

Global Co2 Emission Analysis

Project Report

Introduction:

Overview:

A suitable carbon footprint analysis is all-encompassing and includes direct and indirect emissions. The analysis should determine the exclusive global amount of carbon dioxide and other greenhouse gases accumulated over the full lifecycle of a product, service, or operation.

Purpose:

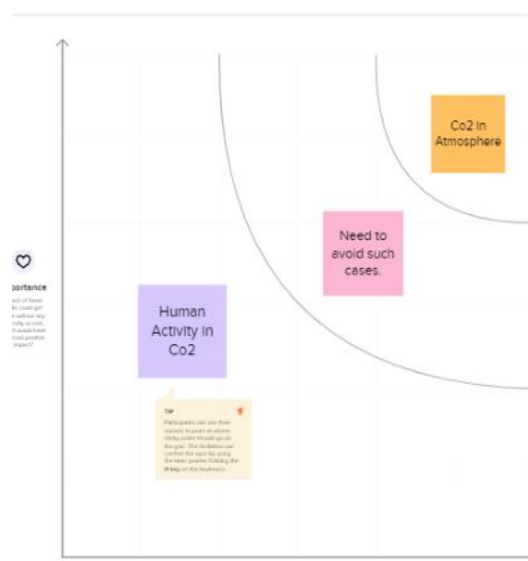
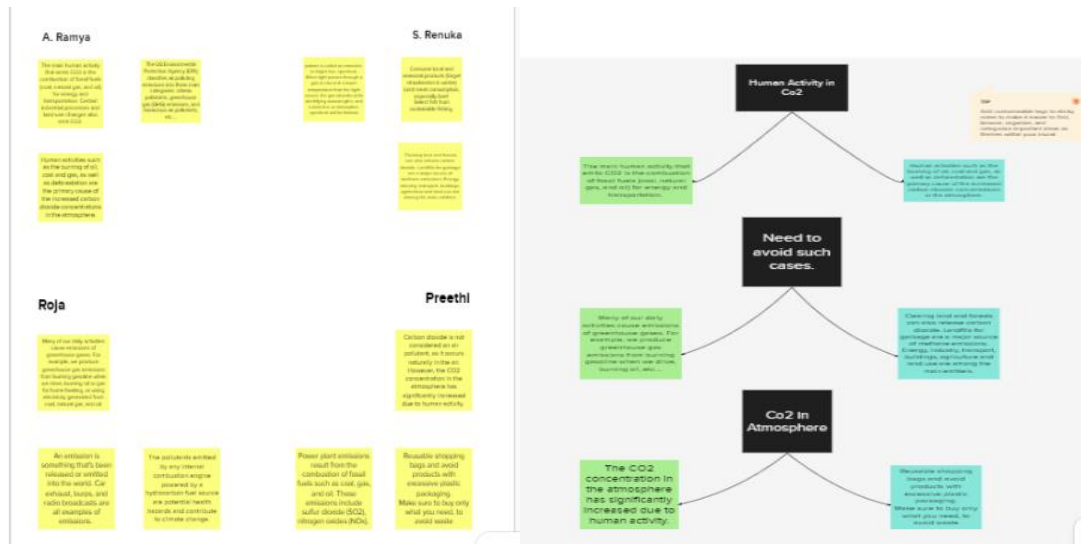
- Measurements of emissions can be used to understand the relative importance of a given source compared to other sources and in developing emissions inventories.
- Government or industry personnel use emissions measurements to assess the performance of control strategies.

Problem Definition & Design Thinking:

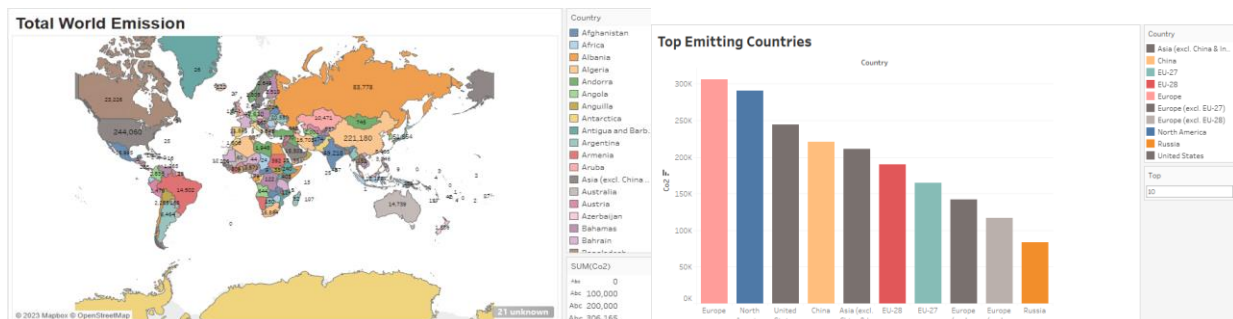
Empathy Map:

