A. Software installation:

Step1- Download a Python editor (ex: *KOMODO edit*) and download Python 3 (the tool was made in the Python version 3.9).

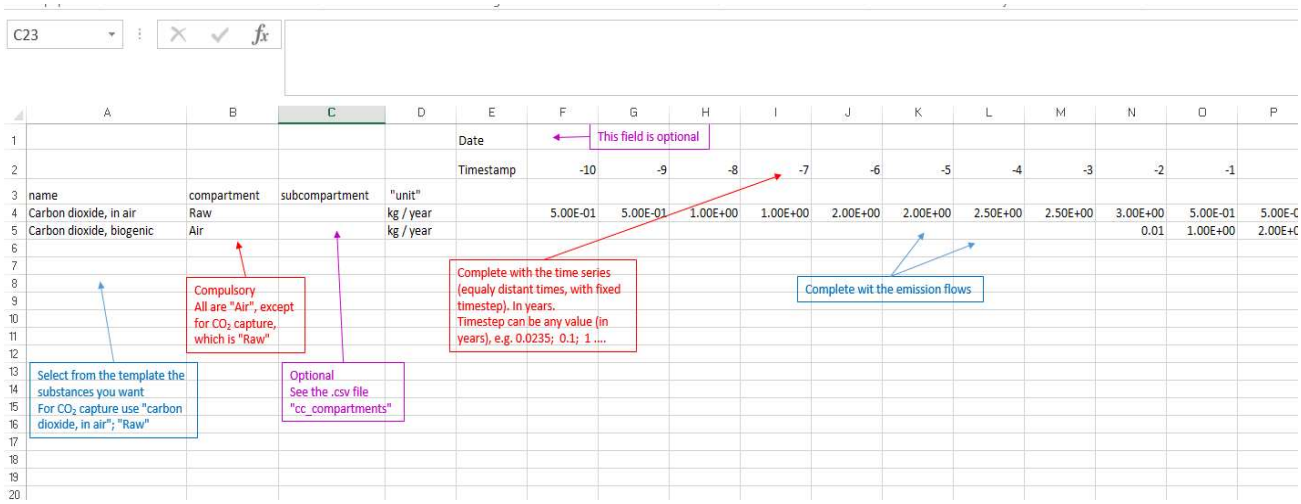
Step2- Download the .zip file of the *CCI-Tool* and extract it.

Step3- this is not necessary for version3. Open the Python editor, open the directory of the *CCI-Tool* folder, open the folder *install_libraries*, then open the file *install_libraries.py* and run it.

B. Read the following explanations to understand how the tool works, and what results it provides.

Step1- Read the Example in the picture below to understand how the input data file should be completed (.csv file).

Optional : you can run the Example to become familiar with the tool. For that, follow the instructions below.



Step2- Build your own input data file : Download the proposed template if needed and enter your data as explained in the Example above. You can select in this file the concerned GHGs. Keep the substance name as is, do not change it.

Step3- Relocate your input data file or the modified template file (It should be a .csv file), inside the folder *CCI-Tool*.

Step4- Open the Python editor, open the directory of the folder *dynlca_impact_assessment*, then open the file *main.py*.

Step5- Go to the function «*dynlca_params*», and for the «*'dynlca_file_name' :'test'*» change '*test*' by the name of your file (example: *'dynlca_file_name' : 'template'* if you are using the proposed template in our web page).

Step6- In the function «*dynlca_params*», you can change the timespan of climate change impact calculation by changing the variable «*'span_time_cc' :200*» replace '*200* ' by the desired value, in **years**. Change the value of *'step_size_cc'* (the time step) according to your data (in years).

Step7- Run the file *main.py*

Step8- In the folder *CCI-Tool*, open the folder *results* and open the last folder recorded: you'll find there the computed results. This recorded folder has the same name as your input file *"name"*

Results

All the results for the climate change impact are found in the folders "*results\\name\\cc*"

- ✓ ***Numerical results***

Some key results of the calculation can be found in the file "*report.csv*"

All numerical results are placed in folder *"cc"*

The results files for temperature and radiative forcing **per substance** are named "*results_temperature*" and "*results_radiative*" respectively.

The global results for temperature, radiative forcing, cumulated radiative forcing, and cumulated temperature in function of time can be found in the file "*results_total*"

- ✓ ***Visual results***

The graphics for temperature for each substance are placed in the folder "*cc*"*\\graphics\\substances*". Each csv file represents one substance (in its compartment – sub-compartment).

The global results for temperature (absolute and cumulated) and radiative forcing (absolute and cumulated) are represented in graphics in the folder "*cc*"*\\graphics*". They are named "*Global Mean Temperature Change*","*Radiative Forcing*" and "*Cumulative Radiative Forcing*", "*Cumulative Temperature*"