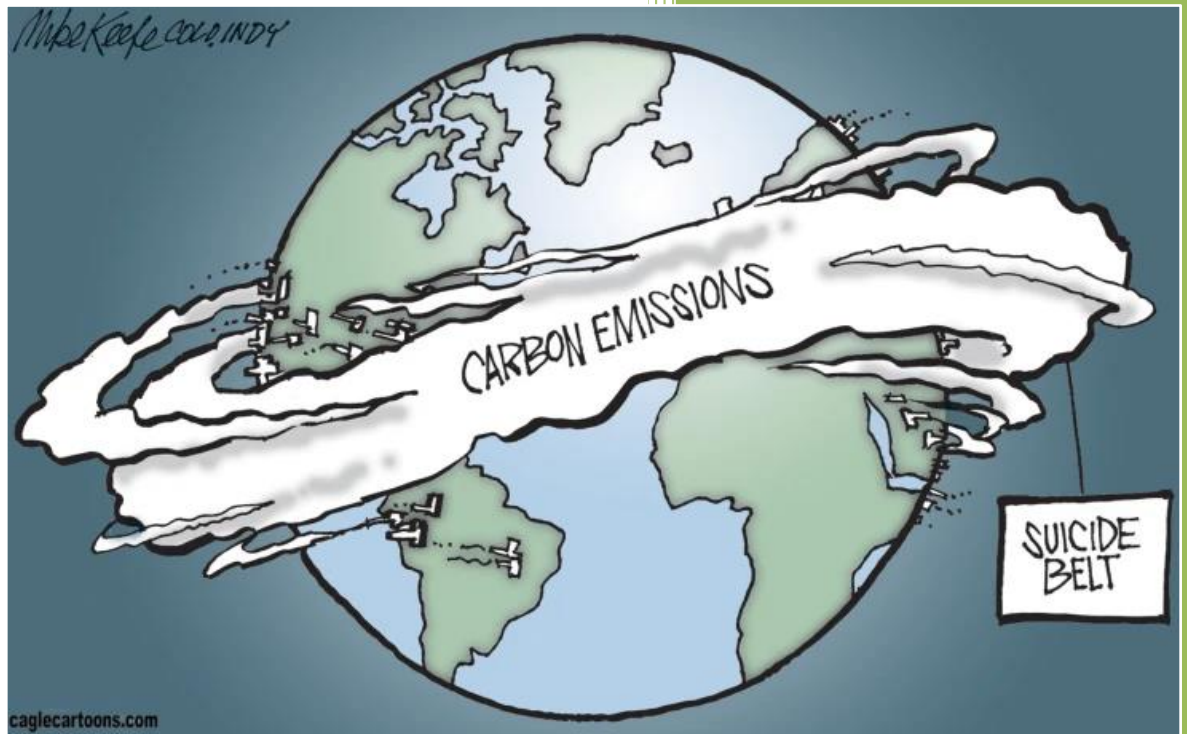# Unearthing the Environmental Impact of Human Activity: A Global CO2 Emission Analysis

1 . INTRPDUCTION

1.1 OVERVIEW

Global warming is one of the biggest challenges currently being faced by the human race, although correlation is not causation, a likely cause of global warming is due to increased atmospheric carbon dioxide from human activities. CO2 Emission refers to the Carbon Dioxide emitted throughout the world. For this analysis we will be focusing on CO2 Emissions and its effect on the world we live in as well as some key factors and stats that may play a role in the emission of CO2 globally. Fossil fuel use is the primary source of CO2. The data throws light onto how much fossil fuels are burnt, per year per nation, which amounts to an increase in CO2 every year. This will help researchers and environment experts to predict global warming. So countries should set a goal to decrease this amount yearly.

Analysing Global Co2 Emission across countries from 1975 to 2020. This dataset contains a record of Co2 Emission by each Country and Region of Earth, here we are going to analyse and visualise Country wise, Region wise and Overall Co2 Emission on Earth.

1.2 PURPOSE

The purpose of CO2 emission analysis is to understand and assess the amount of carbon dioxide (CO2) and other greenhouse gases being emitted into the atmosphere by human activities, such as industrial processes, transportation, and energy production. This analysis helps to evaluate the impact of these emissions on the environment and climate change.