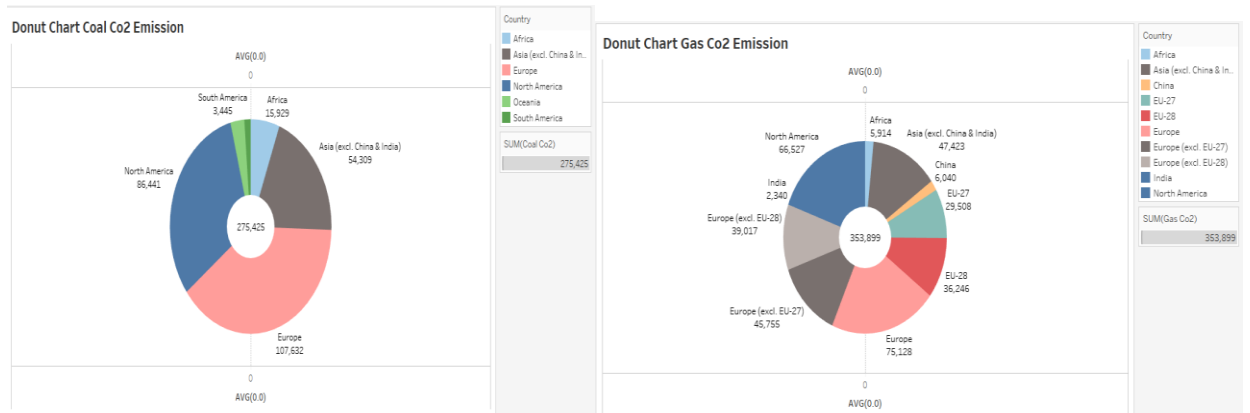
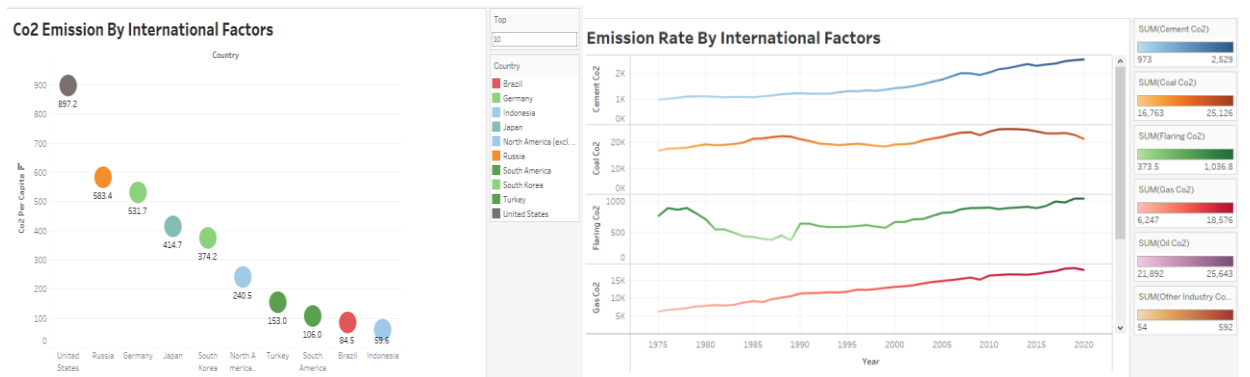
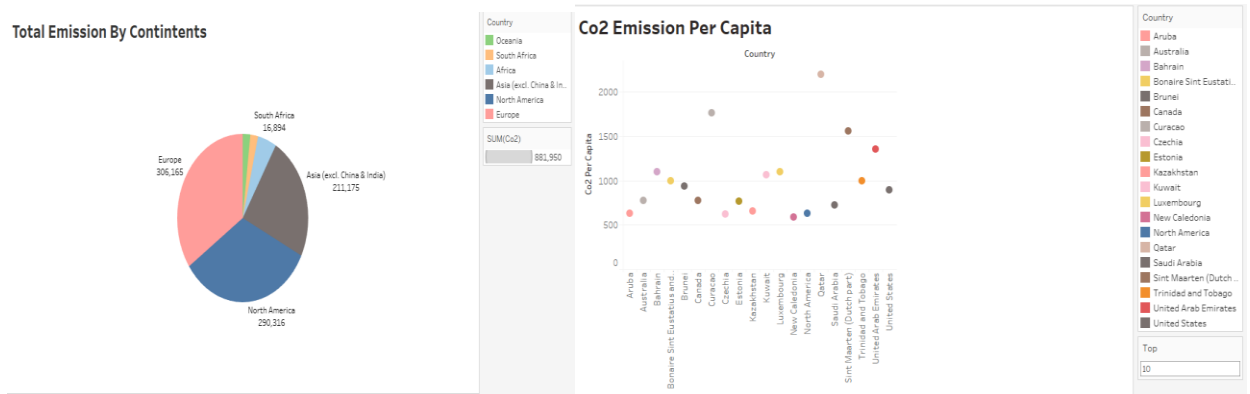
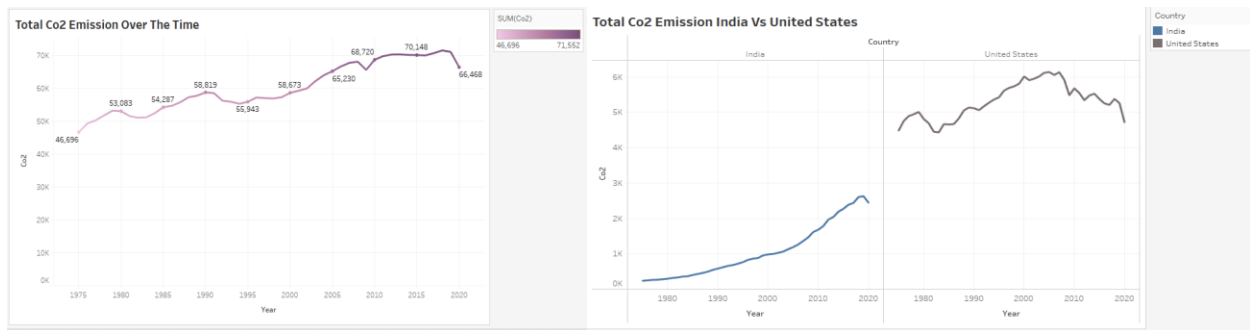


