Preparation of GFED biomass burning emissions for REACH

<https://www.globalfiredata.org/data.html>

**Instructions**

1. Edit python script (sa\_biomass.py) to calculate pollutant emissions from biomass burning. The script processes GFED emissions for the year 2018. If another year is needed, download emissions from the GFED site and change the year in the python script.

Change python index number based on domain:

|  |  |  |
| --- | --- | --- |
| Code | Name | Python index number |
| BONA | Boreal North America | 0 |
| TENA | Temperate North America | 1 |
| CEAM | Central America | 2 |
| NHSA | Northern Hemisphere South America | 3 |
| SHSA | Southern Hemisphere South America | 4 |
| EURO | Europe | 5 |
| MIDE | Middle East | 6 |
| NHAF | Northern Hemisphere Africa | 7 |
| SHAF | Southern Hemisphere Africa | 8 |
| BOAS | Boreal Asia | 9 |
| TEAS | Central Asia | 10 |
| SEAS | Southeast Asia | 11 |
| EQAS | Equatorial Asia | 12 |
| AUST | Australia and New Zealand | 13 |

2. Crop out domain from global GFED grid

Edit 00\_grid.R script and edit the *sa\_sf* variable into the shapefile for your domain

3. Combine total VOC emissions from individual VOC compounds

Run 00\_combine\_VOCs.R

4. Re-grid biomass burning emissions from 0.25 degrees grid to local geography resolution for domain

Edit 01\_regrid\_plot.R and change sa\_sf variable to shapefile for domain

Check emission totals before and after re-gridding

5. Add emissions for each pollutant and location from biomass burning to **ground-level emissions** from other inventories (e.g. EDGAR)