CO2 emission analysis is an essential tool for policymakers, businesses, and individuals to make informed decisions about reducing their carbon footprint and mitigating climate change. By measuring and monitoring emissions, it is possible to identify areas where improvements can be made and implement measures to reduce the impact of greenhouse gas emissions on the environment. It also helps in tracking the progress of emission reduction initiatives and understanding the effectiveness of policies and regulations aimed at curbing emissions

2. PROBLEM DEFINITION & DESIGN THNKING

2.1 EMPATHY MAP
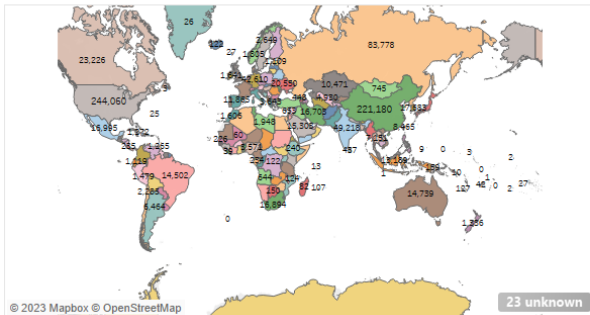
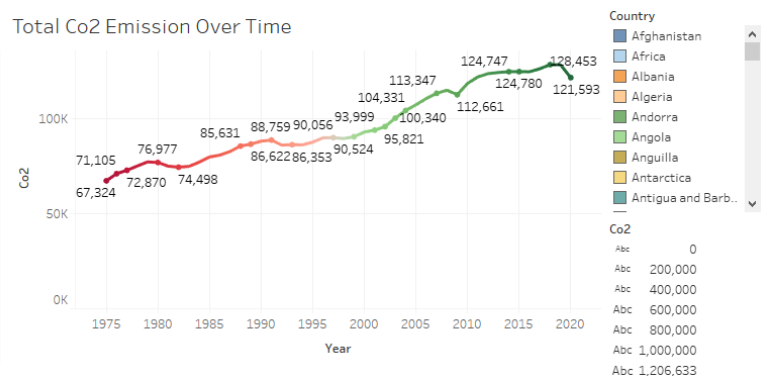## 2.2 IDEATION AND BRAINSTORMING MAP
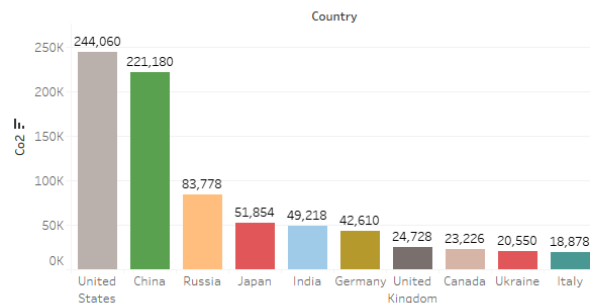
3 . RESULT

❖ DASHBOARD
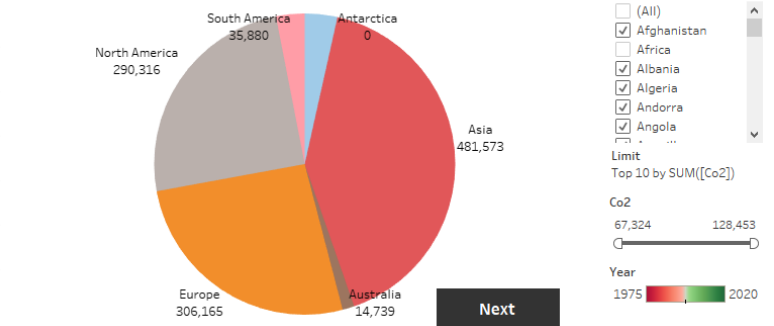
Total World Emission
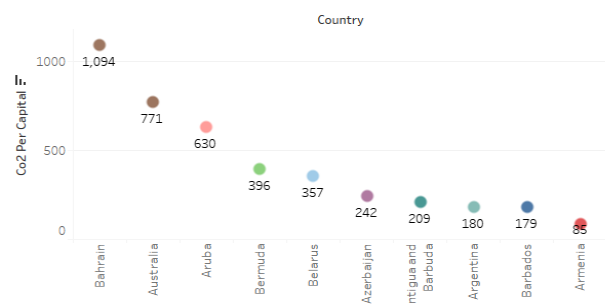