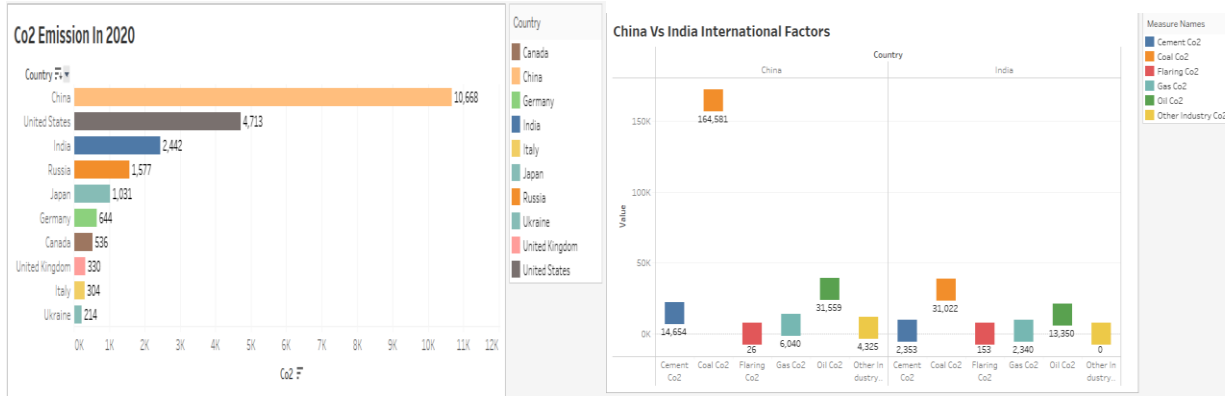
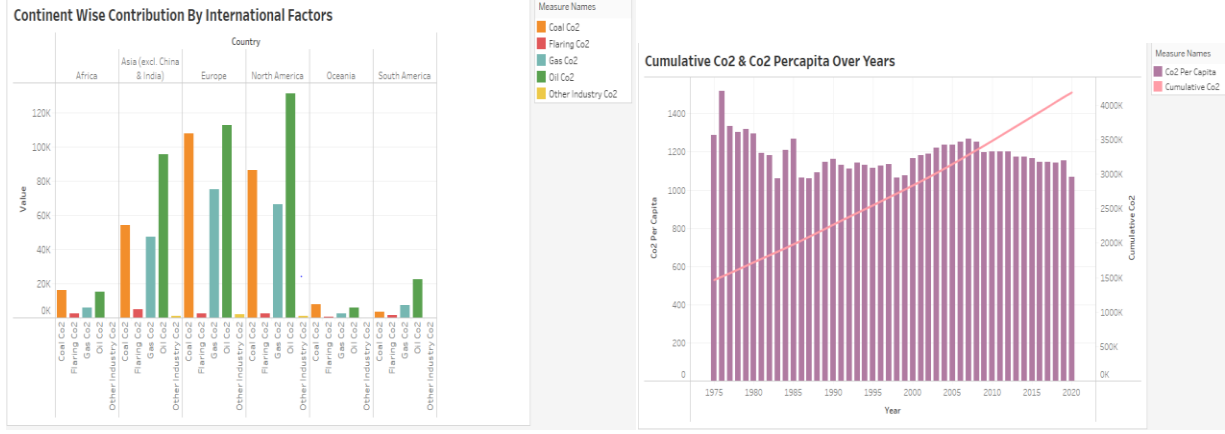
