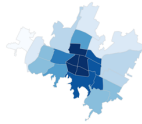
**Image** – raster



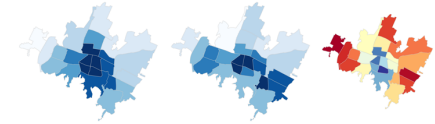
**Image Collection**



**Feature** -- vector



**Feature Collection**



Other fundamental data structures in Earth Engine include **Dictionary**, **List**, **Array**, **Date**, **Number** and **String**.

# How GEE works?

Main methods and functions

