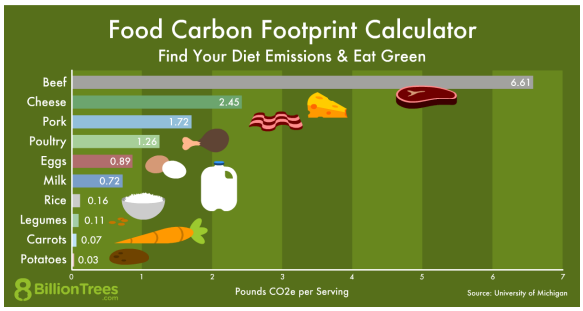
Agri-food CO_2 emission and crop yield changes



Badges

Preparation

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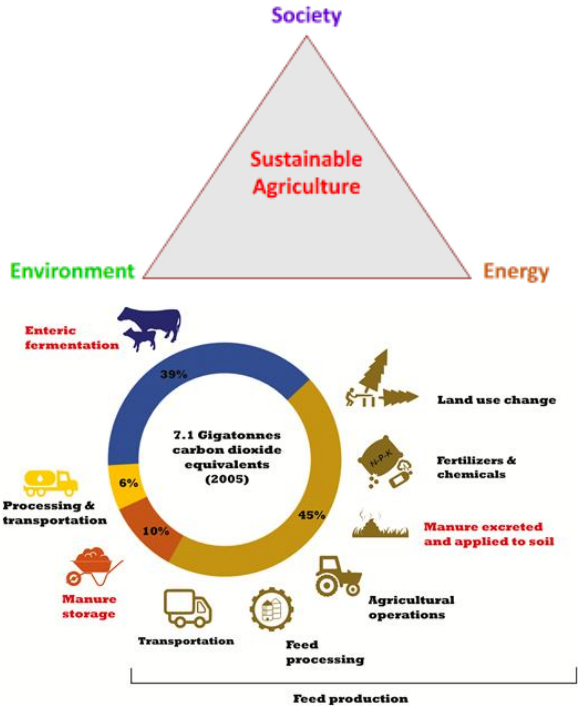
Sources:

https://www.kaggle.com/datasets/alessandrolobello/agri-food-co2-emission-dataset-forecasting-ml

https://data.world/nasa/effects-of-climate-change-on-global-food-production-v-1



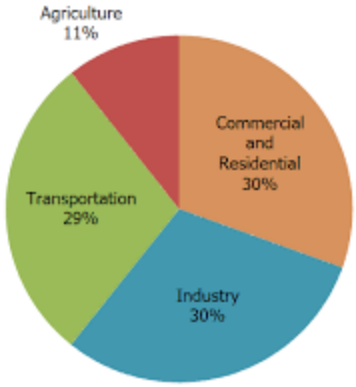
About

- Climate change has significant and far-reaching effects on global food production, impacting crop yields, food availability, and food security. The complex interactions between climate change variables and agricultural systems contribute to a range of challenges that affect both crops and livestock.
- Data on agri-food CO2 emissions are crucial for understanding the environmental impact of food production and identifying areas for improvement. Various organizations and research institutions compile datasets to quantify greenhouse gas emissions associated with agriculture and the broader food supply chain.

Use cases

Applications across various fields and applying it to the real-world diversely

1. Which agricultural practices contribute the most to CO2 emissions in a specific region or crop type?
2. How do different crop and livestock production systems compare in terms of carbon footprint?
3. How do different fertilizer and pesticide application methods impact CO2 emissions?
4. How can climate impact modeling and early warning systems be leveraged to improve preparedness and resilience in vulnerable agricultural regions?
5. What are the socioeconomic implications of climate change on global food production, including impacts on smallholder farmers, food prices, and food security?
6. What is the correlation between extreme weather events and fluctuations in global food production?



U.S. Environmental Protection Agency (2023). Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2021