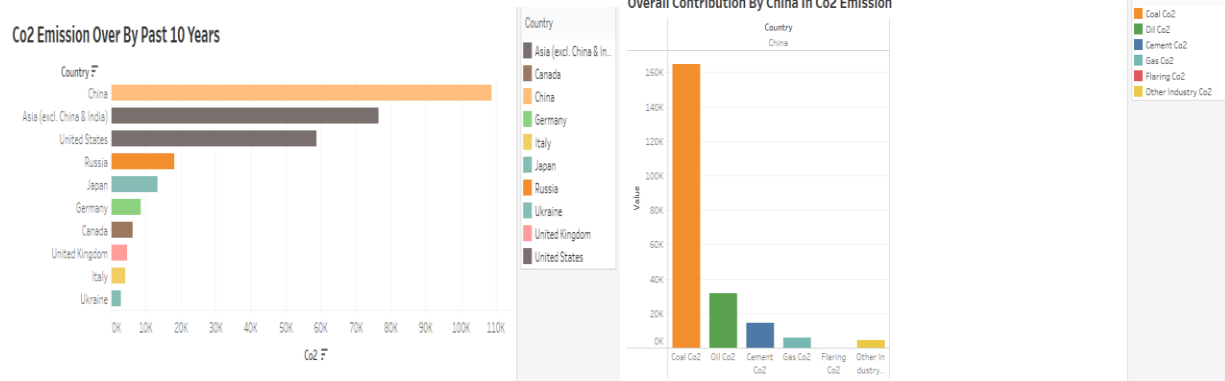
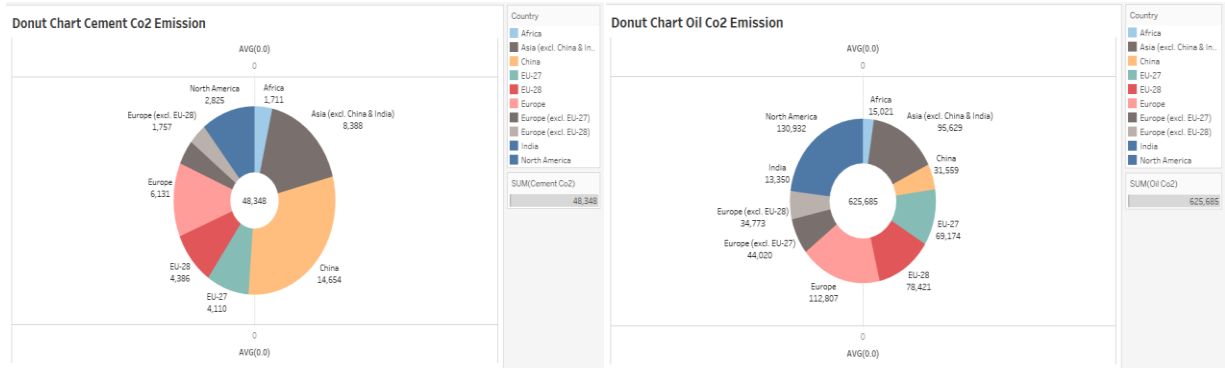
Ideation & Brainstorming Map:



