

Post-processing

Using the post-processing

There are two post-processing tools: agricultural and shipping. The post-processing of agriculture needs a reference scenario. The program expects a folder "Basis_REF" in the input folder with the scenarios.

Installing the post-processing tool

Post-processing includes Python scripts calculating effect on shipping and agriculture and creating a dashboard from the results.

They require Python, and the following side packages:

- matplotlib
- openpyxl
- scipy

The script calculating effects on agriculture contain Geopandas. The installation of Geopandas is the following (this guide is valid for an older version, the versions can be replaced, e.g. Python39):

#####

Installing geopandas using pip

This is assuming Python is installed in : c:\Python\Python36

#####

In this guide we explain the steps to install geopandas. It is very important that these steps are followed in the right order.

Otherwise the installation might become corrupted.

Note that everytime a file needs to be run in command window, this needs to be done as ADMINISTRATOR.

Step 1: Uninstall any dependencies (which might have accidently been installed) by running geopandas-uninstall.bat in cmd as administrator.

Step 2: Install Microsoft Visual Studio Build Tools 2019 by running the file vs_buildtools__2074514829.1566813139.exe

- During installation when it asks which components to install, select C++ build tools
- ensure the latest versions of MSVCv142 - VS 2019 C++ x64/x86 build tools and Windows 10 SDK are checked
- Click on install

Step 3: Modify System Environment Variables

- the system environment variables are found by searching for envi in your Windows Search button
- Add a System Environment Variable with name: INCLUDE pointing at C:\Program Files (x86)\Windows Kits\10\Include\<version>\ucrt

Step 4: Run geopandas-installation1.bat as administrator in CMD.

- This will install GDAL

Step 5: Modify System Environment Variables

- the system environment variables are found by searching for envi in your Windows Search button
- Edit the System Environment Variable with name: PATH and add an extra line pointing at c:\Python37\Lib\site-packages\osgeo
- Note that you do not delete the other lines at your PATH environment variable, only add a new one.

Step 6: Run geopandas-installation2.bat as administrator in CMD.

- This will install all other dependencies on GDAL

step 7: copy FileGDBAPI.dll to c:\Python\Python36\Lib\site-packages\osgeo\gdalplugins\

Step 8: Modify System Environment Variables

- Add a System Environment Variable with name: GDAL_DRIVER_PATH pointing at c:\Python\Python36\Lib\site-packages\osgeo\gdalplugins
- Edit the System Environment Variable with name: PATH pointing at c:\Python\Python36\Lib\site-packages\osgeo\gdalplugins

Step 9:

- check if installation was succesful by running gdalinfo

Note:

More information and installation guidelines found at:

<https://geoffboeing.com/2014/09/using-geopandas-windows/> (GDAL and dependencies)

https://github.com/Esri/file-geodatabase-api/blob/master/FileGDB_API_1.5.1/FileGDB_API_1_5_1-VS2017.zip (fileGDB)

<https://wiki.python.org/moin/WindowsCompilers> (visual studio)

<https://gis.stackexchange.com/questions/198289/does-gohlke-gdal-break-command-line-gdal-ogr-in-windoiws> (environment variables)

geopandas-installation1.bat

```
set PATH=
```

```
set PY_HOME=c:\Python37
```

```
set PYTHONPATH=%PY_HOME%\Lib;%PY_HOME%\DLLs;%PY_HOME%\Lib\lib-tk
```

```
set PATH=%PATH%;%PY_HOME%;%PY_HOME%\Scripts
```

```
call pip install GDAL-3.0.1-cp37-cp37m-win_amd64.whl
```

pause

geopandas-installation2.bat

set PATH=

set PY_HOME=c:\Python\Python36

set PYTHONPATH=%PY_HOME%\Lib;%PY_HOME%\DLLs;%PY_HOME%\Lib\lib-tk

set PATH=%PATH%;%PY_HOME%;%PY_HOME%\Scripts

call pip install Fiona-1.8.9-cp36-cp36m-win_amd64.whl

call pip install pyproj-2.4.0-cp36-cp36m-win_amd64.whl

call pip install Rtree-0.8.3-cp36-cp36m-win_amd64.whl

call pip install Shapely-1.6.4.post2-cp36-cp36m-win_amd64.whl

call pip install geopandas

pause