Total Co2 Emission Over Time
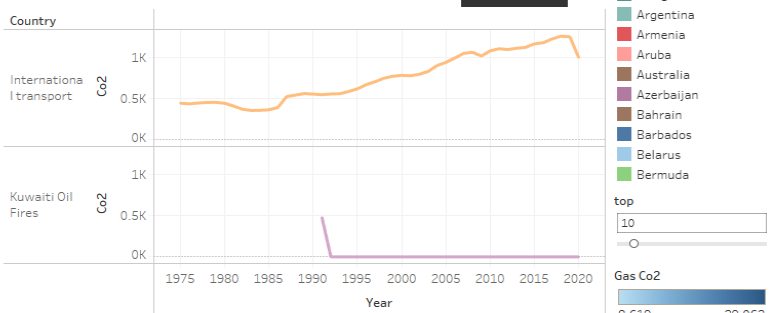

Top Emitting Countries

Total CO2 Emissions By Continents

Co2 Emission Per Capita

Co2 Emission By Other Factors

Emission Rate By Internal Factors
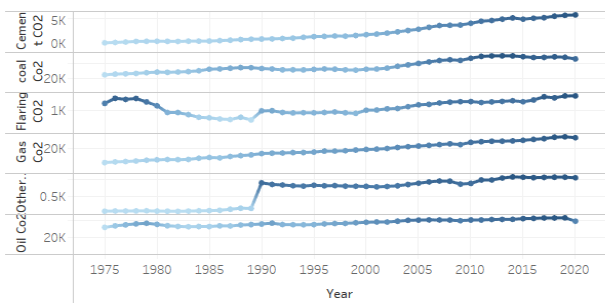
Co2 Emission Over Past 10 Years
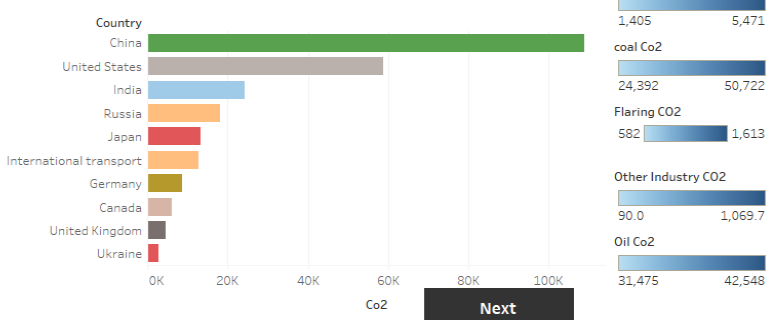
❖ STORY

