

Data Intake Processing and Verification Report

Background Information

- **Original Dataset Name:** GRA2PES Greenhouse Gas and Air Quality Species
- **GHG Center Dataset Title:** GRA2PES Greenhouse Gas and Air Quality Species
- **Dataset Provider:** NIST, NOAA
- **Date Obtained:** August 2024
- **Location Obtained From:**
- **Data Location in GHG Center:** gra2pes-ghg-monthgrid-v1
- **Data POC(s):**
- **Dataset File Type(s):** NetCDF
- **Projection (if different from WGS84):**

Data Transfer Confirmation

An SHA-256 checksum is used to detect high-level errors within data transmissions. Results from individual checksum file comparisons of pre-transfer and post-transfer shows all files were transferred successfully and no individual files had any transfer issues.

Data Intake Process

- https://us-ghg-center.github.io/ghgc-docs/data_workflow/gra2pes-ghg-monthgrid-v1_Data_Flow.html

Overall Dataset Statistics

- Statistics across all files:

	Minimum (tonne/km ² /month)	Maximum (tonne/km ² /month)	Mean (tonne/km ² /month)	Standard Deviation
Original Data	0.0	110011.766	5.1753297	172.27177
Transformed Data	0.0	110011.766	5.1753297	172.27177

Monthly Dataset Statistics for Total Fossil Fuel emissions

- Statistics for Total Fossil Fuel CO₂ Emissions in 2021-03:

	Minimum (tonne CO ₂ /km ² /month)	Maximum (tonne CO ₂ /km ² /mont h)	Mean (tonne CO ₂ /km ² /month)	Standard Deviation
Original Data	0.0	99142.828125	25.646704	354.345093
Transformed Data	0.0	99142.828125	25.646704	354.345093

- Statistics for Total Fossil Fuel NO_x Emissions in 2021-09:

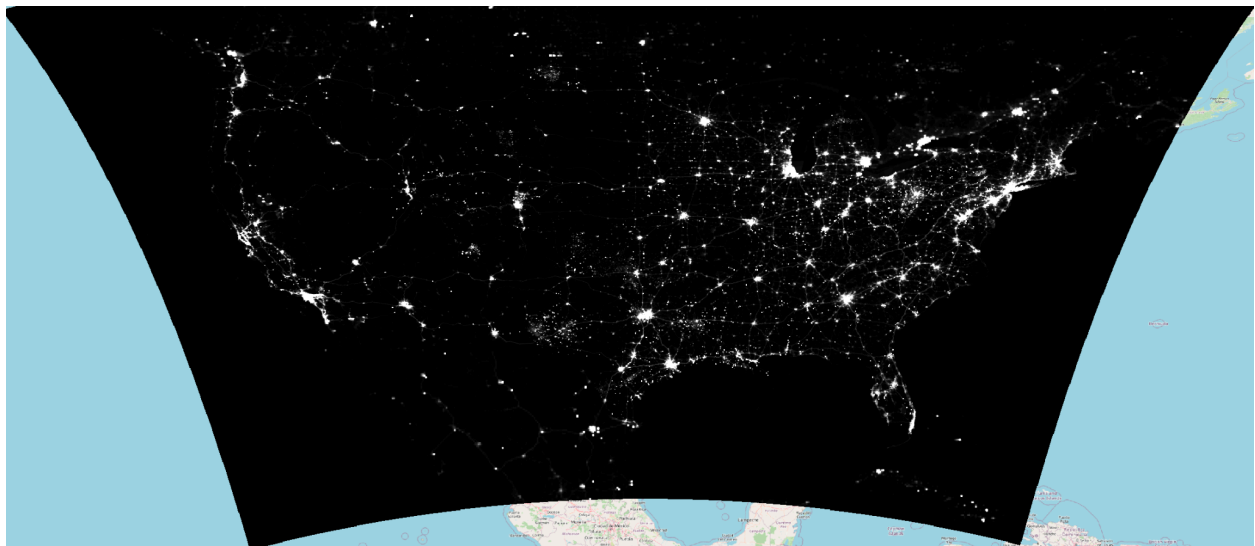
	Minimum (tonne NO _x /km ² /mont h)	Maximum (tonne NO _x /km ² /month)	Mean (tonne NO _x /km ² /mont h)	Standard Deviation
Original Data	0.0	144.753204	0.067136	0.518551
Transformed Data	0.0	144.753204	0.067136	0.518551

Visual Comparison:

Original Data for Total Fossil Fuel CO₂ Emissions 2021-01 visualized on QGIS



Transformed Data Total Fossil Fuel CO₂ Emissions 2021-01 visualized on QGIS



- Link to transformation record in [Jupyter Notebook](#)
- All values are in expected range

Summary

- We are confident that the transformation and display of data in the GHG Center is correct
- There were no problems identified in the data
- Link to [Data Usage Notebook](#)

- Link to [US GHG Center Data Catalog overview page](#)

Report Completed on: 20/8/2024

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