RESULT:

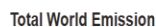




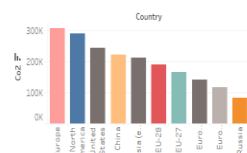


Dashboard:

Global Co2 Emission Analysis



Top Emitting Countries



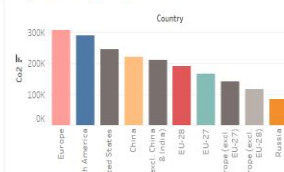
Total Co2 Emission Over The Time



Total World Emission



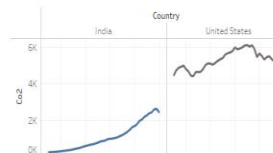
Top Emitting Countries



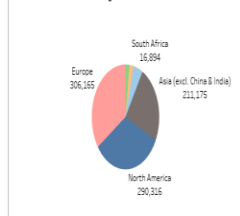
Total Co2 Emission Over The Time



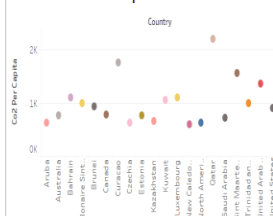
Total Co2 Emission India Vs United States



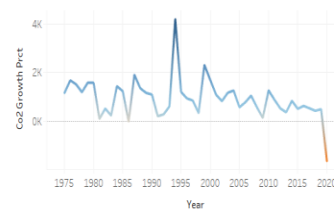
Total Emission By Continents



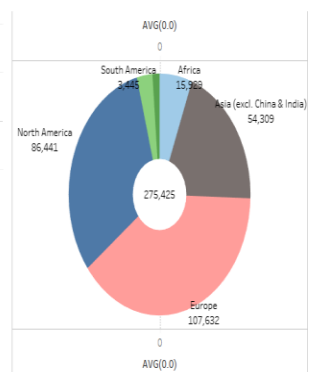
Co2 Emission Per Capita



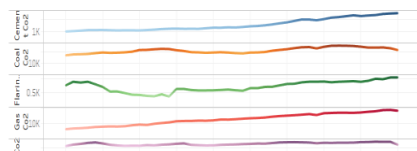
Total Co2 Emission Rate Over The Year



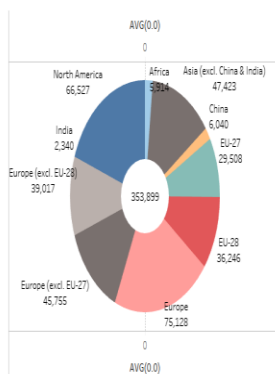
Donut Chart Coal Co2 Emission



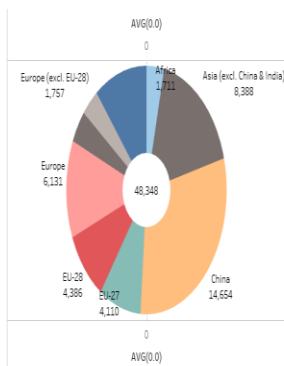
Emission Rate By International Factors



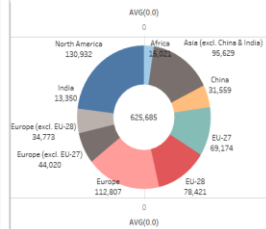
Donut Chart Gas Co2 Emission



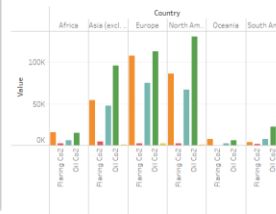
Donut Chart Cement Co2 Emission



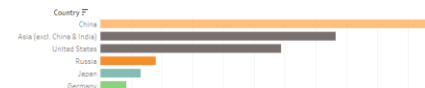
Donut Chart Oil Co2 Emission



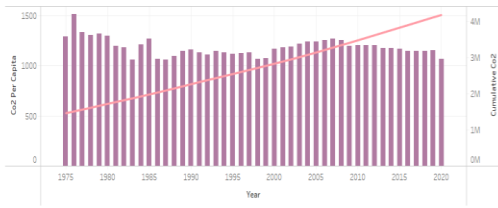
Continent Wise Contribution By International Factors



