Instructions for using census tract rescaling code. See final report for description of running GIS code. The GIS code should not need to be rerun anytime soon since the census tract information it relies on and generates corresponds to the 2020 census tracts.

The final estimates will be made available as soon as the method is communicated to the MRCC. This will also have the Combinations_Union.csv file

Base Requirements: Python 3 or higher. Numpy and NETCDF4 modules. Any additional requirements by these modules (e.g. a particular iteration of Python 3) also need to be observed.

First let's assume a directory structure where the source code is in the current directory. Our mapping directory will be ../map_data, our output directory will be ../output, and our input files (netcdf gridded nclimgrid-d data) is in ../ncei_data. (We are using / assuming Unix. Use \ instead for windows).

1.) Put the ncei data in the ncei_data directory. For this, setup subdirectories (e.g. ncei_data/1981) for each year. Put each monthly .nc file in it's proper subdirectory.

2.) Setup directories in the output directory (e.g. ../output/1981), for the output .txt files containing the estimates.

3.) Edit the mapproc* scripts to utilize these directories.

4.) Put the Combinations_Union.csv file in the map directory.

5.) Run mapproc.g2c.py and mapproc.c2g.py scripts. These will generate pickle files for the dictionaries that are used hereafter which will be put into the output directory.

6.) Edit forproc.py for directories and dates. Remember to ensure the correct directories exist as described at the beginning of this document.

Estimates have now been produced and are in the text files in ../output/yyyy.

7.) Create subdirectory ../output/err and ../output/err/stat.

8.) Edit devcomp.py and run it for the desired dates and field (one field at a time). This produces deviation arrays that will go into subdirectory err. There will be one for each day and each field.

9.) Edit errstat.py and run it for the desired dates and field. Output will go to err/stat subdirectory and the filenames contain enough info to know what is in them. These are numpy arrays and should be easly to load with np.load.

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