Where and How to download data

Vector data or Occ. data can be downloaded from GBIF- Global Biodiversity Information Facility (<https://www.gbif.org/>). Steps for downloading online occurrence data from GBIF are as follows:

1. Open GBIF website, first you need to sign up using your Google account. And then login.
2. Click on Occurrences. After that search for the particular species you want to work with in the search bar for example *Lantana camara*. Click Yes.
3. Click on Simple tab. Under the occurrence status click present.
4. Check for Scientific name of the specific species. It will show you all the classification.
5. Select the basis of record for instances choose Human observation, it will give you only human observed records.
6. Choose the Location from where you want species data like, India.
7. Select or filter the year, month and the dataset for example you want the occurrence data from 2018 to 2020, for the month of January and want only from iNaturalist Research-grade Observation.
8. You can also choose location by country or area and continent wise data that are already fed in. Then after doing all these procedures click download button on the upper right side of the screen.
9. Click on simple. Then a dialog box will appear, click understood.
10. After few moments your requested data will be prepared for downloading. Click on download.
11. The downloaded data is in the .csv format.

Raster data or climate data can be downloaded from WorldClim (<https://www.worldclim.org/>) and CCAFS climate - Climate Change Agriculture and Food Security (<http://www.ccafs-climate.org/>).The steps for downloading data from WorldClim are as follow:

1. Open WorldClim website. Click download.
2. Click on historical climate data (near current). There are 19 bio-climatic variables present in it for the year 1970-2000.
3. Under the Bio-climatic variables click on the highest resolution data i.e; 30 seconds.
4. The downloaded data is in the zip file. It contains 19 bio-climatic variables in GeoTiff (.tif) file format.
5. For SSPs data click on Future climate data.
6. Click on the resolution you want.
7. As per your choices, select the future time period and GCMs like if you want IPSL-CM6A-LR model for each scenario. Click bc which stands for bio-climatic variables it will start downloading.
8. Open it in ArcGIS or Qgis software for further pre-processing.

Steps for downloading RCP data from CCAFS climate are as follows:

1. Open CCAFS climate website. Click spatial downscaling.
2. Under Spatial downscaling click on Statistical downscaling delta method CMIP5 data.
3. Click on Data download by scrolling down.
4. In the left column of File Set, under Empirical/Statistical Downscaling click Delta Method IPCC AR5.
5. In the right panel, select the extent to region, format to ASCII, drop down and select period to 2050, variable to bioclimatic and resolution to 30 seconds.
6. Then again in the left column go on to scenario and select all four RCP 2.6, 4.5, 6.0, 8.5. Also go on to Model tab and select the model accordingly say ipsl\_cm5a\_lr.
7. Select the region of interest like B5 for India. Click for search in the upper right corner.
8. A page will open. Check box for select all and click generate download links.
9. Give your E-mail id and click search. Fill the details and submit.
10. Click the links one by one and the data will start downloading. It will be in zip file.
11. Open it in ArcGIS or Qgis software for further pre-processing.