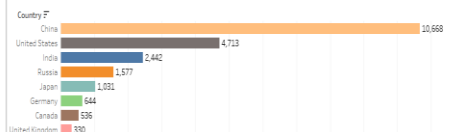
Co2 Emission Over By Past 10 Years



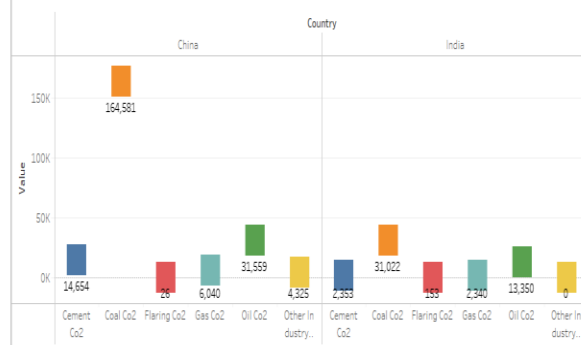
Cumulative Co2 & Co2 Percapita Over Years



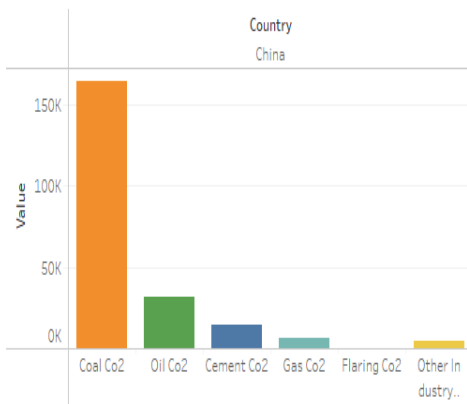
Co2 Emission In 2020



China Vs India International Factors



Overall Contribution By China In Co2 Emission



Story:

A Global CO2 Emission Analysis

- < This map shows that total co2 emission around the world.
- This chart shows top 10 co2 emission countries around the world.
- This chart shows that co2 emission over the years. It ranges from 1975 to 2020.
- This chart shows that co2 emission for India vs U.S.
- This chart shows the total emission of co2 continent wise. The y-axis represents the value.
- This chart shows that co2 emission on percapita. The 1st y-axis represents the value.
- > This chart shows that co2 emission on percapita. The 1st y-axis represents the value.



ADVANTAGES:

- Benefits considered include achieving a healthier population, reducing the frequency and intensity of extreme weather events such as heatwaves, heavy rainfall and droughts, and reducing the number of people exposed to sea-level related risks.
- Carbon dioxide is an important greenhouse gas that **helps to trap heat in our atmosphere**. Without it, our planet would be inhospitably cold. However, an increase in CO₂ concentrations in our atmosphere is causing average global temperatures to rise, disrupting other aspects of Earth's climate.

DISADVANTAGES:

- As CO₂ levels rise, the Earth's temperatures rise with it, causing the melting of the polar ice caps directly into the oceans.
- Continued emissions of greenhouse gases will lead to further climate changes. Future changes are expected to include a warmer atmosphere, a warmer and more acidic ocean, higher sea levels, and larger changes in precipitation patterns.

APPLICATIONS:

Carbon dioxide is Earth's most important greenhouse gas: a gas that absorbs and radiates heat. Unlike oxygen or nitrogen (which make up most of our atmosphere), greenhouse gases absorb heat radiating from the Earth's surface and re-release it in all directions—including back toward Earth's surface.

CONCLUSION:

Global energy-related CO₂ emissions grew by 0.9% or 321 Mt in 2022, reaching a new high of over 36.8 Gt. Following two years of exceptional oscillations in energy use and emissions, caused in part by the Covid-19 pandemic, last year's growth was much slower than 2021's rebound of more than 6%.

Future Scope:

In the *Annual energy outlook 2023* (AEO2022) Reference case, which assumes no changes to current laws or regulations, the U.S. Energy Information Administration (EIA) projects that U.S. energy-related carbon dioxide (CO₂) emissions will fall to 4.5 billion metric tons in 2037, or 6% below the energy-related CO₂ emissions in 2021, before rising to 4.7 billion metric tons in 2050, or 2% below 2021 levels.