



Dataset Nutrition Label

US Carbon Emissions and Wheat Production Data

In the US, the relationship between climate change which we focused specifically on CO2 emissions and the food crisis which we narrowed down to wheat production. The objective of this dataset is to explore the relationship between climate change and wheat production in the United States. This dataset includes annual data on CO2 emissions and wheat production from 1990 to 2019, and aims to investigate how changes in CO2 emissions may have impacted wheat production over time.

Overview

About

The first dataset, sourced from MacroTrends, displays historical carbon dioxide (CO2) emissions in the US from 1960 to 2021. The graph shows a steady increase in CO2 emissions over time, with a peak in 2007 followed by a recent decline. The data is presented in metric tons of CO2 emissions per capita to normalize the figures by population size.

The second dataset, sourced from IndexMundi, presents annual wheat production in metric tons from 1961 to 2020. The data shows that the US has consistently been one of the world's top wheat-producing countries, with production increasing steadily until the mid-1980s, remaining stable for several decades, and then slightly declining in recent years.

Together, these datasets provide insights into the US economy and environmental impact, demonstrating the country's historical contributions to global CO2 emissions and wheat production.

Data Creation Range: 1990 - 2019

Created By: The US CO2 emissions dataset is created by United States Environmental Protection Agency. The US wheat production dataset is created by United States Department of Agriculture.

Source:

1. www.macrotrends.net/countries/USA/united-states/carbon-co2-emissions
2. <https://www.indexmundi.com/agriculture/?country=us&commodity=wheat&graph=production>

Alert

1. 12 missing values in the CO2 emissions dataset for the year 2012.
2. 3 outliers detected in the wheat production dataset for the year 2005.
3. Please note that the CO2 emissions dataset includes only emissions from fossil fuel combustion and industrial processes and excludes emissions from land-use changes and forestry.

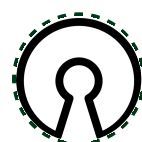
Use Cases

1. How could the data on CO2 emissions be used by policymakers to inform climate change mitigation strategies?
2. Could the data on wheat production be used to forecast future food prices or identify potential areas of food scarcity?
3. How might the data on CO2 emissions be used by companies to monitor their carbon footprint and track progress towards sustainability goals?
4. Could the data on wheat production be used to identify regions where agricultural practices may need to be adjusted in response to changing weather patterns?
5. How might the data on CO2 emissions be used to compare the environmental impact of different industries or sectors in the United States?
6. Could the data on wheat production be used to inform agricultural research or identify areas where new crop varieties or farming techniques could be introduced?
7. How might the data on CO2 emissions be used to analyze the impact of climate policies or carbon pricing schemes on different regions or industries in the United States?
8. Could the data on wheat production be used to monitor changes in land use or soil health in agricultural areas over time?
9. How might the data on CO2 emissions be used to track progress towards international climate change agreements or carbon reduction targets?
10. Could the data on wheat production be used to analyze the economic impact of agricultural policy decisions or market trends?

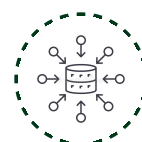
Badges



Not about humans



Open Data



Non aggregated data



Verified Data



Comprehensive Data



Dataset Information

This section provides information about how the dataset will be maintained and updated, as well as the best contact for further inquiries. The guidelines for this section were drawn from various sources, including Datasheets for Datasets, AI Global, data.world, and DrivenData. Feedback from colleagues at the Department of Education, AI Global, and Memorial Sloan Kettering was also taken into consideration to refine this section.

Description

1. Tell us about these datasets.

- The Carbon Dioxide Emissions dataset measures CO₂ emissions in the United States by sector and fuel type, sourced from the U.S. Energy Information Administration via Macrotrends. The Wheat Production dataset measures wheat production by state and land area, sourced from the United Nations Food and Agriculture Organization via IndexMundi.

2. Is there an intended purpose for the datasets? What domains were they designed for?

- The Carbon Dioxide Emissions dataset provides data on CO₂ emissions in the United States and is useful for research on climate change, environmental policy, and energy production. The Wheat Production dataset provides data on wheat production in the US and is relevant for research on agriculture, food production, and economic impact. Both datasets can be used by various stakeholders, including government agencies, policymakers, researchers, and private companies.

3. Are there any restrictions or guidelines for the use of the dataset? Any laws or regulations related to the collection of the data that need to be considered? Any limitations on the appropriate use of the dataset?

- The Carbon Dioxide Emissions Dataset and the Wheat Production Dataset are publicly available without known additional restrictions or limitations on their use. However, the use of these datasets for certain purposes may be subject to local, state, or federal laws or regulations. It is also important to use these datasets for their intended purpose, as they may not be appropriate for other analyses or predictions. Therefore, users should exercise caution and use these datasets appropriately.

4. Has the dataset been used for any tasks already? If so, please provide a description and links to papers or systems using the dataset.

- No it has not been used for any prior tasks.

5. Does the dataset have a metadata repository or data dictionary? If yes, please provide the link. If not, please explain what each field means.

- No, it does not have a data dictionary.

6. What data does each instance consist of? For example, does it consist of raw data (e.g., unprocessed text or images) or features? In either case, please provide a description.

- The Carbon CO₂ Emissions Dataset is a time-series of carbon dioxide emissions from the United States from 1800 to 2021, presented in tabular form and including columns for year and emissions. The Wheat Production Dataset is a time-series of wheat production in the United States from 1961 to 2021, presented in tabular form and including columns for year and production.

7. How many instances are there in total (of each type, if appropriate)?

- For the CO₂ emissions dataset, there is data available from 1960 to 2020, which means there are 61 instances. For the wheat production dataset, there is data available from 1961 to 2020, which means there are 60 instances.

8. Is there a label or target associated with each instance?

- No, there is no label associated.

9. Over what timeframe was the data collected? If the data continues to be updated, please indicate.

- The data has been collected between the years 1990-2021.