Story (Co2 Emission)
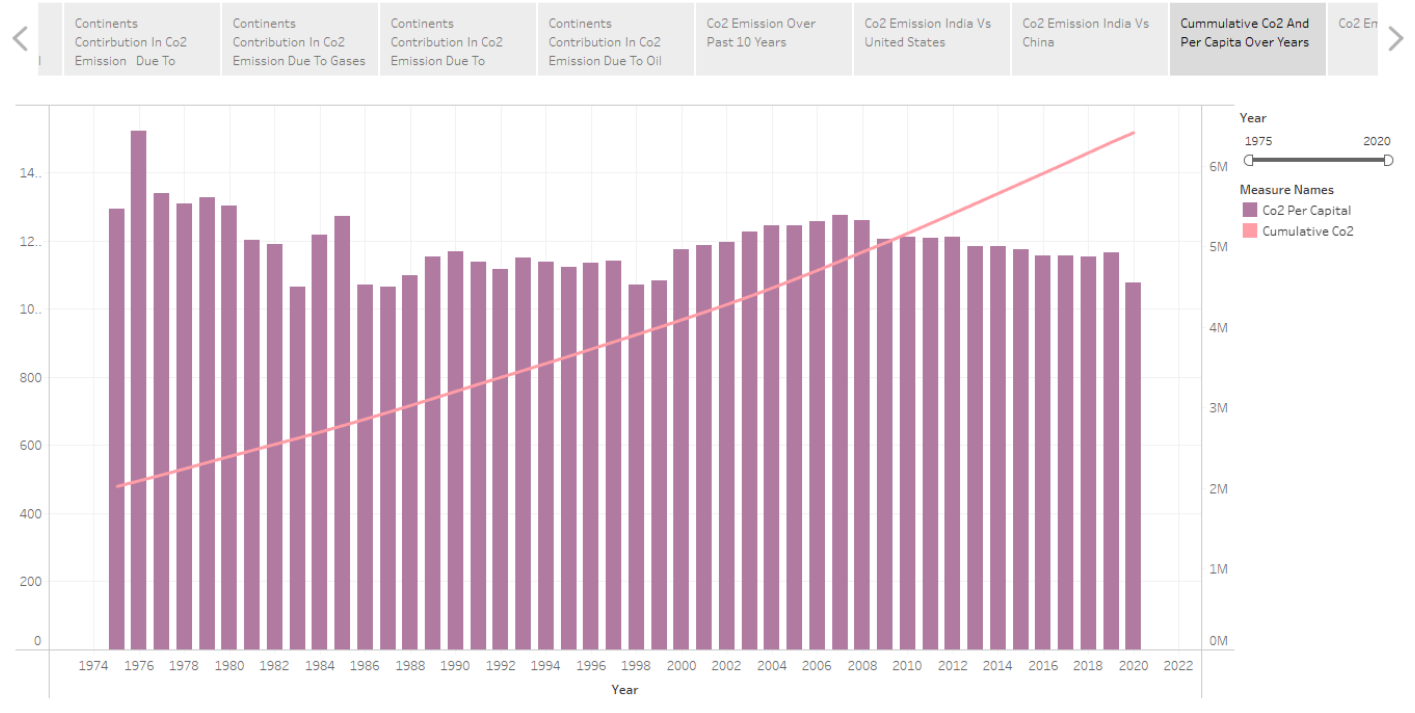
4 . ADVANTAGES & DISADVANTAGES

- ADVANTAGES

Identifying sources of emissions: CO2 emission analysis helps to identify the sources of CO2 emissions. This information is crucial for creating effective strategies for reducing emissions.

Measuring the impact of emissions: CO2 emission analysis helps to measure the impact of emissions on the environment. This information can be used to create policies and regulations to reduce emissions and protect the environment.

Monitoring progress: CO2 emission analysis can be used to monitor progress towards reducing emissions. This helps to ensure that targets are being met and that efforts to reduce emissions are effective.

Identifying opportunities for improvement: CO2 emission analysis can identify areas where emissions can be reduced. This information can be used to develop strategies and technologies to reduce emissions.

Encouraging innovation: CO2 emission analysis can encourage innovation in developing new technologies and processes that reduce emissions. This can lead to economic growth and job creation in the green technology sector.

Overall, CO2 emission analysis is a crucial tool for understanding the impact of human activities on the environment and developing effective strategies for reducing emissions.

- DISADVANTAGES

Incomplete data: CO_2 emission analysis relies on data from various sources, including government agencies, corporations, and scientific studies. However, the data can be incomplete or inaccurate, leading to inaccurate analyses.

Limited scope: CO_2 emission analysis is typically limited to the measurement of greenhouse gas emissions. While important, this narrow focus can neglect other environmental impacts such as air pollution or waste generation.

Complex methodology: CO_2 emission analysis can be complex and require specialized knowledge and expertise. This can make it difficult for non-experts to understand and use the results of the analysis effectively.

Uncertainty and variability: There is often a high degree of uncertainty and variability associated with CO_2 emission analysis due to the many factors that can influence greenhouse gas emissions, including weather, production processes, and energy sources.

Cost: CO_2 emission analysis can be expensive, especially if conducted at a large scale or using sophisticated methods. This can be a barrier for smaller organizations or developing countries that lack the necessary resources.

