

Handout for October 2020 Newsletter

Mapping Environmental Economics in GeoFRED®

Purpose.

1. Create state-level geographical maps of carbon dioxide (CO₂) emissions.
2. Edit the maps by modifying their data, legend, and color.
3. Interpret the economic information displayed in the maps.

Pedagogical Rationale. This assignment requires that you first search for data online, select a particular series, and display it in the form of a geographical map. Next, you will edit the format of the map. Lastly, you will interpret the economic information displayed in the map. These tasks will develop your proficiency in searching for, transforming, and interpreting data.

Grading. Your grade will be determined by (a) how precisely you complete the search and transformation data tasks and (b) how accurately you interpret the data.

Steps to Search for and Transform the Data.

1. Access <https://geofred.stlouisfed.org> and click on “Build New Map.”
2. Click on “Choose Data” and under “Region Type” select “State.”
3. Under “Data:” search for “Total Carbon Dioxide Emissions From All Sectors, All Fuels.”
4. Select “Frequency: Annual,” “Units: Million Metric Tons CO₂,” and “2017” as the date.
5. Click on “EDIT LEGEND” and select from “Interval method” the option “User Defined.”
6. Define the maximum interval values by typing the following values in each interval box:
 - 30
 - 60
 - 125
 - 350
 - 711
7. Click on “CHOOSE COLORS”; from the “Multi Hue” option, select the left-most color scheme on the first row (tagged “pubu”).
8. Open a new browser tab.
9. Access <https://geofred.stlouisfed.org> and click on “Build New Map.”
10. Click on “Choose Data” and under “Region Type” select “State.”
11. Under “Data:” search for “Total Carbon Dioxide Emissions From All Sectors, Coal.”
12. Select “Frequency: Annual,” “Units: Million Metric Tons CO₂,” and “2017” as the date.
13. Click on “EDIT LEGEND” and select from “Interval method” the option “User Defined.”
14. Define the maximum interval values by typing the following values in each interval box:
 - 10
 - 20
 - 35
 - 70
 - 139
15. Click on “CHOOSE COLORS”; from the “Multi Hue” option, select the left-most color scheme on the first row (tagged “pubu”).

Discussion Prompts. Answer the following questions:

1. In 2017, which state was the second-largest source of carbon dioxide emissions from all sectors?
2. In 2017, which state was the second-largest source of carbon dioxide emissions from coal?
3. Briefly describe the size of carbon emissions from coal relative to the size of carbon dioxide emissions from all sectors in Texas and in Indiana. How are they different? Briefly describe coal's contribution to carbon emissions across different states.