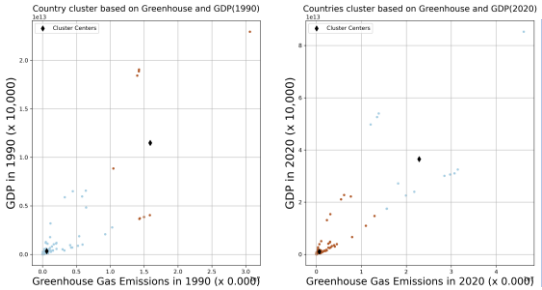
Greenhouse gases vs GDP for different Countries

Presented by : Chandra Shekar Losirlu(22081216)

Abstract

The increase in industries, commercial and economic activities have triggered significant and long terms changes in temperature and weather. Greenhouses from industries may affect the ozone layer of the atmosphere and it may result in global warming, biodiversity impact etc. This study specifically concentrates on greenhouse gas emission – one of the principal contributors to climate change and aims to establish its correlation with the Gross Domestic Production (GDP) per capita.

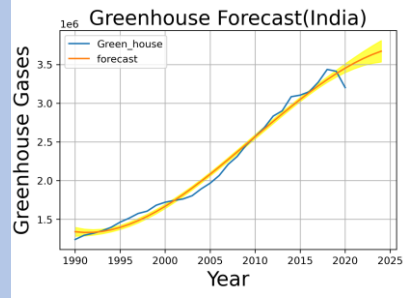


Introduction

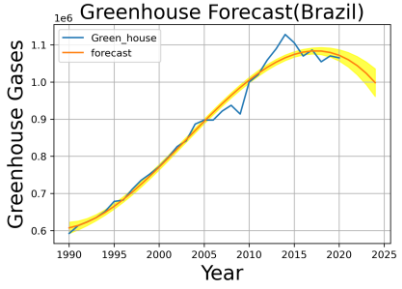
Figure I depict the cluster analysis of global countries, considering both Greenhouse Gas emissions per head and GDP per capita. This analysis spans 1990 and 2020, providing insights into the evolving clusters. The primary aim is to uncover the relationship between economic indicators and Greenhouse Gas emissions. Notably, a discernible trend emerges as most countries exhibit a reduction in Greenhouse Gas emissions per capita, evident in the leftward movement of the clusters. Conversely, the graph suggests an overall increase in GDP per capita between 1990 and 2020, pointing towards economic growth during this period.

I have selected from each cluster depicted in Figure I; three countries are spotlighted to illustrate Greenhouse gas projections for the upcoming 5 years(starting from 2020): India is characterized by high Greenhouse gas emissions per head, followed by Brazil and China. Figure 2, presented below, outlines the anticipated growth rates for Greenhouse gases per head in each of these distinct countries.

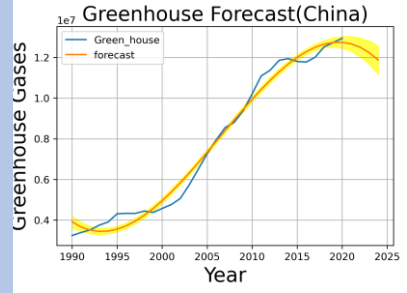
The projections for greenhouse gas emissions in India indicate a rising trend, although they appear to stabilise over the next 5 years. This suggests that the country will likely experience the impacts of climate change, including phenomena such as global warming, in the upcoming years.



The projections for greenhouse gas emissions in Brazil indicate a falling trend, although they appear to stabilise over the next 5 years. This suggests that the country will not likely experience the impacts of climate change, including phenomena such as global warming, in the coming years.



The projections for greenhouse gas emissions in China indicate a falling trend, although they appear to stabilise over the next 5 years. This suggests that the country will not likely experience the impacts of climate change, including phenomena such as global warming, in the coming years.



Conclusion:

This study contributes to the understanding that greenhouse gas emissions have decreased, likely influenced by the global population's growth. Concurrently, a general upward trend in GDP per capita suggests potential implications for increased environmental pollution, particularly in the context of urbanization. Implementing necessary and effective measures to prevent the climate from shouldering the burden of global technological advancements is essential.

GitHub link: https://github.com/losirlu1411/assignment-3-

University of Hertfordshire UH