Potential for misinterpretation: CO_2 emission analysis can be misinterpreted or used to support misleading claims or arguments. For example, focusing solely on CO_2 emissions can distract from other important environmental concerns, such as biodiversity loss or water scarcity.

5 . APPLICATIONS

The analysis of CO2 emissions has numerous applications across different sectors. Here are some examples:

Environmental Policy: CO2 emission analysis can be used to inform environmental policy decisions. Governments and policymakers can use this analysis to set emission targets, develop regulations and incentives, and evaluate the effectiveness of different policies.

Energy and Transportation: CO2 emission analysis can help evaluate the environmental impact of energy and transportation systems. For example, it can be used to compare the emissions of different fuels or modes of transportation, such as gasoline-powered cars versus electric cars.

Corporate Sustainability: Companies can use CO2 emission analysis to understand their environmental impact and identify opportunities to reduce their emissions. This analysis can inform sustainability strategies, help companies meet regulatory requirements, and improve their reputation with customers and investors.

Climate Change Mitigation: CO2 emission analysis is a critical tool in the fight against climate change. It helps researchers and policymakers understand the sources and drivers of emissions and identify the most effective strategies for reducing them.

Carbon Trading: CO2 emission analysis is essential for the development and implementation of carbon trading systems. These systems allow companies and organizations to buy and sell emissions credits, providing a financial incentive to reduce emissions.

Overall, CO2 emission analysis is crucial for understanding and addressing climate change. It helps inform policy decisions, promotes sustainable practices, and facilitates the transition to a low-carbon economy.

6 . CONCLUSION

In conclusion

 CO2 emission analysis plays a vital role in understanding and addressing climate change. It provides essential information to policymakers, businesses, and individuals on the sources and drivers of emissions and the most effective strategies for reducing them. The analysis helps inform environmental policy decisions, evaluate the environmental impact of energy and transportation systems, promote corporate sustainability, and facilitate the development and implementation of carbon trading systems. As the world faces the urgent challenge of mitigating the impacts of climate change, CO2 emission analysis will continue to be a critical tool in the fight to reduce greenhouse gas emissions and transition to a low-carbon economy.

we came to this conclusion by working on the worksheets where we have given graphs ,pie charts ,charts regarding co2 emission analysis .And we have made dashboards and story with the following titles

☆ Total World Emission

☆ Top emitting countries

☆ Total CO2 emission overtime

☆ Total emission by continents

☆ Co2 emission by international factors

☆ Co2 emission over past 10 years

☆ Continent voice contribution by internal factors.

☆ Co2 emission from 1990 to 2020 based on internal factors.

☆ Cumulative Co2and co2 per capita

☆ Co2 emission in 2020.

☆ Overall contribution by China in CO2 emission. Etc..

7 . FUTURE SCOPE

The future scope of CO2 emission analysis is vast and ever-expanding, with ongoing research and technological advancements driving new insights and opportunities. Some potential areas of focus include:

Improved data collection and analysis: As technology improves, so too does our ability to gather and analyse data on CO2 emissions. This includes everything from satellite imaging to machine learning algorithms, which can help identify patterns and trends in emissions data that may have previously gone unnoticed.

Greater focus on tracking emissions from individual sectors: While overall emissions levels are important, there is also a growing need to track emissions from specific sectors, such as transportation or agriculture. This can help policymakers and businesses identify areas where emissions reductions can be most effectively targeted.

Development of new emission reduction technologies: There is ongoing research into new technologies that can help reduce CO2 emissions, such as carbon capture and storage, renewable energy sources, and more efficient transportation systems. The continued development and implementation of these technologies will play a critical role in reducing emissions in the future.

Increased public awareness and engagement: As more people become aware of the impacts of CO2 emissions on the environment, there is a growing demand for action. This includes everything from individual lifestyle changes to collective political action, and will be a critical factor in driving emissions reductions in the future.

Overall, the future of CO2 emission analysis is exciting and full of potential. By continuing to invest in research, technology, and public engagement, we can work towards a more sustainable and environmentally-friendly future.

8 . APPENDIX

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